Tionscadal Soláthair Uisce
Water Supply Project

Uisce Éireann Water Supply Project Eastern and Midlands Region

Statutory Consultation:

Response to Additional Submissions Report

Version: Final

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Uisce Éireann
Irish Water

Jacobs

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Acronyms and Abbreviations

Acronym	Meaning
AA	Appropriate Assessment
ACP	An Coimisiún Pleanála
AI	Artificial Intelligence
AOD	Above Ordnance Datum
BPS	Booster Pumping Station
BPT	Break Pressure Tank
CEMP	Construction Environmental Management Plan
CIEEM	Chartered Institute of Ecology and Environmental Management
CLO	Community Liaison Officer
CIS	Common Implementation Strategy
CPO	Compulsory Purchase Order
CRU	Commission for Regulation of Utilities
CWBPMP	Construction Waste and Byproduct Management Plan
DHLGH	Department of Housing, Local Government and Heritage
DMRB	Design Manual for Roads and Bridges
ECoW	Ecological Clerk of Works
Eflow	Environmental Flow
EIA	Environmental Impact Assessment
EIAR	Environmental Impact Assessment Report
EPA	Environmental Protection Agency
ESB	Electricity Supply Board
EU	European Union
FCV	Flow Control Valve
FOAR	Final Options Appraisal Report
FRA	Flood Risk Assessment
GDA	Greater Dublin Area
GEP	Good Ecological Potential
GES	Good Ecological Status
GHG	Greenhouse Gas
GWDTE	Groundwater Dependent Terrestrial Ecosystems
GWS	Group Water Scheme
HEFS	High-End Future Scenario
HGV	Heavy Goods Vehicle
HMWB	Heavily Modified Water Body
HSE	Health Service Executive
IAQM	Institute of Air Quality Management
IFI	Inland Fisheries Ireland

Acronym	Meaning
INNS	Non-Native Invasive Species
KER	Key Ecological Receptor
LiDAR	Light Detection and Ranging
LLO	Land Liaison Officer
m^3/s	cubic metres per second
MMaRC	Motorway Maintenance and Renewal Contractor
NIS	Natura Impact Statement
NPWS	National Parks and Wildlife Service
NSL	Noise Sensitive Location
NTA	National Transport Authority
NVMP	Noise and Vibration Management Plan
NWRP	National Water Resources Plan
OCC	Offaly County Council
PBR	Potential Bat Roost
Proposed Project	Water Supply Project Eastern and Midlands Region
POAR	Preliminary Options Appraisal Report
PWS	Public Water Scheme
PWWC	Passive Wedge-Wire Cylinder
REAC	Register of Environmental Actions and Commitments
RBMP	River Basin Management Plan
RSA	Road Safety Audit
RTS	Response to Submissions (Report)
RWI&PS	Raw Water Intake and Pumping Station
RWRP	Regional Water Resource Plan
RWRM	Raw Water Rising Mains
SAC	Special Area of Conservation
SCI	Special Conservation Interest
SEA	Strategic Environmental Assessment
SELL	Sustainable Economic Level of Leakage
S.I.	Statutory Instrument
SID	Strategic Infrastructure Development
SPA	Special Protection Area
SRTS	Supplementary Response to Submissions (Report)
SWMP	Surface Water Management Plan
THM	Triohalomethane
TII	Transport Infrastructure Ireland
TMP	Traffic Management Plan
TPR	Termination Point Reservoir

Acronym	Meaning
WAA	Water Environment (Abstractions and Associated Impoundments) Act 2022
WFD	Water Framework Directive
WSIAR	Water Status Impact Assessment Report
WSP	Water Supply Project
WTP	Water Treatment Plant
WwTP	Waste Water Treatment Plant
ZoI	Zone of Influence

1. Introduction

1. Uisce Éireann (hereafter referred to as the Applicant) acknowledges receipt of the letter sent by An Coimisiún Pleanála (ACP) on 1st September 2026, in respect to the Strategic Infrastructure Development (SID) planning application for the proposed Water Supply Project Eastern and Midlands Region (hereafter referred to as the Proposed Project), under ACP reference number PA92.323980.

2. The letter from ACP invited the Applicant to make a submission, as follows:

   "*The Commission hereby considers it appropriate to invite you to make a submission on the observations received in relation to the application. Please be advised that any response to the Commission's invitation should not contain any additional reports or supplementary reports and should be confined to the issues raised in the observations received by the Commission.*"

3. This Response to Additional Submissions Report (hereafter referred to as this Report), and its supporting appendix (Appendix A), comprise the response of the Applicant to the issues raised in the Additional Submissions received by ACP.

4. The Applicant notes that, should ACP consider it necessary, further clarification or information requests on any of the responses provided within this Report can be facilitated by the Applicant. The Applicant reserves its entitlement to further expand on its reply to these issues as may be appropriate at an Oral Hearing which may be held in relation to the planning application for the Proposed Project under ACP reference number 323980.

1.1 Background

5. The application for planning permission for the Proposed Project was submitted to ACP on 19th December 2025. The application documentation was placed on display during the period 6th January to 25th February 2026 (a seven-week period). Additionally, the application documentation was made available to view and download on a dedicated website (www.watersupplyproject.ie).

6. Prescribed bodies, the general public, landowners and other interested parties were able to make submissions / observations on:

   - The implications of the Proposed Project for proper planning and sustainable development;
   - The likely effects on the environment of the Proposed Project, if carried out; and
   - The likely significant effect of the Proposed Project on the integrity of a European site, if carried out.

7. A total of 114 submissions / observations were received, comprising 17 from prescribed bodies and 97 from general observers.

8. The Applicant was invited to respond to these in a letter from ACP dated on 9th April 2026 and responded to these 114 submissions in the Response to Consultation Submissions Report (RTS) in May 2026.

9. The ACP accepted two further submissions in response to the Statutory Consultation and the Applicant was invited to responded to these in letters dated 19th May 2026 and 20th May 2026. One of those responses was from a stakeholder that was part of the original 114 responses. The Applicant responded to these 2 submissions in the Supplementary Response to Consultation Submissions Report (SRTS) in June 2026.

10. The ACP, in June 2026, then invited the previous respondents to the Statutory Consultation for any additional comments on the RTS and SRTS.

1.2 Overview of the Additional Submissions

11. The ACP has received 43 submissions referred to as 'Additional Submissions' in response to the RTS and SRTS. These were as follows:

1. Add. Sub. - Ballymore Eustace Trout and Salmon Anglers' Association
2. Add. Sub. - Castleconnell River Association (CRA) co Pat O'Connor
3. Add. Sub. - Chambers Ireland
4. Add. Sub. - Christopher Campion
5. Add. Sub. - Clare County Council
6. Add. Sub. - Cllr Seán Hartigan
7. Add. Sub. - Derg Open Water Swim School & Lively Wimmin Swimmin
8. Add. Sub. - Development Applications Unit
9. Add. Sub. - Dublin Chamber
10. Add. Sub. - Eamonn Dooley
11. Add. Sub. - EirGrid
12. Add. Sub. - Environmental Trust Ireland
13. Add. Sub. - Fintan Dunne
14. Add. Sub. - Futureproof Clare Environmental CLG
15. Add. Sub. - Garrett Reil and Cliona Geary
16. Add. Sub. - Geological Survey Ireland
17. Add. Sub. - Ibec
18. Add. Sub. - James Crowley
19. Add. Sub. - James Cullen Snr.
20. Add. Sub. - Joe Mayo
21. Add. Sub. - John Fingleton
22. Add. Sub. - John Quinn & Sandra Frayne
23. Add. Sub. - Laura Kavanagh
24. Add. Sub. - Limerick City & County Council
25. Add. Sub. - Mark Kinsella
26. Add. Sub. - Melina Sharp & Michael Eversen
27. Add. Sub. - Melissa Anne Kenny
28. Add. Sub. - Michael and Mary Kinsella
29. Add. Sub. - Michael McKeogh
30. Add. Sub. - Michael Reidy
31. Add. Sub. - National Transport Authority
32. Add. Sub. - Offaly County Council
33. Add. Sub. - Peamount Healthcare
34. Add. Sub. - Richard Cahill

35. Add. Sub. - River Shannon Environmental Protection Alliance
36. Add. Sub. - Robert Frayne
37. Add. Sub. - Senator Dee Ryan
38. Add. Sub. - Shane Mathews
39. Add. Sub. - South Dublin County Council
40. Add. Sub. - Stefan and Olivia Hahne
41. Add. Sub. - Tipperary County Council
42. Add. Sub. - Transport Infrastructure Ireland
43. Add. Sub. - Waterways Ireland

12. The Applicant is cognisant and appreciative of the time spent by all third parties in preparing these Additional Submissions. Each Additional Submission has been considered, and the Applicant has sought to ensure that the substantive matters raised in each are appropriately addressed in this Report. The matters raised by a single Additional Submission may be addressed in different parts of this Report, and Appendix A – Additional Submissions Identification Table provides a summary of which sections of the Report each Additional Submission is addressed under.

13. Of the 43 respondents the Additional Submission from Melissa Anne Kenny raises matters relating exclusively to property compensation. These matters fall to be addressed through the statutory compulsory purchase order (CPO) process rather than this Report and are being responded to separately by way of individual CPO response letters. This Additional Submission is recorded in Appendix A – Additional Submissions Identification Table but is not addressed further in the response sections in Chapters 2 – 27 of this Report.

14. For other Additional Submissions that include matters that relate to the detailed or specific property negotiation, compensation and compulsory acquisition matters within the CPO process these matters are not addressed in this Report and they are also addressed by way of separate CPO response letters.

1.3 Review of Submissions

15. The Additional Submissions have been initially reviewed and manually categorised against the matters raised previously in the RTS and SRTS. Each Additional Submission has then been responded to by technical experts associated with the design of the Proposed Project and the environmental assessment contained within the Environmental Impact Assessment Report (EIAR), Natura Impact Statement (NIS) and Water Status Impact Assessment Report (WSIAR). The responses have been categorised based on whether the matter raised is:

- a matter that has been responded to previously; or
- is a new matter.

16. For the matters that are identified as a matter that has been responded to previously, the Report differentiates between matters for which the Applicant is offering some further clarification or explanation and those for which it is relying on the previous response provided in the RTS and SRTS.

17. It is noted that a separate CPO Application (ACP Ref: CH92.323982) has been submitted to ACP and is running in parallel to the SID Application (ACP Ref: PA92.323980) to which this Report relates. Thirteen submissions were made in relation to the CPO application and are being addressed separately through the CPO application.

1.4 Response to Submissions

18. A significant number of issues raised in Additional Submissions have already been addressed in the Planning Report, EIAR, NIS, WSIAR and other supporting documentation submitted to ACP as part of the SID planning application for the Proposed Project. To avoid significant replication of text, the Applicant has addressed the substance of the issues raised and provides references to the relevant sections of the planning application documentation throughout this Report.

19. Many responses cover matters which cut across different chapters, and therefore, cross referencing has been included to sign-post this to the reader. However, this Report in its entirety constitutes the Applicant's response to the Additional Submissions and should be considered, as a whole, when identifying the response to any particular matters raised in one the 43 Additional Submissions (albeit that the response may be to refer back to the previous RTS and SRTS).

20. The Applicant notes that some of the Additional Submissions raise issues that are directed towards ACP, and the Applicant is not in a position to respond to such matters.

1.5 Key Concerns Raised in Submissions

21. The previous RTS provided an overview of the key concerns raised in the previous responses. In general the same matters, listed below, were the key concerns in the Additional Submissions and we have not repeated the broad responses provided in the RTS which are similarly unchanged:

- Alternative Source
- Leakage Reduction
- Peak Abstraction
- Impact of the Proposed Abstraction on Water Levels and Hydrological modelling
- Assessment of Low Flow and Drought Conditions
- Reduction in the Statutory Minimum Compensation Flow down the Old River Shannon
- Future Change to the Statutory Minimum Compensation Flow down the Old River Shannon
- Potential Impact of the Proposed Abstraction on Habitats and Species
- Adequacy of the Findings of the Appropriate Assessment
- Adequacy of the Water Framework Directive Assessment
- Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth
- Development Contributions and Bonds
- Planning Conditions
- Statutory Consents.

1.6 Structure of this Report

22. Section 1 (Introduction) of this Report outlines the requirements of ACP, as set out in its letter dated 1st September 2026, the Applicant's approach to reviewing and responding to issues raised in Additional Submissions received by ACP, and the structure of the overall response.

23. Chapter 2 to Chapter 27 of this Report include all responses to Additional Submissions under the structure of the EIAR and other planning application document topics, and this is summarised in 1.1. Many responses cover matters which cut across different chapters, and therefore, cross referencing has been included to sign-post this to the reader. However, this Report in its entirety constitutes the

Applicant's response to the Additional Submissions and should be considered, as a whole, when identifying the response to any particular matters raised in one the 43 Additional Submissions.

24. The Applicant would highlight that the Tipperary County Council response included the River Shannon Environmental Protection Alliance responses appended to it. We have responded to the Additional Submission from the River Shannon Environmental Protection Alliance and have not listed the items raised against Tipperary County Council as well.

25. For Chapter 13 – Soils, Geology and Hydrogeology and Chapter 23 – Risk of Major Accidents and Disasters there is only an overview provided as there were no Additional Submissions raising matters that needed to be responded to under these sections. The overview provided identifies responses in other sections of this Report related to those topics.

26. Chapter 27 – Additional Topics provides a high level summary of the topics that were repeated in the Additional Submissions and responded to in the RTS.

27. Chapter 2 to Chapter 276 of this Report (excluding Chapter 13– Soils, Geology and Hydrogeology and Chapter 23 – Risk of Major Accidents and Disasters) are structured around three broad sections:

- Matters Responded to Previously
- Matters Responded to Previous and For Which Further Clarification is Being Provided
- New Matters Raised.

Table 1.1: Structure of this Report

Chapter	Summary of Content
1. Introduction (This chapter)	Overview of this Report
2. Overarching Matters	Considers Additional Submissions that raised broad, cross cutting topics.
3. Planning	Considers Additional Submissions related to Planning Compliance including policy compliance and the community benefit scheme.
4. Consultation and Communications	Considers Additional Submissions related to the adequacy of consultation and engagement matters.
5. Consideration of Reasonable Alternatives	Considers Additional Submissions that raised alternatives to the Proposed Project.
6. Proposed Project Description	Considers Additional Submissions related to the design of the Proposed Project.
7. Construction and Commissioning	Considers Additional Submissions related to the design or components of the works needed to construct and commission of the Proposed Project.
8. Noise and Vibration	Considers Additional Submissions related to noise or vibration effects, assessment and mitigation measures.
9. Traffic and Transport	Considers Additional Submissions related traffic and transport effects, assessment and mitigation measures.
10. Biodiversity	Considers Additional Submissions related to biodiversity effects, assessment and mitigation measures.
11. Water (Hydrological Modelling and Water Levels)	Considers Additional Submissions related to assessment and modelling of the Parteen Basin, lough Derg, River Shannon including modelling and drought effects.
12. Water (General)	Considers Additional Submissions related to water effects, assessment and mitigation measures (other than those addressed in Chapter 11).
13. Soils, Geology and Hydrogeology	Summarises that that no specific matters related to soils, geology and hydrogeology were included in the Additional Submissions and cross references to other sections of this Report that includes responses relevant to this topic.
14. Agriculture	Considers Additional Submissions related to agricultural effects, assessment and mitigation measures.
15. Air Quality	Considers Additional Submissions related to air quality effects, assessment and mitigation measures.

Chapter	Summary of Content
16. Climate	Considers Additional Submissions related to climate effects (including carbon and climate resilience), assessment and mitigation measures.
17. Population	Considers Additional Submissions related to population effects (including tourism and recreation), assessment and mitigation measures.
18. Human Health	Considers Additional Submissions related to human health effects, assessment and mitigation measures.
19. Landscape and Visual	Considers Additional Submissions related to landscape and visual effects, assessment and mitigation measures.
20. Cultural Heritage	Considers Additional Submissions related to cultural heritage effects, assessment and mitigation measures.
21. Material Assets	Considers Additional Submissions related to effects on material assets, the assessment and mitigation measures.
22. Resource and Waste Management	Considers Additional Submissions related to resource and waste management effects, assessment and mitigation measures.
23. Risk of Major Accidents and / or Disasters	Summarises that that no specific matters related to the risk of major accidents and disasters were included in the Additional Submissions and cross references to other sections of this Report that includes responses relevant to this topic.
24. Cumulative Effects and Interactions	Considers Additional Submissions related to noise or vibration effects, assessment and mitigation measures.
25. Natura Impact Statement (NIS)	Considers Additional Submissions related to the NIS.
26. Water Status Impact Assessment Report (Water Framework Directive (WFD)	Considers Additional Submissions related to WFD.
27. Additional Topics	Provides a high level summary of additional topics raised in the Additional Submissions.
Appendix A – Additional Submissions Identification Table	This provides a reference for each of the Additional Submissions and identifies where the matters raised are addressed in Chapters 2 to 27.

1.7 References in this Report

28. There are extensive references to the planning application documentation in this Report while providing responses to the issues raised in Additional Submissions. The structure of the relevant planning application documentation is outlined in Table 1.2.

29. In addition, this Report takes the same approach as adopted in the SID Planning Application documents in distinguishing between different stages of the development of the Proposed Project by using the following terminology:

- ‘Previous iterations of the project’ refers to the In-Flight Water Supply Project developed prior to the adoption of the NWRP (including the Regional Water Resources Plan – Eastern and Midlands (the Eastern and Midlands Plan (Irish Water, 2022)).
- The ‘Proposed Project’ refers to the project that planning permission is being sought for as described in Chapter 4 (Proposed Project Description) in this EIAR and that has taken account of the conclusions of the NWRP (including the Eastern and Midlands Plan (Irish Water, 2022)). The Proposed Project aligns with the Preferred Approach for the Eastern and Midlands Region, a New Shannon Source with transfers, as set out in the Eastern and Midlands Plan (Irish Water, 2022).

Table 1.2: Structure of the Relevant Planning Application Documentation for the Proposed Project

Documentation Category	Details
Statutory	SID Application Cover Letter
	SID Application Form
	SID Site Notice
	Newspaper Notices
	Prescribed Bodies Letters
	Planning Application Schedule of Drawings
Planning	SID Planning Report
	Material Contravention Statement
	SID Engineering Report
	Draft Water Abstraction Document
	SID Consultation Report
	Community Benefits Scheme
	Planning Drawing Project Overview
	Site Notice Locations
	Raw Water Intake and Pumping Station Planning Drawings
	Water Treatment Plant Planning Drawings
	Break Pressure Tank Planning Drawings
	Booster Pumping Station Planning Drawings
	Flow Control Valve Planning Drawings
	Termination Point Reservoir Planning Drawings
	Pipeline Long Sections Planning Drawings
	38kV Planning Drawings
	Landscape Drawings
	Standard Details Planning Drawing
Environmental	Environmental Impact Assessment Report Volume 1 - Non-Technical Summary
	Environmental Impact Assessment Report Volume 2 – EIAR Main Report (comprising Chapter 1 to Chapter 5)
	Environmental Impact Assessment Report Volume 3 – Environmental Assessment (comprising Chapter 6 to Chapter 20)
	Environmental Impact Assessment Report Volume 4 – Summary (comprising Chapter 21 and Chapter 22)
	Environmental Impact Assessment Report Volume 5 – Drawings and Figures
	Environmental Impact Assessment Report Volume 6 – Appendices
	Natura Impact Statement
	Appropriate Assessment Screening Report
	Water Status Impact Assessment Report

2. Overarching Matters

2.1 Overview

30. A number of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant considered were overarching in nature. These were considered in the RTS Report and were reporting in Chapter 2 – Overarching Matters in the RTS. That approach has been retained for this Report.

31. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised any further matters which the Applicant identified as being overarching in nature.

32. Fourteen of the 43 Additional Submissions received by ACP raised matters overarching in nature.

33. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions in respect of Consultation and Communication and should be read alongside the original RTS and SRTS. Cross references to the relevant chapters of the RTS and SRTS have been included, where appropriate, to assist the reader.

34. This chapter should be read alongside the following chapters of this Report, which address issues raised in the Additional Submissions in greater technical detail:

- Chapter 1 – Introduction
- Chapter 24 - Cumulative Effects and Interactions.

35. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

36. Observations identified by the Applicant included in this chapter include topics such as the business case for the Proposed Project, the adequacy of environmental mitigation measures, the sequencing of the abstraction licencing and how this relates to the scope of the whole project and Data centre usage being large and not accounted for

37. This Chapter is structured around the following sections:

- Matters raised regarding Overarching Matters and previously responded to;
- Matters raised previously and further clarification is being provided; and
- New matters raised regarding Overarching Matters in the Additional Submissions.

2.2 Response to Matters Raised Previously

2.2.1 Additional Submissions

38. Five of the Additional Submissions raised matters that had been considered previously including:

- Accuracy of the need for the Proposed Project based on 2016 Census data;
- The sequencing of the abstraction licencing and how this relates to the scope of the whole project;
- Clarity, efficacy, enforceability and auditability of mitigation in the EIAR; and
- Support for the principal of 'Compliance Framework'.

39. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council	Accuracy of the need for the Proposed Project based on 2016 Census date.	RTS – Population Growth Forecast – Section 2.2
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance		
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	The sequencing of the abstraction licencing and how this relates to the scope of the whole project.	RTS – Abstraction Licensing – Section 2.3
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance		
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council		
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Clarity, efficacy, enforceability and auditability of mitigation in the EIAR.	RTS – Mitigation Measures in EIAR and NIS – Section 2.8
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance		
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo		
Additional Sub – Offaly County Council Previous: WSP_SUB_113	Offaly County Council	Support for the principal of 'Compliance Framework'.	RTS – Consent Condition – Section 2.9

2.2.2 Applicant's Summary Response on Matters Raised Previously

2.2.2.1 Census

40. The use of the 2016 Census data as the basis of the forecast of the need for water was raised previously, by An Taisce and this has been reiterated in the Additional Submissions. The Applicant responded to these in Section 2.2 (Population Growth Forecast) of the RTS. The Applicant has no additional information or further clarification to provide but would reiterate that the project's demand projections, including sensitivity analysis, were independently, expertly reviewed, the Applicant regularly reviews new data through a formal monitoring process to ensure our forward projections remain robust.

2.2.2.2 Abstraction Licencing

41. The Additional Submissions raised the relationship between the SID Planning Application and the future application for an Abstraction Licence for the Proposed Project. This was raised previously and has been responded to by the Applicant in Section 2.3 (Abstraction Licencing) of the RTS.

42. The Applicant would reiterate that the 'whole' project has been included within the assessment of the Proposed Project in the EIAR. It is not correct to refer to the existing impoundment and the Proposed Project as 'the whole project'. The project for which permission is sought is the Proposed Project as defined and described in the EIAR and other SID planning application documents. The ESB impoundment is an existing development which is already consented via statute. The environmental assessments have taken account of the existing impoundment within the baseline and considered any potential for further cumulative effects from Ardnacrusha power generation and the existing ESB impoundment.

43. The Coimisiún will assess the likely significant effects on the environment of 'whole' project – the infrastructure and the abstraction – and carry out cumulative assessments. The EPA, under the abstraction licensing process, will assess and condition the abstraction. The abstraction licensing regime does not prevent the Coimisiún from assessing the likely environmental effects of the Proposed Project (including operational effects) based on the information submitted.

44. The interaction between the Proposed Project and ESB impoundment has been further addressed in Section 24.3.2.1 (The Whole Project and Impermissible Project Splitting) of this Report.

2.2.2.3 Environmental Mitigation

45. The clarity, efficacy, enforceability and auditability of mitigation in the EIAR were raised previously, including by Tipperary County Council and have been reiterated in the Additional Submissions.

46. The Applicant responded to these in Section 2.8 (Mitigation Measures in the Environmental Impact Assessment Report and Natura Impact Statement), of the RTS. The Applicant would reiterate:

- Detail on specific mitigation measures are included in the REAC and in the topic management plans that support the CEMP;
- Proposed measures have been developed by competent experts, based on best practice guidance, professional judgement, and experience on similar infrastructure projects;
- An Environmental Manager will ensure that the CEMP is fully adopted, effectively implemented and amended and updated as required;
- The Contractor will maintain the environmental records (including monitoring data) which will be made available for audits, inspections and periodic reporting; and

- In the event of a grant of permission the CEMP, including the REAC and topic management plans, will form part of the conditions for which the Applicant must comply with (i.e. they would be binding commitments). The Applicant will be required to demonstrate to each local authority in which works are undertaken how it has complied with the planning conditions. The Applicant proposes to do this via a Compliance Framework, as set out in Section 2.9 (Consent Condition) of the RTS.

2.2.2.4 Compliance Framework

47. The Applicant welcomes Offaly County Council's support for the proposed Compliance Framework as set out in Section 2.9 (Consent Condition) of the RTS and has no further response.

2.3 Response to Matters Raised Previously – Further Clarification

2.3.1 Additional Submissions

48. Seven Additional Submissions raised matters that had been considered previously and related to which the Applicant is providing further clarification. The matters raised included:

- Sufficient legislate detail for Water Resource Plans and holistic view of the management of the resource;
- Financial risk and cost effectiveness of the WSP. Operational competence to justify confidence in a project of this scale and complexity;
- Alternatives Assessment does not comply with EIA Directive; and
- Inaccurate Leakage Values.

49. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Sufficient legislate detail for Water Resource Plans and holistic view of the management of the resource.	RTS –Status of the Regional Water Resources Plan – Section 2.1
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Financial risk and cost effectiveness of the WSP. Operational competence to justify confidence in a project of this scale and complexity. Impact of cost increases on alternatives assessment.	RTS – Project Costs / Cost Benefit – Section 2.5
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance		
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary		
Additional Sub – Shane Matthews Previous: WSP_SUB_77	Shane Mathews		

Additional Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council		
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Alternatives Assessment does not comply with EIA Directive.	RTS – Compliance with the Environmental Impact Assessment and Strategic Environmental Assessment Directives – Section 2.6
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo		
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Inaccurate Leakage Values	RTS - Challenging the Need for the Proposed Project – Section 3.2.2
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary		

2.3.2 Applicant's Summary Response providing further clarification on Matters Raised Previously

2.3.2.1 Water Resource Plans

50. Whether Water Resource Plans require additional legislative detail covering areas such as the authority and responsibility of Uisce Éireann over water bodies and the interface between statutory bodies, especially the ESB, was previously raised by Michael Reidy. Michael Reidy's Additional Submission also raises whether Water Resource Plans should also take a holistic view of the management of the resource'.

51. Uisce Éireann's interactions with waterbodies are regulated by the EPA. Legislation specifically around abstraction, including relationship between statutory bodies such as EPA, Uisce Éireann and ESB, is contained within the Water Environment (Abstractions and Associated Impoundments) Act 2022 (WAA). As per section 83 of the WAA, Irish Water and the ESB may enter into an agreement whereby Irish Water may abstract and the ESB may permit Irish Water to abstract water from a reservoir owned or operated by the ESB. The basis of this agreement is the draft water abstraction document included in the SID Planning application.

52. As per Section 6.3, Engagement with Statutory Stakeholders, of the Consultation Report for the Regional Water Resources Plan - Eastern and Midlands, statutory bodies, such as the EPA, were consulted with during the creation of the plan.

53. River Basin Management Plans (RBMP) take a holistic approach of the management of Irish water bodies. Uisce Éireann and Uisce Éireann's Water Resource Plans fed into the RBMPs.

2.3.2.2 Costs

54. The cost increases, the financial risk of further increases and the cost effectiveness of the Proposed project WSP were also previously raised. Many of the Additional Submissions reiterate these points. In addition, the River Shannon Environmental Protection Alliance now also raises whether ecological costs (eg salmon population collapse) extinction) is assigned any monetary value in the Cost Benefit Analysis.

55. Garrett Reil and Cliona Geary also raise in their Additional Submission whether the Preliminary Business Case's cost benefit analysis of in excess of 10 to 1 used the most up to date cost estimate of €4.6 - €5.9 billion. Further they now raise a previously raised item on whether Uisce Eireann has the operational competence to justify confidence in a project of this scale and complexity

56. The impact of costs increases on alternatives assessment in the NWRP was previously raised and is raised again including for example, by River Shannon Environmental Protection Alliance and Christopher Campion.

57. The Applicant would reiterate as per Section 2.5 (Project Costs / Cost Benefit) of the RTS, the preliminary project cost estimate is robust and was independently verified. It was reviewed in 2025 and did not change. An independently reviewed Cost Benefit Analysis found that the Proposed Project will deliver in excess of €10 of benefits for every €1 of costs.

58. In relation to the ecological costs for the CBA, as detailed in the publicly available Preliminary Business Case, the CBA was required to be calculated as per the *Public Spending Code – A Guide to Evaluating, Planning and Managing Public Investment", December 2019* and the Applicant fully complied with that. Carbon costing and traffic disruption is allowed for within this. Costing of temporary habitats or permanent loss under the permanent above ground infrastructure is not, however the cost for habitat reinstatement / planting is included within the capital cost including allowance for maintenance in accordance with the CEMP.

59. The Applicant would reiterate as per Section 2.5 (Project Costs / Cost Benefit) of the RTS, at each project gate, the project estimate is updated and reassessed to ensure value for money. Further the Applicant can confirm and would reiterate, that the Preliminary Business Case's cost benefit analysis used the most up to date cost estimate of €4.6 - €5.9 billion. As set out in Section 2.5.1 of Section 2.5 (Project Costs / Cost Benefit) of the RTS, the cost benefit analysis was updated in 2025 and was still in excess of 10:1.

60. The Applicant would reiterate as per Section 2.5 (Project Costs / Cost Benefit) of the RTS, the Applicant has a strong track record for delivering projects on time and to budget, e.g. Athlone main drainage, and while the Proposed Project Region is the largest water infrastructure project in the history of the State, it is not complex in its design. The project comprises elements that the Applicant is delivering on a day-to-day basis, over a large geographical area.

61. Any cost increases since the Eastern and Midlands Plan (this is the 2022 Regional Water Resources Plan (RWRP) would primarily be due to updated construction start date, updated inflation rate and level of risk conservatism. These cost changes would have similar impacts on all options' costs, which is one of a number of factors considered in the optioneering, and does not alter the Preferred Approach as set out in the RWRP in accordance with the approach defined in the National Water Resources Plan – Framework Plan.

2.3.2.3 Alternatives Assessment does not Comply with EIA Directive

62. Non-compliance with the Environmental Impact Assessment (EIA) and Strategic Environmental Assessment (SEA) Directives was previously raised and has been repeated in the Additional

Submissions. The River Shannon Environmental Protection Alliance raised in its Additional Submission that alternative water sources must be assessed in the EIA as well as the SEA.

63. The Applicant does not agree with this as alternative water sources are strategic considerations and dealt with in the SEA. As per Section 3, Consideration of Reasonable Alternatives, of the EIAR, Article 5 and Annex IV of the EIA Directive require an EIAR to provide a description of the reasonable alternatives studied by the developer, which are relevant to the proposed project and its specific characteristics. The Proposed Project's EIA assessed relevant alternatives including pipeline routing, siting of infrastructure along the pipeline and pipeline material and these were reported in the EIAR in Chapter 3 – Consideration of Reasonable Alternatives.

2.3.2.4 Inaccurate Leakage Values

64. The accuracy of the Applicant's demand figures were raised previously and addressed in Section 3.2.2 (Challenging the Need for the Proposed Project) of the RTS. In response to River Shannon Environmental Protection Alliance's Additional Submission in relation to inaccurate leakage figures, the Applicant can confirm that Uisce Éireann (who are the Applicant) reports leakage performance through methodologies agreed with the CRU and EPA. These assessments indicate that national leakage has reduced from approximately 49% in 2014 to 36%, while leakage in the Greater Dublin Area has reduced from 37% to approximately 29%. These figures are based on completed Water Balance studies and form part of Uisce Éireann's regulatory reporting framework. Leakage levels in Dublin and nationally are now at their lowest ever recorded and reflect more than a decade of sustained investment in pipe rehabilitation, pressure management, leak detection and repair.

65. It should be noted that in references to higher leakage figures; that Total Leakage comprises both Network Leakage and Customer-Side Leakage. Uisce Éireann is responsible for Network Leakage only and not for Customer-Side Leakage. The appropriate CRU-approved methodology distinguishes between these different elements.

66. Garrett Reil and Cliona Geary raise that in their Additional Submission that they are not satisfied with the response in Section 3.2.2 (Challenging the Need for the Proposed Project) of the RTS, regarding 'Kennedy Analysis' claims of mathematical errors in the demand analysis. The Applicant previously responded to Kennedy Analysis claims regarding the need for the Proposed Project as part of responses to consultation submissions on previous iterations of the project, and in response to consultation submissions on the NWRP and on the RWRP for the East and Midlands Region.

2.4 Response to New Matters Raised in Additional Submissions

2.4.1 Additional Submissions

67. Ten Additional Submissions raised new matters that had not been previously responded to regarding:

- Data centre usage being large and not accounted for;
- ChatGPT usage resulting in insufficient response;
- Documents not being on the Public File;
- RTS report did not answer all matters raised and did not provide evidence; and
- Missed leakage targets.

68. The following Additional Submissions raised new matters considered to constitute an overarching matter.

Additional Submission Ref	Name of Individual or Organisation	New Matter Raised
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Data centre usage being large and not accounted for
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	
Additional Sub – Melina Sharp and Michael Eversen Previous: WSP_SUB_59	Melina Sharp and Michael Eversen	
Additional Sub – Richard Cahill Previous: WSP_SUB_25	Richard Cahill	
Additional Sub – Stefan and Olivia Hahne Previous: WSP_SUB_28	Stefan and Olivia Hahne	
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	ChatGPT usage resulting in insufficient response
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary	
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Documents not on Public File
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council	
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	RTS report did not answer all matters raised and did not provide evidence
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Missed Leakage Targets

2.4.2 Applicant's Summary Response on New Matters

2.4.2.1 Data Centres

69. A number of the Additional Submissions, including Melina Sharp and Michael Eversen, requested clarification on data centre water usage, especially during hot weather and whether data centres will be a significant proportion of the Eastern & Midlands demand and whether latest data centre water usage data impacts the Water Supply Project's demand calculations.

70. In 2026 Uisce Éireann carried out a review of data centre water use. This involved a review of commercial customers to determine public water consumption use across all known Data Centres. It identified a total of 30 campuses where data centres were located, with public water supplying 57 units in Dublin, Meath Cork, and Louth.

71. Data Centre consumption as a percentage of overall water supplied is low. Nationally Uisce Éireann produces over 1.8 billion litres of drinking water a day with data centres using on average less than 0.3% of all water produced.

72. Given most data centres are in the Greater Dublin Area (GDA) water resource zone the Applicant also analysed demand here, water production in the GDA averages circa 640 million litres a day, with water use by data centres still low, equating to less than 0.8% of water produced in the GDA. During the recent summer drought, this rose to an average of approximately 1.0% for July 2026.

73. In planning water supplies for the future, data centres are not a concern for Uisce Éireann. Its engagement with operators has shown that new/future facilities are increasingly adopting water-efficient technologies, including hybrid cooling systems, water recycling, rainwater harvesting and on-site storage, which minimise reliance on public drinking water supplies.

74. Current data centre water consumption does not represent a significant proportion of overall public water demand. Many modern Data Centres in Ireland are designed to utilise a hybrid of air and liquid cooling, this approach results in minimal to no reliance on public drinking water. Data Centres also recycle the water sourced from the public mains and send it back through the data halls several times, as a result, not continually drawing upon the public mains and utilising water more efficiently for cooling purposes. In addition, such Data Centres may also switch to air cooling at times as a method of cooling data centre halls.

75. Further measures being taken to reduce water use in future data centres include leveraging rainwater harvesting for cooling purposes, with limited contingency to draw from the public supplies.

76. It remains Government policy to support the development of sustainable Data Centres by encouraging a conservation and use-less approach where possible. Uisce Éireann when engaging with Data Centre applicants through its Connection Enquiry process continue to promote the adoption of water-efficient technologies through the connection enquiry and connections process.

77. The Water Supply Project has not been developed to serve data centre demand. Rather, it is required to address long-term water security, resilience and supply deficits across the Eastern and Midlands Region, including domestic, commercial, industrial and public service demand.

2.4.2.2 ChatGPT

78. Two Additional Submissions queried the Applicant's use of Artificial Intelligence (AI), specifically ChatGPT, in the thematic analysis of submissions. The Additional Submissions expressed concern that the use of AI may have resulted in individual submissions not being read in full by the Applicant and that nuanced or cross-cutting issues may have been fragmented across different thematic chapters rather than considered as coherent submissions.

79. As detailed in Section 1.2 (Review of Submissions) of the RTS, the use of ChatGPT was limited to assisting with the initial identification and thematic categorisation of issues raised in the submissions. The output generated by ChatGPT was subsequently reviewed and manually audited by the Project Team.

80. This review process involved each submission being read in full by members of the Project Team to verify that all matters raised had been appropriately identified, categorised and addressed. The use of ChatGPT did not replace human review of submissions and did not determine the Applicant's response to any issue raised.

81. The Applicant further notes that, while issues raised in submissions were grouped by theme to facilitate assessment and response, submissions were also considered in their entirety during the review

process. The thematic structure adopted in the RTS Report was intended to avoid duplication and to provide a consolidated response to common issues raised by multiple respondents. It was not intended to fragment or diminish the substance of any individual submission.

82. The Applicant is satisfied that all submissions received were considered in full and that the responses provided in the RTS Report appropriately address the issues raised, including matters that span multiple technical disciplines or report chapters.

2.4.2.3 Documents not on Public File

83. The River Shannon Environmental Protection Alliance Additional Submission contends that a number of documents relevant to the assessment of the Proposed Project are not available on the public file and that this gives rise to a procedural deficiency. The Applicant's response in relation to each document referred to in the Additional Submission is set out in Table 2.1. Should ACP require additional information to enable assessment of the application, UÉ will respond to any such queries via a request for further information.

Table 2.1: Applicant's response on documents not available on public file

Document	Applicant Response
Foundational Wallingford Hydrological Reports (understood to date from approximately 1994 and 2007), which underpin the NWRP alternatives screening	Appendix C of the NWRP provides a transparent information on how yield assessment of existing sources of supply were developed and refers to Institute of Hydrology Report No. 108 Low flow estimation in the United Kingdom Methodology (1992). The Applicant assumes this is the document being referenced. This guidance document is publicly available at IH_108.pdf.
HR Wallingford External Assurance Review (2024), commissioned by the CRU as a Public Spending Code compliance review and considered by the MPAG.	These have been publicly available on CRU's website since 2024 – see CRU Review of Uisce Éireann's Proposed Water Supply Project | CRU.ie
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 methodology, criteria and screening outcomes informing the National Water Resources Plan are publicly available within the Regional Water Resources Plan - Eastern and Midlands and its supporting technical appendices. In particular, Appendix Study Area 9 Technical Report (see RWRP-EM-Appendix-9-Study-Area-9-Technical-Report) includes the assessment of alternative sources and identifies the factors which resulted in individual alternatives being screened out. The National Water Resource Plan and each of the Regional Water Resource Plans were made publicly available between 2021 to 2023 and each of them had their own public consultation period. The Applicant considers that sufficient information has been made available to understand and assess the alternatives screening process at that strategic level.
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 Preliminary Business Case has been publicly available at Prelim Business Case.pdf since before submission of the SID application. It sets out the principal assumptions underpinning the Cost Benefit Analysis, including the discount rate and appraisal period. Section 2.3.2.2 (Costs) of this report addresses ecological cost and the CBA. Any cost increases since the 2022 Regional Water Resources Plan (RWRP) – Eastern and Midlands, would primarily be due to updated construction start date, updated inflation rate and level of risk conservatism. These cost changes would have similar impacts on all options' costs, which is one of a number of factors considered in the optioneering, and does not impact the determinations of the RWRP.
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 758 page Abstraction Assessment Appendix (Appendix A9.1 of the EIAR) extensively covers the modelling performed, including details mentioned in submission.

Document	Applicant Response
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'.	It should be noted that the ultimate responsibility for demonstrating and recording the Article 6(3) assessment and integrity conclusion rests with the competent authority, not with the applicant or the author of the Natura Impact Statement (NIS). The applicant's role is to provide the necessary information and scientific evidence through the NIS, but An Coimisiún Pleanála must undertake its own Appropriate Assessment and reach its own reasoned conclusion. In this regard, the purpose of an NIS is to provide a scientifically robust evaluation of how a proposed development or project might affect a protected European site. The Applicant submitted an extensive NIS that robustly assessed each European site that could be impacted by the Proposed Project, following an Appropriate Assessment screening process. The NIS was undertaken by a team of competent experts and based on best scientific knowledge, including drawing on information from other assessments undertaken for the Proposed Project including the EIAR, hydrological modelling and Water Status Impact Assessment Report. The Applicant considers that the NIS, together with the supporting technical assessments submitted as part of the application, contains the evidence, analysis and scientific assessment relied upon in reaching the conclusion that the Proposed Project will not adversely affect the integrity of any European site, either alone or in combination with other plans or projects, in view of the conservation objectives of those sites, and that there is no reasonable scientific doubt as to that conclusion. It should be noted that the future abstraction licence application will be open to public participation.
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.	The EPA correspondence referred to in the Additional Submission relates to a separate statutory licensing process. The Applicant notes that the abstraction licence application has not yet been submitted and that the EPA will be responsible for the administration of that process. Any future correspondence associated with that process will be managed in accordance with the statutory requirements applicable to the abstraction licensing regime. The Applicant does not consider that the absence of such correspondence from the planning file represents a deficiency in the SID application.

84. Limerick City and County Council's Additional Submission requested that independently verified cost-benefit analysis be made publicly available. As outlined in Table 2.1, the Preliminary Business Case and the independent assurance review commissioned by the CRU are publicly available. The Applicant therefore considers that the information requested by Limerick City and County Council is already available in the public domain.

2.4.2.4 RTS Report did not Answer all Matters Raised

85. Joe Mayo submits that the thematic approach adopted in the RTS may be inadequate where submissions raise specific legal and technical questions that, in his view, require individual responses. He also criticises the Applicant's reliance on cross-references to the Planning Report, EIAR, NIS and WSIAR. Laura Kavanagh similarly submits that the RTS frequently relies on conclusions rather than supporting evidence and, in some instances, addresses different issues to those raised in submissions. Similar comments were made in the Additional Submissions from the River Shannon Environmental Protection Alliance, who raised the sufficiency of the evidence provided by the Applicant.

86. The Applicant considers that the RTS adequately addressed all substantive matters raised during the statutory consultation process. On the back of the Additional Submission, where matters previously addressed in the RTS are deemed to require further clarity, they have been clarified in this Report. The thematic structure of the RTS was adopted to avoid unnecessary repetition where similar matters were raised across multiple submissions and to provide a clear and coherent response to recurring issues. Cross-references were included where appropriate to direct ACP to the relevant assessments and supporting evidence contained within the application documentation, including the Planning Report, EIAR, NIS and WSIAR, which together comprise the evidential basis supporting the application.

2.4.2.5 Missed Leakage Targets

87. The Additional Submission of River Shannon Environmental Protection Alliance raises leakage nationally went up in 2022, 2023 and 2024 and Uisce Eireann missed it's leakage reduction target for 2020-2024.

88. Leakage did increase in one year between 2020 and 2024 (i.e. 2023). While annual leakage reduction targets have not always been achieved, the longer-term trend is one of significant leakage reduction through sustained investment, active leakage detection, repairs, network improvements and pressure management programmes across the country. Leakage in the Greater Dublin Area has reduced from 37% in 2019 to approximately 29%. A range of factors can influence annual leakage performance, including the condition and age of existing infrastructure, severe weather events, operational challenges and the complexity of repairing leaks on large and strategic water mains.

89. While significant reductions have been achieved, further gains become progressively more challenging due to factors including ageing infrastructure, increasing demand, climate-related pressures and resource constraints. Uisce Éireann's strategy is to achieve the Sustainable Economic Level of Leakage (SELL) by 2034, equating to 31% nationally and below 24% in the Greater Dublin Area. SELL is the technically, operationally and economically sustainable level of leakage, beyond which further reductions may not deliver value for money. Uisce Eireann are committed to achieving SELL by 2034 and seek further reductions once SELL has been achieved.

90. Regardless of the revised targets the Proposed Project is still critically required as evidenced by its designation by the state as a Critical Infrastructure Project.

3. Planning

3.1 Overview

91. 50 of the 114 initial submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Planning, such as, for example, compliance with planning policy. These were considered in the RTS provided to the ACP in May 2026.

92. Both of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Planning. These were considered in the SRTS provided to the ACP in June 2026.

93. Of the 43 Additional Submissions received by ACP 15 raised matters relevant to Planning.

94. The Applicant included a Planning Report in the documentation submitted as part of the SID Planning Application. This Report should be read in conjunction with the Planning Report submitted with the SID planning application for the Proposed Project.

95. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Planning and should be read alongside the original RTS and SRTS. Cross references to the relevant chapters of the EIAR, RTS and SRTS have been included, where appropriate, to assist the reader.

96. This Chapter responds specifically to Planning matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 4 (Consultation and Communication); and
- Chapter 9 (Traffic and Transport).

97. Cross references to this chapter have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

98. Observations identified by the Applicant included in this chapter include topics such as 'need for the project' (both supportive and challenging), support of the project delivery in an accelerated manner, balanced regional development, alignment of the project with national planning policy including the National Planning Framework and National Development Plan, the alignment of the project with the principles of sustainable development, compliance of the project with planning law and the assessment of future water supply needs in the west and mid-west.

99. This Chapter is structured around the following sections:

- Matters raised regarding Planning and previously responded to;
- Matters raised previously and further clarification is being provided; and
- New matters raised regarding Planning in the Additional Submissions.

3.2 Response to Matters Raised Previously

3.2.1 Additional Submissions

100. 13 of the Additional Submissions related to matters that had been responded to previously. These included the following planning matters:

- Support / Acknowledgement for the Need for the Proposed Project

- Challenging the Need for the Project
- Balanced Regional Development
- Potential Impact of Acquisition on Future Development Lands
- Compliance with Conditions.

101. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Chambers Ireland Previous: WSP_SUB_09	Chambers Ireland	Support for the Project	RTS - Support / Acknowledgement for the Need for the Proposed Project - Section 3.2.1
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Balanced Regional Development	RTS - Balanced Regional Development - Section 3.2.3
Additional Sub – Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Challenging the Need for the Project Balanced Regional Development	RTS – Challenging the Need for the Project - Section 3.2.2 RTS - Balanced Regional Development - Section 3.2.3
Additional Sub – Dublin Chamber Previous: WSP_SUB_41	Dublin Chamber	Support for the Project	RTS - Support / Acknowledgement for the Need for the Proposed Project - Section 3.2.1
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Challenging the Need for the Project	env
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary	Challenging the Need for the Project	RTS - Balanced Regional Development - Section 3.2.3
Additional Sub – IBEC Previous: WSP_SUB_49	IBEC	Support for the Project	RTS - Support / Acknowledgement for the Need for the Proposed Project - Section 3.2.1
Additional Sub – Ballymore Eustance Trout and Salmon Anglers Association Previous: WSP_SUB_71	Ballymore Eustace Trout and Salmon Anglers Association	Compliance with Conditions	RTS -Compliance with the Environmental Liability Directive and Article 191(2) of Treaty on the Functioning of the European Union Section 27.5.1
Additional Sub – Eamonn Dooley Previous: WSP_SUB_84	Eamonn Dooley	Potential Impact of Acquisition on Future Development Lands	RTS - Potential Impact of Acquisition on Future Development Lands - Section 14.3.2
Additional Sub – Fintan Dunne Previous: WSP_SUB_86	Fintan Dunne	Potential Impact of Acquisition on Future Development Lands	RTS - Potential Impact of Acquisition on Future Development Lands - Section 14.3.2
Additional Sub – Michael and Mary Kinsella	Michael and Mary Kinsella	Potential Impact of Acquisition on Future Development Lands	RTS - Potential Impact of Acquisition on Future Development Lands - Section 14.3.2

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Previous: WSP_SUB_108			
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council*	Challenging the Need for the Project Balanced Regional Development	RTS - Challenging the Need for the Project - Section 3.2.2 RTS - Balanced Regional Development - Section 3.2.3
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Challenging the Need for the Project Balanced Regional Development	RTS – Challenging the Need for the Project - Section 3.2.2 RTS - Balanced Regional Development - Section 3.2.3

3.2.2 Applicant's Summary Response on Matters Raised Previously

3.2.2.1 Support for the Proposed Project

102. As with the response in Section 3.2.1 (Support / Acknowledgement for the Need for the Proposed Project) of the RTS Report the Applicant welcomes the Additional Submissions received which recognise the importance of the Proposed Project and the critical need to deliver this necessary infrastructure.

3.2.2.2 The 'Need' for the Proposed Project

103. As with the original responses to the Statutory Consultation a number of responses challenged the need for the Proposed Project including for example, Limerick City and County Council, Futureproof Clare Environmental CLG. The Applicant would reiterate its response in Section 3.2.2 (Challenging the Need for the Proposed Project) of the RTS Report that the need for the Proposed Project is firmly established by NWRP including specifically in the Regional Water Resources Plan - Eastern and Midlands (the Eastern and Midlands Plan (Irish Water, 2022)) which is part of the NWRP. This is set out in Sections 4.2 – 4.4 of the Planning Report submitted as part of the SID Planning Application. Section 4.4.1 of the Planning Report describes the 'Supply Demand Balance' and Table 4.1 summarises the Treated Water Requirement in the GDA & 35 Other Water Resource Zones (WRZs) by 2050. The deficit is the gap or difference between the water available for supply compared with the demand for water. This is the need for water. The Proposed Project is intended to address a deficit in water supply and provide resilience in supply. The Government of Ireland has designated the Proposed Project as critical infrastructure precisely because of its critical national importance under The Critical Infrastructure Act 2026.

3.2.2.3 Balanced Regional Development

104. Section 3.2.3 (Balanced Regional Development) of the RTS set out the Applicants response to previous observations regarding balanced regional development. Several of the Additional Submissions repeated these concerns including for example, Christopher Campion, Michael Reidy, Tipperary County Council and Limerick City and County Council. The Applicant would refer to its previous response, including for example:

- The Proposed Project accords with sustainable development principles and is fully aligned with national, regional and local planning policy, including the NPF and the Regional Spatial and Economic Strategies for both the Southern Region and the Eastern and Midland Region. The Proposed Project is identified as strategic, enabling infrastructure that improves resilience, addresses an established regional water deficit, and supports balanced regional development across the Eastern and Midlands Region rather than solely Dublin.

- The overall NWRP examines water supply solutions across all Water Resource Zones, including those in the Mid-West (Limerick, Clare and Tipperary), and identifies preferred approaches that enable each WRZ to develop in line with the growth objectives set out in the National Planning Framework.

3.2.2.4 Future Development Potential

105. Future Development Potential was previously addressed in Section 14.3.2 (Potential Impact of Acquisition on Future Development on Specific Landowner Lands) of the RTS rather than as a planning matter. However, it does relate to potential future planning applications. The Applicant has no further response to the future development potential point raised by specific landowners.

3.2.2.5 Compliance with existing planning conditions

106. One Additional Submission relates to the current operation of the existing Ballymore Eustace WTP in County Kildare. This is an existing facility and is not within the scope of the response to be provided to issues relating to the SID planning application under consideration by ACP. Matters of planning compliance are a matter between Uisce Éireann and the relevant planning authority.

3.3 Response to Matters Raised Previously – Further Clarification

3.3.1 Additional Submissions

107. 10 of the 15 Additional Submissions raised matters relating to planning that had been considered previously and for which further clarification is being provided. The matters raised included:

- Notification of Planning;
- Best Practice in Urban Water Resource Management;
- Planning Policy Compliance; and
- Community Benefit Scheme.

108. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Notification of Planning	RTS - Notification of Planning - Section 3.3.3
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Notification of Planning	RTS - Notification of Planning - Section 3.3.3
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary	Best Practice in Urban Water Resource Management	RTS - Best Practice in Urban Water Resource Management - Section 3.3.4
Additional Sub – National Transport Authority Previous: WSP_SUB_95	National Transport Authority	Planning Policy Compliance	RTS - Planning Policy Compliance- Section 3.4.1
Additional Sub – Transport Infrastructure Ireland (TII) Previous: WSP_SUB_99	Transport Infrastructure Ireland (TII)	Planning Policy Compliance	RTS - Planning Policy Compliance- Section 3.4.1
Additional Sub – Mark Kinsella Previous: WSP_SUB_107	Mark Kinsella	Notification of Planning	RTS - Notification of Planning - Section 3.3.3
Additional Sub – Michael and Mary Kinsella Previous: WSP_SUB_108	Michael and Mary Kinsella	Notification of Planning	RTS - Notification of Planning - Section 3.3.3
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council	Notification of Planning	RTS - Notification of Planning - Section 3.3.3
		Community Benefit Scheme	RTS - Development Contributions and Bonds – Section 3.4.4 RTS - Community Benefit Scheme - Section 3.4.5
Additional Sub – Offaly County Council Previous: WSP_SUB_113	Offaly County Council	Community Benefit Scheme	RTS - Development Contributions and Bonds – Section 3.4.4 RTS - Community Benefit Scheme - Section 3.4.5
Additional Sub - Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Community Benefit Scheme	RTS - Development Contributions and Bonds – Section 3.4.4 RTS - Community Benefit Scheme - Section 3.4.5

3.3.2 Applicant's Summary Response providing further clarification on Matters Raised Previously

3.3.2.1 Notification of Planning

109. A number of specific landowners repeated concerns that they had not received written notification of the SID planning application / Compulsory Purchase Order. The Applicant does not agree and individual responses have been provided within the CPO process.

110. Limerick City and County Council, Tipperary County Council, Futureproof Clare CLG and Environmental Trust Ireland raised the observation that site notices were not erected in Limerick or Clare, calling into question the validity of the application. Environmental Trust Ireland questioned the validity of the planning application on the grounds of the descriptions of the site notices and their locations in the planning application form, noting correspondence between the Applicant and An Coimisiún Pleanála subsequent to lodgement. The Applicant responded to these matters in Section 3.3.3 (Notification of Planning) of the RTS.

111. In respect of the further clarification being provided this relates to the identification of the location of the site notices on the application form and the townlands listed within it. This clarification had no bearing on the site notices. The locations of the site notices concerned were identified and clarified by the Applicant. The clarification regarding the sites notices related to the application form and the townlands listed within it versus the site notices The Applicant considers that the clarification of site notice locations had no material effect on the ability of the public to understand the project or participate in the process.

3.3.2.2 Urban Water Resource Management

112. The Additional Submission from Garrett Reil and Cliona Geary raised specific concerns relating to international best practice in water resource management.

113. The Applicant considers that its previous response to the matter is not generic and relates to the characteristics of the project and the environment in which it is located.

114. The Applicant has complied with current international best practice in urban water resource management. The submitted Water Status Impact Assessment Report sets out the Proposed Project's compliance with the Water Framework Directive (WFD) Directive 2000/60/EC, the UK Environment Agency's 'Clearing the Waters for All' 2016 (updated 2023) (Environment Agency 2023) and the UK Planning Inspectorate's Advice Note 18: Water Framework Directive (Planning Inspectorate 2015) for England and Wales.

115. The basis of the Proposed Project comes from the National Water Resources Plan and the Eastern and Midlands Plan (the RWRP), which sets out the Option Development process and outlines how the Preferred Approach for the region was identified from a screening process, updated outline design and a Multi Criterial Assessment using criteria such as lowest cost, lowest carbon, most resilient and best environmental. Following this, the Preferred Approach went through sensitivity testing by testing the effect of a range of future events, for example climate change or new abstraction legislation on the Supply Demand Balance and the Preferred Approach was found to be highly adaptable to a broad range of future scenarios. The National Water Resources Plan was the subject of public consultation and a strategic environmental assessment.

116. Chapter 3 (Consideration of Reasonable Alternatives) of the submitted EIAR sets out the reasonable alternatives considered in respect of the Proposed Project and has been prepared in accordance with best practice and in compliance with the EIA Directive. It is therefore considered to be adequate in terms of the alternatives analysis and the overall justification for the Proposed Project.

117. The Preferred Approach which has been put forward to ACP as the Proposed Project, and since designated by the Government as a critical infrastructure project, will provide the best overall outcome for the region, particularly in relation to environmental, ecology and resilience outcomes and the submitted SID documentation demonstrates compliance with best practice in urban water resource management.

3.3.2.3 Planning Policy Compliance

118. In its Additional Submission, Transport Infrastructure Ireland (TII) raised issues regarding compliance with road policies affecting Offaly and Tipperary, as it had in its original submission. Tipperary County Council also raised similar concerns to TII regarding the provision of a construction site entrance off a national road at Lisgarriff, in the context of the County Development Plan. The National Transport Authority notes the applicant's agreement to the proposed conditions and reiterates the need to apply them to any grant of planning permission.

119. The Applicant previously responded to these matters in Section 3.4.1 (Planning Policy Compliance) of the RTS and this is noted by TII and Tipperary County Council. The Applicant will complete the Road Safety Audits and Design Reports requested by TII and continue to work with TII to ensure that the matters raised are taken into account in the detailed design. TII in its further response has now confirmed such matters can be conditioned. It is considered that meeting these requirements will not result in material change to the planning design or the assessments carried out as part of the planning application.

120. Generally, the Applicant is satisfied that should ACP consider that the conditions proposed are appropriate, that such conditions would be attached to a grant of planning permission. The detail of these conditions and the Applicants response to them is set out in Section 9.3.2.2 (Proposed Conditions) of this Report.

121. The NTA response is noted and welcomed.

3.3.2.4 Development Contributions and Community Benefit Scheme

122. Offaly County Council, Tipperary County Council and Limerick City and County Council each raised the proposed Community Benefit Scheme in their Additional Submissions. Each of the Additional Submissions restate their position in respect of the terms, value and length of the proposed Scheme.

123. With regards to the proposed Community Benefiting Scheme, Offaly County Council notes, in its Additional Submission that its Development Contribution Scheme 2026-2032 has been in effect since March 2026. The Council notes that the scheme will apply to any development consent granted by ACP. The Additional Submission reiterates concerns that the proposed five-year duration of the Community Development Fund is too short and may prevent some communities from benefiting from the fund. It is submitted that a higher level of funding is justified given the scale of disruption anticipated within Offaly. It is proposed that the maximum allocation per project should be increased to €100,000.

124. The making of the new Offaly Development Contribution Scheme 2026-2032 is noted. The Applicant responded to these matters in Section 3.4.4 (Development Contributions and Bonds) of the RTS and it's position remains that Section 48 development contributions would not ordinarily apply to a project of this nature and strategic importance, although ACP retains discretion under the Act to impose such a condition where the statutory requirements are met.

125. In its Additional Submission Tipperary County Council request that should permission be granted ACP include the payment of Development Contributions in accordance with its Development Contributions Scheme 2020. It reiterates that Community Gain Proposals should not be viewed as a means to offset

development contributions. It draws attention to a wind farm case which allowed for a Bond, and Development Contributions, in addition to a Community Gain Fund proposal.

126. The Applicant responded on the Community Benefit Scheme in Section 3.4.5 (Community Benefit Scheme) of the RTS and would reiterate:

- The Community Benefit Scheme submitted as part of the SID planning application sets out the aim to deliver support for community initiatives under the categories: Economy, Environment and Education.
- To inform the making of the Community Benefit Scheme, specialist research examined available socio-economic and demographic information and, in combination with stakeholder engagement, highlighted community development priorities and frameworks that the Applicant can align with to ensure that the benefits of the Proposed Project are maximised for local communities.

127. The Applicant considers that, as a public water supply project providing a utility and a community supporting use, which the Government has designated as critical infrastructure because of its national importance, rather than a commercial, for- profit concern, that wind farm case cited is not a precedent for the application of development contributions in addition to a community benefit fund. The Proposed Project relates to infrastructure delivered by a State Body with statutory responsibility for the provision of public water services, which are funded and delivered at national level. The application of financial contributions towards other infrastructure would result in public funds being transferred between State Bodies without a clear and justified link between the proposed development the Development Contribution Scheme, resulting in an unjustified duplication of public investment. Such conditions amount to one arm of the state funding another arm of the state.

128. Limerick City and County Council stated that:

"*Given that the abstraction and associated infrastructure are intended to operate indefinitely, and the impact – hydrological, environmental and reputational – extends well beyond a 5km construction corridor, the scale and duration of this scheme are not proportionate to a project of this magnitude and permanence*."

The Applicant responded to these matters previously in Section 3.4.5 (Community Benefit Scheme) of the RTS and would reiterate:

- As part of the research study provided in the SID application, similar large scale projects in energy, transportation and healthcare sectors were reviewed to ascertain the level of community gain investment that was proposed or implemented. This was undertaken to understand if the Proposed Project fund could be benchmarked against other large scale projects to align the funding and approach. Through the research it was found that there is no standard or common approach to community gain investment in the water supply sector in Ireland or the UK. It was also found that community funding initiatives for nationally important projects in the energy and transport sectors were usually associated with the construction phase and /or a defined period of the operational phase.
- With regard to the 5 year fund duration, taking into account that Chapter 14 of the submitted EIAR concluded that there were anticipated to be no significant residual negative effects on people and communities during the Construction and Operational Phases, it is considered that a five year fund duration, aligning with the Construction Phase, is appropriate for publicly funded project rather than over the operational period, which is more aligned with private developer led, or profit driven, projects. The 5km radius for funding support was proposed to ensure that the communities experiencing the greatest impact during the Construction Phase are prioritised and receive proportionate funding. The Applicant considers the 5km radius, inclusive of communities adjacent to Lough Derg, to be appropriate for the Proposed Project.

3.4 Response to New Matters Raised in Additional Submissions

3.4.1 Additional Submissions

129. Three of the Additional Submissions raised matters that had not been responded to previously. These all related to information provided to stakeholders.

130. The following Additional Submissions raised new matters related to Planning.

Unique ID	Name of Individual or Organisation	New Matter Raised
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary	Information to Stakeholders
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Information to Stakeholders
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Information to Stakeholders
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council*	

3.4.2 Applicant's Summary Response to New Matters Raised

3.4.2.1 Information to Stakeholders

131. The Additional Submissions note that additional information was requested by prescribed bodies in their original submissions, including those of TII and Tipperary County Council, for details such as road safety audits in respect of compounds along the alignment. However, no further information could be provided to ACP in response, due to procedural constraints stipulated by ACP.

132. The Additional Submissions raise concerns that if the requested information is not provided to ACP then it would not be included in the determination process for the planning application.

133. The Applicant confirms that no information has been withheld from prescribed bodies, contrary to the assertions made in the Additional Submissions. Uisce Éireann has carried out further work that can provide adequate comfort to the prescribed bodies concerned. Further, the Applicant would note that TII in its Additional Submission has stated that the matters it previously raised can be satisfactorily resolved by way of planning condition. The Applicant would propose that such an approach is appropriate.

134. Ultimately, it is a matter for ACP to determine whether it has before it sufficient information to enable it to reach its decision on the application. We note that section 37F of the Planning and Development Act 2000 as amended empowers ACP "at its absolute discretion and at any time" to require the applicant for permission to submit further information.

135. Should ACP require further information to satisfy any questions that it may have in respect of the matters raised, the Applicant is happy to provide it on request.

4. Consultation and Communication

4.1 Overview

136. Twelve of the initial 114 submissions received by ACP in response to the Statutory Consultation raised relating to Consultation and Communication in respect of the Proposed Project. These were considered in the RTS Report submitted to the ACP in May 2026.

137. One of the two further submissions received by ACP in response to the Statutory Consultation raised matters relating to Consultation and Communication. These matters were responded to in the SRTS Report submitted to the ACP in June 2026.

138. Six of the 43 Additional Submissions received by ACP raised matters relevant to Consultation and Communications.

139. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions in respect of Consultation and Communication and should be read alongside the original RTS and SRTS. Cross references to the relevant chapters of the RTS and SRTS have been included, where appropriate, to assist the reader.

140. Observations identified by the Applicant included in this chapter include topics such public consultation adequacy, inadequate landowner engagement, consultation for landowners from potential future connections and issues with the consultation process.

141. This Chapter is structured around the following sections:

- Matters raised regarding Consultation and Communication and previously responded to;
- Matters raised previously and further clarification is being provided; and
- New matters raised regarding Consultation and Communication in the Additional Submissions.

4.2 Response to Matters Raised Previously

4.2.1 Additional Submissions

142. Seven responses raised matters that had been considered previously including:

- Public Consultation Adequacy;
- Inadequate landowner engagement; and
- Consultation for landowners from potential future connections.

143. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Public Consultation Adequacy	RTS - Public Consultation Adequacy – Section 4.2.1
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG		
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Snr	Inadequate landowner engagement	RTS - Landowner-Specific Engagement – Section 4.2.5
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne		
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare		
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne		
Additional Sub – Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Consultation for landowners from potential future connections	RTS – Future Take Offs – Section 4.3.1

4.2.2 Applicant's Summary Response on Matters Raised Previously

4.2.2.1 Public Consultation Adequacy

144. Matters relating to the adequacy of public consultation have been raised previously and have been raised again in a number of the Additional Submissions. Futureproof Clare Environmental CLG state there was inadequate consultation with local authorities and impacted communities. Environmental Trust Ireland details that they received no consultation. The Applicant refers ACP to Section 4.2.1 (Public Consultation Adequacy) of the RTS, in which these matters were addressed. As outlined therein, the Applicant implemented a comprehensive programme of stakeholder engagement and public consultation designed to facilitate accessibility, geographic reach and meaningful participation. This programme included in person public information events, webinars, a dedicated project website, briefings for local authorities and elected representatives, and ongoing stakeholder engagement activities. The aforementioned consultation opportunities are additional to the entitlement members of the public have to make submissions to ACP as part of the planning application process, which entitlement stems directly from the Aarhus Convention and the EIA Directive.

4.2.2.2 Inadequate landowner engagement

145. Matters relating to the adequacy of engagement with landowners and level of design information provided in respect of the Proposed Project have also been raised previously and are raised again in

Additional Submissions. The applicant refers ACP to Section 4.2.5 (Landowner-Specific Engagement) of the RTS, where these matters were addressed. As set out therein, extensive engagement has been undertaken with affected landowners since 2017, including the provision of information relating to the SID planning application and CPO process. In total, approximately 13,500 individual interactions have taken place with landowners during the development of the Proposed Project.

146. Within the statutory compulsory purchase order (CPO) process the Applicant is responding to individual landowners regarding the notice provided, where this has been raised. This will be separately by way of individual CPO response letters.

4.2.2.3 Potential future connections

147. Concerns were raised by Michael Reidy again regarding the potential future connections from the proposed take-off points and submits that consultation should be undertaken with potentially affected landowners. This matter was previously addressed in Section 4.3.1 (Future Take Offs) of the RTS. The Applicant notes that planning permission is not being sought for any future connections beyond those forming part of the Proposed Project. Accordingly, any such future connections do not form part of the application currently before ACP.

4.3 Response to Matters Raised Previously – Further Clarification

148. There were no matters within the Additional Submissions that had been raised previously that required further clarification relating to Consultation and Communication.

4.4 Response to New Matters Raised in Additional Submissions

4.4.1 Additional Submissions

149. One Additional Submission raised a new matter that had not been previously responded to regarding.

- Issues with the consultation process

150. The following Additional Submission raised new matters relating to Consultation and Communications.

Unique ID	Name of Individual or Organisation	New Matter Raised
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Issues with the consultation process

4.4.2 Applicant's Summary Response on New Matters

4.4.2.1 Issues with the consultation process

151. Futureproof Clare Environmental CLG raised a number of issues relating to the consultation process including;

- The assertion that non-statutory consultation events undertaken in early 2025 were held in Tipperary but not in Clare, Offaly or Limerick;
- Concerns regarding differences between the Applicant's record of the Community Clinic held in Scariff on 10 June and the account of that event presented by members of the local community and associated inadequacy of the broad consultation process; and
- The view that, if local authorities are opposed to the Proposed Project, ACP should not grant approval for the Proposed Project.

152. The Applicant can confirm that, as set out in Section 4.2.1 (Public Consultation Adequacy) of the RTS Report, six in-person consultation events were held in the vicinity of key elements of the Proposed Project. These included events in County Offaly and in Ballina, located on the Clare/Tipperary border.

153. The document prepared by the Applicant in relation to the Scariff Community Clinic (Appendix 2) was intended as a written response to issues and queries raised during the meeting and was not prepared as a formal record or set of meeting minutes. As per Section 4.2.2.1 (Issues with the Consultation Process) of this Report, there has been extensive consultation with the public.

154. It is incorrect to suggest that all local authorities are opposed to the Proposed Project. While a number of local authorities raised observations and concerns as part of the statutory planning process, none objected to the Proposed Project. Furthermore, a number of local authority Additional Submissions expressed support for the need and strategic importance of the Proposed Project.

5. Consideration of Reasonable Alternatives

5.1 Overview

155. Sixty-seven of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Consideration of Reasonable Alternatives, such as, for example, Alternative Sources. These were considered in the RTS Report submitted to the ACP in May 2026.

156. Neither of the further two submissions received by ACP, in response to the Statutory Consultation, raised matters which the Applicant identified as most relevant to Consideration of Reasonable Alternatives.

157. There were 16 of the 43 Additional Submissions received by ACP which raised matters relevant to Consideration of Reasonable Alternatives.

158. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Consideration of Reasonable Alternatives and should be read alongside the original RTS and SRTS. Cross references to the relevant chapters of the RTS and SRTS have been included, where appropriate, to assist the reader.

159. This Chapter responds specifically to Consideration of Reasonable Alternatives matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 2 – Overarching Matters
- Chapter 6 – Proposed Project Description; and
- Chapter 7 – Construction and Commissioning.

160. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

161. A large number of Additional Submissions made reference to the availability of alternatives to the Proposed Project including specifically leakage reduction and the availability of other sources of water. The matters were considered as part of the NWRP including the Eastern and Midlands Plan (Irish Water, 2022) and were not an alternative to the Proposed Project as explained in the EIAR in Chapter 3 (Consideration of Reasonable Alternatives).

162. This Chapter is structured around the following sections:

- Matters raised regarding Consideration of Reasonable Alternatives and previously responded to;
- Matters raised previously and further clarification is being provided; and
- New matters raised regarding Consideration of Reasonable Alternatives in the Additional Submissions.

5.2 Response to Matters Raised Previously

5.2.1 Additional Submissions

163. 13 responses raised matters that had been considered previously including:

- Leakage

- Alternative sources
- Groundwater Alternatives
- Alternative Assessment
- Desalination
- Alternative Access on Landowner Lands
- Alternative Regional Development.

164. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Pre-occupation with single solution	RTS – Alternative Assessment – Section 5.2.9
		Alternative groundwater sources	RTS – Alternative Source – Section 5.2.2
		Lough Ree abstractions	RTS – Groundwater Alternatives – Section 5.2.3
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Alternative assessment and NWRP reliance	RTS – Alternative Assessment – Section 5.2.9
Additional Sub – Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Alternative Sources for supply	RTS – Alternative Source – Section 5.2.2 RTS – Alternative Assessment – Section 5.2.9
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Groundwater Sources in Kildare	RTS – Groundwater Alternatives – Section 5.2.3
		Alternative sources plan level assessment	RTS – Alternative Source – Section 5.2.2
		Approach to alternatives	RTS – Alternative Assessment – Section 5.2.9
		Desalination as an alternative	RTS – Desalination – Section 5.2.4
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Aggressive water leak remediation	RTS – Leakage Reduction – Section 5.2.1
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Leakage Reduction inadequate	RTS – Leakage Reduction – Section 5.2.1
		Groundwater Sources	RTS – Groundwater Alternatives – Section 5.2.3
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary	Alternative Assessment remains inadequate	RTS – Alternative Assessment – Section 5.2.9
Additional Sub – James Crowley	James Crowley	Is the Project the best solution	RTS – Alternative Assessment – Section 5.2.9

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Previous: WSP_SUB_50			
Additional Sub – Melina Sharp and Michael Eversen Previous: WSP_SUB_59	Melina Sharp and Michael Eversen	Combination of multiple alternatives would provide better solution	RTS – Alternative Source – Section 5.2.2 RTS – Alternative Assessment – Section 5.2.9
Additional Sub - Senator Dee Ryan Previous: WSP_SUB_67	Senator Dee Ryan	Desalination	RTS – Desalination – Section 5.2.4
		Alternative sources	RTS – Alternative Source – Section 5.2.2
		Leakage reduction	RTS – Leakage Reduction – Section 5.2.1
Additional Sub – Shane Matthews Previous: WSP_SUB_77	Shane Matthews	Combination of alternatives could provide better solution	RTS – Alternative Assessment – Section 5.2.9
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	Consideration of alternative access route	RTS – Alternative Access on Specific Landowner Lands – Section 5.3.2
Additional Sub: Stefan and Olvia Hahne Previous: WSP_SUB_28	Stefan and Olvia Hahne	Alternative sources	RTS – Alternative Source – Section 5.2.2
Additional Sub – Limerick City and County Council Previous: WSP_SUB_11	Limerick City and County Council	Leakage reduction, demand management	RTS – Leakage Reduction – Section 5.2.1
		Alternative Regional sources	RTS – Alternative Source – Section 5.2.2 RTS – Alternative Regional Development – Section 5.4.2
		Desalination should have a fuller comparative assessment	RTS – Desalination – Section 5.2.4 RTS – Alternative Assessment – Section 5.2.9

5.2.2 Applicant's Summary Response on Matters Raised Previously

5.2.2.1 Leakage

165. In respect to Additional Submissions around leakage the Applicant would emphasise that leakage reduction is being undertaken in parallel, and in addition, to the Proposed Project. However, an additional supply of drinking water is needed even accounting for leakage reduction targets. Therefore, the Applicant does not agree that leakage reduction is an alternative option to the Proposed Project rather it is an entirely separate and necessary measure to the Proposed Project, neither measure will affect each other but are needed from an overall supply perspective as set out in the Eastern and Midlands Plan (Irish Water, 2022). Further detail has been provided in the RTS under Section 5.2.1 (Leakage Reduction) and in this Report in Section 2.3.2.4 (Inaccurate Leakage Values) and Section 2.4.2.5 (Missed Leakage Targets).

5.2.2.2 Groundwater Alternatives

166. In respect to Additional Submissions related to alternative groundwater sources being available the applicant states that the Eastern and Midlands Plan (Irish Water, 2022) considered all feasible options to provide supply to the Greater Dublin Area, including groundwater options. In summary, due to the limited yield availability compared to the magnitude of need in the Water Resource Zone, such solutions needed to be considered in combination with many other options. When solutions for the area were considered using the methodology set out in the NWRP - Framework Plan the provision of new groundwater supplies, were not determined as the proposed preferred approach for the area.

167. Further details on groundwater supplies and the lack of suitable scale groundwater sources was provided in the RTS in Section 5.2.3 (Groundwater Alternatives).

5.2.2.3 Alternative Assessment

168. As detailed in the RTS the NWRP including the Eastern and Midlands Plan (Irish Water, 2022) set out the need for a New Shannon Source with Transfers and Chapter 3 (Consideration of Reasonable Alternatives) in the EIAR set out how the recommendations of the Plans were accounted for within the objectives of the Proposed Project.

169. The purpose of the consideration of reasonable alternatives at EIA is not to re-consider strategic decisions already made and subject to the SEA as the NWRP Framework Plan and Regional Water Resources Plans (including the Eastern and Midlands Plan (Irish Water, 2022)) were.

170. The Applicant previously published its response in relation to the assessment of alternative projects and sources as part of the RTS in Section 5.2.9 (Alternative Assessment).

5.2.2.4 Alternative Sources

171. The Applicant does not agree that there are suitable alternative sources of water available. Similar to the position regarding leakage, desalination and groundwater and as set out in Chapter 3 (Consideration of Reasonable Alternatives) in the EIAR, the NWRP including the Eastern and Midlands Plan (Irish Water, 2022) confirmed the need for a New Shannon Source with Transfers, and therefore, 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.

5.2.2.5 Desalination

172. Desalination has been thoroughly assessed by the Applicant including as part of the identification of the Preferred Approach for the Eastern and Midlands Region in the Regional Water Resources Plan. Desalination is not the preferred approach for Ireland's long-term water supply needs due to factors such as energy consumption, whole life cost and environmental impact, details of which are summarised in the RTS report Section 5.2.4 (Desalination).

5.2.2.6 Alternative Access on Landowner Lands

173. Within its Additional Submission Peamount Healthcare has repeated its request for an alternative access to be used for the TPR. The Applicant previously responded to this in Section 5.3.2 (Alternative Access on Specific Landowner Lands) of the RTS.

174. Peamount Healthcare continues to seek use of the Grange Castle West Access Road in place of the proposed access adjoining Peamount Hospital and the R120. Peamount Healthcare state that the alternative is set out in planning policy and suggests that this invalidates the Applicants suggestion that

the option of using the Grange Castle West Access Road is not sufficiently certain to be adopted within the Proposed Project.

175. The Applicant does not accept that the existence of a route shown in a masterplan, without a committed delivery programme or planning permission and without demonstrated alignment with the Proposed Project programme, constitutes a presently available alternative capable of meeting the Project's requirements.

176. The Applicant has previously discussed the matter with South Dublin County Council and is not aware of any committed proposal for delivery of the Grange Castle West Access Road. As stated in the RTS in Sections 5.3.2 (Alternative Access on Specific Landowner Lands) and 9.3.1 (Potential Traffic Impacts at Peamount Hospital), there is no current specific timeline for delivery of the north-south road within Grange Castle West (identified as Phases 3 and 4), and its delivery is dependent on future demand. In particular, there is presently no basis on which the Applicant can rely on that road being consented, constructed and available in time to facilitate construction of the TPR from spring 2028.

177. Accordingly, while the Applicant remains willing to consider an alternative access arrangement for the TPR site if the relevant part of the Grange Castle West road network becomes committed and deliverable within the required timeframe, the current proposal is not selected merely as a matter of preference. On the information presently available, it is the access arrangement that is sufficiently certain and deliverable to enable the Proposed Project to proceed in accordance with its programme.

5.2.2.7 Alternative Regional Development

178. As per the details provided in the RTS Section 5.4.2, (Alternative Regional Development) the applicant notes that there are proposals within the Eastern and Midlands Plan (Irish Water, 2022) in order to meet the demand for drinking water up to 2050 in all water resource zones including those within Limerick.

5.3 Response to Matters Raised Previously – Further Clarification

5.3.1 Additional Submissions

179. Five of the Additional Submissions raised matters regarding Consideration of Reasonable Alternatives that the Applicant is providing further clarification on. The matters raised included:

- An abstraction from the north of Lough Derg would result in a shorter pipeline route and less operational energy use;
- Regional Scale Rainwater harvesting as new reservoirs could address the water supply needs.

180. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Alternative abstraction point in north Lough Derg combined with shorter pipeline route	RTS – Alternative Abstraction Location / Shortest Route – Section 5.2.8
Additional Sub – John Fingleton Previous: WSP_SUB_19	John Fingleton	Alternative abstraction point in north Lough Derg combined with shorter pipeline route Pipeline diameter selection	RTS – Alternative Abstraction Location / Shortest Route – Section 5.2.8 RTS – Alternative Design Pipeline Design Measures – Section 5.3.6
Additional Sub – Richard Cahill Previous: WSP_SUB_25	Richard Cahill	Alternative abstraction point	RTS – Alternative Abstraction Location / Shortest Route – Section 5.2.8
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Regional Scale Rainwater harvesting aka reservoirs	RTS – Alternative Source – Section 5.2.2
Additional Sub – James Cullen Snr Previous: WSP_SUB_89	James Cullen Snr	The need for the lay-by and the potential for an alternative	RTS – Alternative Access on Specific Landowner Lands – Section 5.3.2

5.3.2 Applicant's Summary Response on Matters Raised Previously

5.3.2.1 Alternative Abstraction Location / Shortest Route

181. In respect to the Additional Submissions from John Fingleton, Richard Cahil, and River Shannon Environmental Protection Alliance surrounding Lough Derg or Lough Ree as alternative sources linked to shorter routes between a source of water and the Greater Dublin Area these observations were responded to in the RTS for example, in Section 5.2.7 (Alternative Route(s)) and Section 5.2.8 (Alternative Abstraction Location / Shortest Route).

182. The Applicant can confirm that an abstraction at Lough Derg was considered in the Eastern and Midlands Plan, the RWRP (Irish Water 2022), however, it was discounted as the option was determined to have a high likelihood of significant impact on the aquatic ecology of the Lough.

183. The justification for alternative routes being less preferable is outlined in Section 5.2.7 (Alternative Route(s)) and Section 5.2.8 (Alternative Abstraction Location / Shortest Route) of the RTS.

184. The EIAR set out the analysis of the abstraction location and the options considered. Table 3.7 of Chapter 3 (Consideration of Reasonable Alternatives) in the EIAR detailed the results of the analysis and the selection of the abstraction location on Parteen Basin. The proposed abstraction location at the Parteen Basin, a man-made reservoir designated a heavily modified water-body would significantly reduce the potential impact on ecology given its construction, topography and location.

185. To clarify the particular request in regards to the proposed Slevoir alternative abstraction location, this site was determined to have an impact 2 levels higher on Ecology and was "the least favourable abstraction location option in terms of ecology" as noted in the POAR.

5.3.2.2 Pipeline diameter selection

186. In respect to the Additional Submission from John Fingleton regarding the selection criteria for pipe material as detailed in Section 5.3.6 (Alternative Design Pipeline Design Measures) of the RTS, the criteria of 16bar was selected for the pressure pipeline as constituted "the most common and cost-effective pressure rating placed on the pipework". As detailed in 3.8.2 of Chapter 2 "The principle of the optimisation was to find the lowest Total Expenditure (TOTEX) solution. Whilst a smaller pipe diameter would result in lower CAPEX costs for the pipeline, it would result in higher CAPEX and OPEX costs for both the HLPS and the BPS since larger pumps would be required." The 1600mm diameter pipeline met the overall requirements of the projects when looked at from a whole life costing analysis

5.3.2.3 Alternative Sources

187. The Applicant is satisfied based on its comprehensive analysis of the preferred approach in the Framework Plan which looked at supply and demand from a national perspective, and the Regional Plan which looked at it from a regional perspective, both of which were subject to strategic environmental assessment and in respect of both the public had the opportunity to propose alternative solutions as part of the public consultation process. Further, since those processes concluded, the project has been designated by the Government as a critical infrastructure project for the purposes of the Critical Infrastructure Act 2026.

5.3.2.4 Regional Rainwater harvesting in the context of additional reservoirs

188. In respect to the Additional Submission from Futureproof Clare Environmental CLG which suggested regional scale rainwater harvesting via the construction of new reservoirs could provide an additional source, the Applicant clarifies that the proposal for additional reservoir construction and constraints surrounding their viability as alternative sources are addressed within the RTS Section 5.2.2 as opposed to Section 5.2.5 (Rainwater Harvesting and Greywater Reuse) which is more concerned with rainwater harvesting on a residential scale*:*

"Some submissions suggested that building more reservoirs could solve the region's water supply challenges. The Eastern Region's most viable reservoir sites, such as Vartry, Poulaphouca, and Bohernabreena, were developed over the past 150 years. These locations had the right combination of steep-sided valleys, stable geology, and sufficient river flow. Today, very few suitable sites remain, and those that do are often environmentally sensitive or heavily constrained. Under current EU and Irish environmental legislation, the creation of new impoundments is extremely difficult to justify. The scale of construction, environmental impact, and long-term maintenance requirements make new reservoirs rare and often unviable in modern water planning. The issue in the Eastern and Midlands Region is not just about storage; it is about source availability and resilience. The region is already over-reliant on the River Liffey, and there is no spare capacity in the system. Even with more storage, a new, sustainable source of water is still needed to meet future demand and reduce risk" [Section 5.2.2 of the RTS].

5.3.2.5 Alternative Access on Specific Landowner Lands

189. In his Additional Submission James Cullen Senior has repeated a number of matters raised in several submissions made in response to the Statutory Consultation relating to alternative access to a Line Valve on his land.

190. The Applicant would reiterate that the purpose of the proposed access arrangement is to provide safe and reliable access to the associated Proposed Project infrastructure while avoiding unnecessary

conflict with existing private and agricultural movements. The Additional Submission considers that the proximity of the proposed lay-by to the existing farm entrance may itself result in interaction between the respective sightlines and suggests that the existing entrance could instead be used.

191. The Applicant previously responded to Mr Cullen's suggestion that alternative locations of the lay-by including the existing access to his land in Section 6.3.3 (Design Change Requests on Specific Landowner Lands) of the RTS. The Additional Submission from him refers to an existing recess adjacent to the proposed lay-by providing suitable access. Based on the rest of the Additional Submission we understand that to refer to Mr Cullens existing agricultural access to his land south of the Planning Application Boundary. Consideration has been given into the use of the existing entrance and is considered potentially more detrimental to the landowner. The entrance is understood to serve the farmyard, agricultural lands and associated daily movements. Use of that entrance for permanent line valve access would require a permanent right of way from the entrance to the line valve compound and would introduce operational vehicle movements into an access used for livestock and machinery. It would also require coordination of gate access and operational activities with the farming enterprise. By contrast, the proposed lay-by would provide a dedicated access point. In contract the proposed lay-by would provide a dedicated access point. Therefore, the lay-by as proposed is preferred by the Applicant.

5.4 Response to New Matters Raised in Additional Submissions

5.4.1 Additional Submissions

192. Two of the Additional Submissions raised matters related to Consideration of Previous Alternatives that had previously not been raised. The matters raised relate to:

- Lack of evidence for an alternative layout assessment for the holding; and
- The definition of 'Alternatives'.

193. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Senior	Lack of Evidence of Alternative Layout Assessment for this Holding
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council*	Leakage Reduction 'Not an alternative'

5.4.2 Applicant's Response on New Matter Raised

5.4.2.1 Lack of Evidence of Alternative Layout Assessment

194. Mr Cullen also suggests in his Additional Submission that there is a lack of evidence of an alternative layout assessment relating to his land.

195. The identification of PSD9 formed part of the structured and combined site-selection process for Construction Compounds and Pipe Storage Depots set out in section 8 of the CPO Routing Report. The original rebuttal also identified EIAR Chapter 3, EIAR Figure 3.22, EIAR Chapter 5, including section 5.8, and the CPO Engineers Report as relevant supporting documentation.

196. The selection of Construction Compounds and Pipe Storage Depots was interrelated because both types of facility are required to receive pipe deliveries and because the location of each facility

influenced the distance to the next facility along the pipeline route. The number and distribution of the facilities were influenced by the overall length of the Proposed Project and the requirement to achieve an appropriate spatial distribution along the route.

197. The site-selection methodology applied a hierarchy under which proposed infrastructure sites were considered first, followed by brownfield or commercial sites and then greenfield sites. Potential Pipe Storage Depot sites were also required to be appropriately related to the Construction Working Width and the proposed haul-road arrangements.

198. Potential sites were considered against defined technical and environmental criteria. Sites were rejected for reasons including unsuitable access for regular heavy goods vehicle movements, environmental sensitivity, peat conditions, distance from the haul-road network, insufficient usable area and other planning or site-specific constraints.

199. Graiguepottle was identified as greenfield candidate site G26 at chainage TWD-34000 and was recorded as satisfying the applicable site-identification criteria. It was subsequently selected as PSD9 within the sequence of construction and pipe-storage facilities serving Pipeline Section 4.

200. The CPO Routing Report records that PSD9 was selected to reduce the approximately 34-kilometre haulage distance between Principal Construction Compound CC6 at Drummond and the Termination Point Reservoir. Graiguepottle was identified as the closest available suitable site to Drummond, with an anticipated haulage distance of approximately 18 kilometres. Although this exceeded the initial 16-kilometre screening distance, it was considered acceptable in the context of the available sites. PSD10 at Barberstown Lower was subsequently selected approximately halfway between Graiguepottle and the Termination Point Reservoir.

201. The identification of PSD9 was therefore based on its relationship with the relevant pipeline section, the haul-road network and the planned sequence of pipe-storage and construction facilities. It was not identified solely to provide general programme flexibility or as an unrestricted land reserve for a future contractor.

202. The CPO Routing Report explains that Pipe Storage Depots are required to supplement the Construction Compounds and support installation of the pipeline between the Water Treatment Plant and the Termination Point Reservoir. Their function is to receive direct pipe deliveries, provide temporary storage and facilitate the onward transfer of pipes to the required installation locations along the Construction Working Width.

203. A Pipe Storage Depot requires sufficient usable space to allow delivery vehicles to leave the public road safely, unload the pipes and undertake the necessary turning and circulation movements. The CPO Routing Report identifies a minimum site area of the order of 2 hectares for this purpose. The proposed PSD9 is close to this identified minimum requirement.

204. The Applicant can confirm that the application documentation includes an indicative layout for PSD9 in EIAR Figure 5.16, Drawing No. 32105801/700/07038. That layout is not presented as the final contractor design but demonstrates that a practical and environmentally manageable depot arrangement can be accommodated within the assessed area. The temporary plot extent was established to provide sufficient usable space for the required depot functions, including pipe delivery, unloading and storage, vehicle and pipe-handling equipment circulation, safe access and egress, security, soil storage, drainage and environmental controls within the plot boundary, while avoiding those activities extending onto adjoining lands and seeking to minimise land take consistent with safety and deliverability. Detailed configuration and working methods will subsequently be developed within the requirements of the submitted CEMP.

205. The detailed internal configuration may be refined during construction planning, provided that any refinement:

- Remains within the authorised temporary acquisition boundary;
- Preserves the required pipe-storage and handling capacity;
- Provides for safe vehicle and equipment circulation;
- Maintains appropriate access and egress;
- Accommodates soil storage, drainage and environmental controls;
- Complies with the applicable engineering and health-and-safety requirements; and
- Remains consistent with the environmental and construction-management measures submitted with the application.

206. As part of that process, the operational information provided by the landowner, including the effects of temporary severance, narrow or irregular residual areas, continued farm access, livestock movements and machinery movements, will be considered when developing the detailed depot configuration and holding-specific accommodation measures.

207. Any proposed reduction or refinement must be considered by reference to the depot as a whole. A reduced footprint or different configuration would only represent an appropriate refinement where the necessary depot functions could continue to be accommodated safely and effectively without displacing soil-storage, drainage or environmental controls, causing unsafe or inefficient vehicle movements, increasing delivery frequency, or transferring additional effects to the retained holding, adjoining lands or the public road.

5.4.2.2 Leakage Reduction “Not an alternative”

208. Limerick City and County Council have raised concerns that ‘leakage’ was not considered an alternative to the Proposed Project. The Applicant would restate that it is not an alternative for two reasons:

209. As stated in Section 5.2.1 of the RTS leakage reduction is being pursued alongside the Proposed Project and specifically the Proposed Project is still required even if all leakage targets were being met.

210. As set out in the Consideration of Reasonable Alternatives in Chapter 3 of the EIAR the need for the Proposed Project was established by the Eastern and Midlands Plan. The objectives for the Proposed Project, taking account of the Eastern and Midlands Plan are to:

- Provide a sustainable water supply from a New Shannon Source
- Address critical supply issues in the GDA with provision for future supplies to multiple WRZs in the
- Region
- Increase resilience of supplies and Levels of Service
- Deliver a flexible, future-proofed solution that is responsive to change.

211. Therefore, the assessment of reasonable alternatives in respect of the Proposed Project, did not re-consider strategic alternatives that had already been considered by the Plan.

212. In respect of the matter raised, leakage reduction would not meet the objectives of the Proposed Project as defined by the Preferred Approach identified for the GDA WRZ and 35 other WRZs in the Eastern and Midlands Region within the Eastern and Midlands Plan.

6. Proposed Project Description

6.1 Overview

213. Thirty seven of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Proposed Project Description. These were responded to in the RTS Report submitted to the ACP in May 2026.

214. One of the further two further submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Proposed Project Description. This was responded to in the SRTS Report submitted to the ACP in June 2026.

215. There were twelve of the 43 Additional Submissions received by ACP which raised matters relevant to Proposed Project Description and are responded to in this Report.

216. This Report and its supporting Appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Proposed Project Description and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

217. This Chapter responds specifically to Proposed Project Description matters raised in the Additional Submissions to ACP relating to:

- The design of the Proposed Project;
- The design information provided within the SID Planning Application; and
- The operation of the Proposed Project (excluding comments on the environmental effects of the operation of the Proposed Project which, where relevant, are considered in Chapters 2-5 and 8-27).

218. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 3 (Planning)
- Chapter 5 (Consideration of Reasonable Alternatives);
- Chapter 7 (Construction and Commissioning);
- Chapter 9 (Traffic and Transport); and
- Chapter 11 (Water (Hydrological Modelling and Water Levels).

219. Cross references to these other relevant Chapters have been included, where relevant, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report. In particular, proposals for alternative design options are considered in Chapter 5 (Consideration of Reasonable Alternatives) and monitoring of water levels is considered in Chapter 11 (Water (Hydrological Modelling and Water levels)).

220. No new matters were raised regarding the design of the Proposed Project and consequently, this Chapter is structured around the following sections:

- Matters raised regarding Proposed Project Description and previously responded to; and
- Matters raised previously and further clarification being provided.

6.2 Response to Matters Raised Previously

6.2.1 Additional Submissions

221. 14 responses in the Additional Submissions raised matters that had been considered previously regarding the Proposed Project Description including:

- The capacity of the pipeline
- The availability of water;
- The need for additional reservoir storage
- The design of the valves and their location
- The design of the accesses

222. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association	Availability of water	RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)
Additional Sub Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Availability of water	RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)
Additional Sub – Cllr. Sean Hartigan Previous: WSP_SUB_11	Councillor Seán Hartigan	Capacity of the Proposed Pipeline - The full capacity of the pipe needs to be divulged.	RTS - Capacity of the Proposed Pipeline – Section 6.2.2
		Adequacy of Designed Storage Capacity - Increased storage capacity.	RTS - Adequacy of Designed Storage Capacity – Section 6.2.5
Additional sub: John Fingleton Previous: WSP_SUB_19	John Fingleton	Reduce number of valves	RTS - Alternative Design Pipeline Design Measures – Section 5.3.6
		Pipeline diameter	
		Use of butterfly valves	
Additional sub: Richard Cahill Previous: WSP_SUB_25	Richard Cahill	Adequacy of Designed Storage Capacity - Increased storage capacity.	RTS - Adequacy of Designed Storage Capacity – Section 6.2.5
Additional Sub Michael Reidy Previous:	Michael Reidy	Availability of water	RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
WSP_SUB_22			
Additional Sub Ballymore Eustace Trout and Anglers Association Previous: WSP_SUB_71	Ballymore Eustace Trout and Anglers Association	Recommended Conditions	RTS – Recommended Conditions - Section 6.3.11
Additional sub River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Availability of water	RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Snr	The health and safety issue raised by the location of the lay-by	RTS - Potential Safety Impact of Proposed Layby at Landowner Property Access – Section 6.3.4
Additional Sub John Quinn and Sandra Frayne Previous WSP_SUB_103	John Quinn and Sandra Frayne	Location of Washout Valves	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne	Location of Washout Valves	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3
Additional Sub Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	Access to the TPR	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3
Additional Sub Tipperary County Council	Tipperary County Council	Access Design and Sightlines	RTS - Access Design and Sightlines – Section 6.4.9
		Infrastructure Failure	RTS - Risk of Infrastructure Failures – Section 23.4.1 RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Previous: WSP_SUB_114			RTS - clarification on Response Plan for Leakages – Section 7.4.6
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council	Capacity of the Proposed Pipeline - The full capacity of the pipe needs to be divulged.	RTS - Capacity of the Proposed Pipeline – Section 6.2.2
		Adequacy of Designed Storage Capacity - Increased storage capacity.	RTS - Adequacy of Designed Storage Capacity – Section 6.2.5

6.2.2 Applicant's Summary Response on Matters Raised Previously

6.2.2.1 Capacity of the Proposed Pipeline

223. Regarding the observations from Councillor Hartigan which are repeated in the response from Limerick City and County Council regarding the design capacity of the Proposed Project the Applicant would refer back to the response previously provided in Section 6.2.2 (Capacity of the Proposed Pipeline) of the RTS. The pipeline is designed for the peak 300Mld.

6.2.2.2 Alternative Design – Pipeline Design Measures

224. The Applicant welcomes the comments from John Fingleton regarding the design opportunities around the size of the pipeline, reducing the number of line valves and an alternative valve design. Opportunities for value engineering such as reducing the size of the pipeline have been considered and the Applicant does not have any additional response beyond that previously provided in Section 5.3.6 (Alternative Design Pipeline Design Measures) of the RTS.

6.2.2.3 Adequacy of Designed Storage Capacity

225. With regards to requests for additional storage at the TPR the Applicant would refer back to the previous response in Section 6.2.5 (Adequacy of Designed Storage Capacity) of the RTS. In the Additional Submission from Richard Cahill there was a request for a new reservoir in the Greater Dublin Region with

"*suggested capacity to meet demand and leakage for a 2-month period. This is to ensure the protection of the Shannon Water way in times of dry spells or drought*"

226. We recognise the reasons why the comments are being raised but the reservoir at the TPR is not designed as a 'storage' reservoir. To hold a single day peak supply of 300Mld the TPR storage would need to be four times bigger than proposed. The TPR allows a 'balancing' of the supply and demand at the point that the Proposed Project joins the existing distribution network.

6.2.2.4 Availability of Water

227. The Additional Submissions including the observations from Michael Reidy and the River Shannon Environmental Protection Alliance repeated concerns raised previously that there would be insufficient water available to meet the supply needed by the Proposed Project. This was previously responded to in the RTS in Section 6.3.9 (Availability of Water) and in Chapter 11 Water (Hydrological Modelling and Water Levels) in the RTS. The Applicant does not have a further response to that provided previously

however, this matter is considered in more detail in Section 11.3.2.3 of Chapter 11 (Water (Hydrological Modelling and Water Levels)) of this Report.

6.2.2.5 Recommended Conditions

228. Ballymore Eustace Trout and Anglers Association has responded to the Applicant's response on recommended conditions in Section 6.3.11 (Recommended Conditions) of the RTS questioning how it can be confident that the Applicant will comply with planning conditions imposed on any grant of planning permission for the Proposed Project. This is an existing facility and is not within the scope of the response to be provided to issues relating to the SID planning application under consideration by ACP. Matters of planning compliance are a matter between Uisce Éireann and the relevant planning authority..

6.2.2.6 Location of Washout Valves

229. The Additional Submission from John Quinn and Sandra Frayne acknowledges the Applicants response regarding the matters previously raised regarding the location of wash out valves on their land but repeats the concern. The Applicant has no further response to that previously provided in Section 6.3.3 (Design Change Requests on Specific Landowner Lands) of the RTS. Its position is that the siting of such pipeline features is driven by operational requirements and forms part of the Proposed Project's design.

230. The location of valves and ancillary pipeline features could vary slightly based on changes in the pipeline's vertical or horizontal alignment, (within the constraints set out in the definition in Section 4.3.2 of Chapter 4 (Proposed Project Description) and Section 5.3.3 of Chapter 5 (Construction and Commissioning) of the EIAR. This would allow some refinement of the wash out valve location during detailed design.

231. The Applicant acknowledges the landowner's equine safety concern and will continue to engage through the landowner liaison process to consider whether local optimisation of the washout arrangement or its immediate interface with existing land use is feasible at detailed construction planning stage, provided such refinement does not compromise pipeline operability or environmental protection measure.

6.2.2.7 Access to the TPR

232. In its Additional Submission Peamount Healthcare has repeated its concerns regarding the acquisition of land for the access to the TPR and proposed alternative access to TPR. The Applicant would refer to the response previously provided in Sections 5.3.2 (Alternative Access on Specific Landowner Lands), 6.3.3 (Design Change Requests on Specific Landowner Lands) and 9.3.2 (Potential Impact of the Construction and Operation of the Water Treatment Plant on Traffic) of the RTS. The acquisition of these lands will be addressed through the application for the CPO.

233. The request for an alternative access route to be used to provide permanent access to the TPR is considered further in Chapter 5 (Consideration of Reasonable Alternatives) of this report.

6.2.2.8 Potential Safety Impact of Proposed Layby at Landowner Property Access

234. James Cullen Senior has repeated the health and safety concerns regarding the potential conflict between the proposed lay-by access and his agricultural activities. The Applicant responded to these in Section 6.3.4 (Potential Safety Impact of Proposed Layby at Landowner Property Access) of the RTS and has no further response at this time.

235. The observations from Mr Cullen regarding the potential to use the existing access are set out in Section 6.3.2.8 (Design Change Requests on Specific Landowner Lands) and Section 5.4.2.1 (Lack of Evidence of Alternative Layout Assessment) in this Report.

6.2.2.9 Access Design and Sightlines

236. In its Additional Submissions Tipperary County Council reiterated its position regarding access and sightlines. The Applicant would refer to the response previously provided in Section 6.4.9 (Access Design and Sightlines) of the RTS and in Chapter 3 (Planning) and Chapter 9 (Traffic and Transport) of this Report.

6.2.2.10 Infrastructure Failure

237. The Applicant responded on Infrastructure Failure in Chapter 23 (Risk of Major Accidents and / or Disasters) of the RTS (Section 23.4.1 of the RTS) and in Sections 6.3.10 (Systemic Vulnerability of the Proposed Project) and 7.4.6 (Clarification on Response Plan for Leakages) of the RTS. Tipperary County Council noted the response from the Applicant in its Additional Submission.

6.3 Response to Matters Raised Previously – Further Clarification

6.3.1 Additional Submissions

238. There were nine Additional Submissions received that raised matters relating to the Proposed Project Description which the Applicant is providing further clarification, including:

- The resilience of the Proposed Project;
- The design of the BPT;
- The design of the WTP; and
- The design storage capacity at the TPR.

239. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Proposed project is not at all 'resilient'. Threats and risks demonstrate vulnerability.	RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10
Additional sub: John Fingleton Previous: WSP_SUB_19	John Fingleton	Pipeline design and high point of the BPT Inconsistent use of the BPT	RTS -Use of Gravity Pressure – Section 6.3.5
Additional Sub Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Resilience of the Proposed Project and 'shut down'	RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10
Additional sub: Richard Cahill	Richard Cahill	Adequacy of designed storage capacity	RTS - Adequacy of Designed Storage Capacity - Section 6.2.5

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Previous: WSP_SUB_25			
Additional sub Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Vulnerability of relying on Proposed Project.	RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10
Additional sub James Crowley Previous: WSP_SUB_50	James Crowley	Systematic Vulnerability	RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10
		Washout Valves and Ecological Risk	
		Invasive Species Operational Burden	
Ballymore Eustace Trout and Salmon Anglers Association	Ballymore Eustace Trout and Salmon Anglers Association	Chemical Treatment Process and Residues at the Proposed Water Treatment Plant	RTS - Chemicals at the Proposed Water Treatment Plant – Section 6.3.7
Additional sub National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU)* Previous: WSP_SUB_83	NPWS	Effects of any future emergency discharges from the Water Treatment Plant.	RTS - Wastewater Infrastructure – Section 6.4.11 RTS- Management of Waste at the Proposed Water Treatment Plant – Section 22.2.1
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Snr	The need for the lay-by and the potential for an alternative	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3

6.3.2 Applicant's Summary Response providing further clarification on Matters Raised Previously

6.3.2.1 Systemic Vulnerability of the Proposed Project

240. In the response to statutory consultation a number of submissions had raised concerns over the resilience of the Proposed Project and that the use of a single pipeline created a systematic vulnerability in the event that there was a failure of the pipeline. These were responded to in Section 6.3.10 (Systemic Vulnerability of the Proposed Project) of the RTS.

241. In the Additional Submission from Christopher Campion similar matters were raised, under the heading 'Proposed Proiect is not at all 'resilient', to those previously responded to. It remains the Applicants position, as set out in the previous response that the Proposed Project is part of a wider strategy, set out in the Eastern and Midlands Plan (Irish Water, 2022) for the safe and secure supply of water within the region and that the Proposed Project is explicitly intended to increase the resilience of the overall supply within the region.

242. The Additional Submission from Mr Campion summarises a series of threats to the Proposed Project. These are summarised in Table 6.1 with information from the Applicant regarding the points raised.

Table 6.1: Specific Matters Raised Regarding Resilience of the Proposed Project

Threat / Risk to the Proposed Project	Applicants Response
Untreatable pollution event	The Water Treatment Plant has been design for the water quality and characteristics of the raw water in the Lower River Shannon. A pollution event including algeal bloom would not prevent the treatment of the water. This was considered in Section 10.2.5 (Potential Impacts of Algal Bloom in Lough Derg)of the RTS.
Prolonged drought	The evidence that the Proposed Project can continue to operate during a drought period was provided within the Water Chapter of the EIA. This was responded to in Section 6.3.8 –(Risk of Low Flow and Drought Conditions during the Operational Phase) and Section 6.3.9 ((Availability of Water) in the RTS..
Power failure	The design of the Proposed Project includes for a permanent supply to each site including upgrade works to the existing 38kV supply to Birdhill in order to provide a resilient supply to the RWI&PS and WTP. To provide resilience this will be a dual power supply.
Rupture of the pipe	The pipeline has been designed and in particular, steel selected as the material for the pipeline precisely because it avoids a rupture or catastrophic failure. The pipeline can be monitoring for degradation and has been designed so that repairs can be undertaken in short periods. This was responded to in Section 6.3.10 (Systemic Vulnerability of the Proposed Project)of the RTS.

243. In addition to the Additional Submission from Christopher Campion, Futureproof Clare Environmental CLG also raised the vulnerability of relying on the Proposed Project stating that Section 6.3.10.1 of the RTS does not expressly address the issue raised in previous submissions regarding the problem of relying on the River Shannon in relation to a lack of vulnerability assessment, probabilistic analysis, emergency response protocols, estimated repair times, and redundancy provisions, as per James Crowley's original submission. James Crowley in his Additional Submission refers to the same matters. The Applicant does not agree that it has not addressed the points raised and for clarification each of these are considered in Table 6.2.

Table 6.2: Specific Matters Raised Regarding Resilience of the Proposed Project

Threat / Risk to the Proposed Project	Applicants Response
Vulnerability assessment	The Applicant provided a response on vulnerability and the decision made to ensure the resilience of the proposed project beyond that provided in Section 6.3.10 (Systemic Vulnerability of the Proposed Project) of the RTS.
Probabilistic analysis	The Applicant has understood this to refer to probabilistic analysis of the failure to meet the required supply. As set out in the Strategic Infrastructure Development Planning Report submitted as part of the SID planning application, the Proposed project is designed to met a 1 in 50 year Level of Service as required under the Eastern and Midlands Plan (Irish Water, 2022).
Emergency response protocols	The Operational Strategy included within Appendix A4.1 of the EIAR explains the monitoring and shut down process in the event of an unexpected change in pressure in the pipeline. The previous responses in the RTS (e.g. Section 23.3.1 (Risk of Infrastructure Failure) and Section 23.4.1 (Risk of Infrastructure Failures)) and the Operational Strategy included within Appendix A4.1 of the EIAR set out the monitoring of the pipeline using cathodic protection to identify any deterioration in the integrity of the pipeline and allow for intervention for repairs.
Repair times	The Operational Strategy included within Appendix A4.1 of the EIAR states that typical repairs would be undertaken within a 36 hour period based on a dedicated maintenance team being available. The key time factor would be the time to mobilisation the crews to install the mobile line valve pumps and to operate the washout valves to commence the draindown.
Redundancy provision	Redundancy and resilience provisions are included within the design of the permanent infrastructure this includes for example, ensuring that elements of the treatment process at the WTP can be taken 'off-line' for maintenance and inspection and the water supply be maintained. The same philosophy applies to the Raw Water Rising Mains (RWRM). Each RWRM can be taken out of service for maintenance, while delivering the full required flow through the other one. The pumping system is configured in such a way that not just the RWRM but each piece of pipework in the station can be accessed for maintenance without interruption of supply. In the event of INNS infestation, either of the RWRMs could be taken out of service for days or weeks, as may be required for short-term 'pigging' or occasional longer standing chemical treatment, or for creating prolonged fully drained conditions which would inhibit the establishment of zebra mussels or other INNS.

6.3.2.2 Use of Gravity Pipeline and Inconsistent Use of Break Pressure Tank

244. John Fingleton has suggested that the BPT could be eliminated through the use of continuous pumping (on a shorter pipeline alignment). The Additional Submissions also states that the Applicants response to the previous submission suggests an inconsistent reason for the need for the BPT and that surge is not reduced by a BPT unless the BPT is close to the valve closure.

245. The Applicant considers that it has always been consistent that the primary reason for the BPT is managing pressure change within the pipeline as set out in the EIAR in Chapter 4 (Proposed Project Description). Since there is a high point between the start and the end of the pipeline, that is higher than either end, a BPT is necessary at this high point.

246. The way in which the BPT is an essential part of the control system and transient response is two-fold.

- When the pumps at the water treatment stop or trip for whatever reason, the BPT provides a reservoir of water that keeps feeding the gravity pipeline for a few minutes whilst the 100 or so kilometres (200,000 tonnes) of the water column in the pipe downstream of the high point is brought safely to a standstill by the flow control valves. It cannot be brought to a standstill instantly since this would cause a catastrophic pressure surge.

- Further, without the BPT, large pockets of air would be drawn in to the pipeline at a number of high points. This is highly unacceptable for two main reasons: -
    - The risk of drawing in air and potentially dirty water would jeopardise the water quality of a drinking water pipeline.
    - On start up the presence of air in the pipeline would almost certainly cause uncontrolled and unacceptable transient waves as the air was compressed and released. There is often confusion between water hammer (caused by sudden slamming of valves) and the transient conditions that are unavoidable in accelerating or decelerating several hundred thousand tonnes of water. Controlled start up and shut down still result in transient pressure and flow fluctuations that exist over minutes if not hours.

247. Every time there is a change in flow within the pipeline, the BPT will act as a balancing tank providing pressure stability and allowing the flow control valves near the end of the pipeline to adjust to the change in flow from the pumps at the Water Treatment Plant.

6.3.2.3 Shut Down of the Pipeline

248. In addressing previous submissions regarding the resilience of a single pipeline the Applicant has made reference to the fact that sections of the pipeline can be isolated and emptied in order to allow for maintenance an inspection. Mr Reidy in his Additional Submission has suggested that this indicates that the Proposed Project is not required because it can be 'shut down'. By way of response the Applicant can clarify that the draindown strategy is based on being able to draindown a section of pipeline, undertake typical maintenance works and re-fill the pipe with water within a 36 hour period as set out in Appendix A4.1 (Operational Strategy) which is part of EIAR Chapter 4 (Proposed Project Description). There is no intention to have the pipeline shut down for prolonged periods or on a frequent basis. The Proposed Project is required and has been based on a resilient design as previously described in Section 6.3.10 (Systemic Vulnerability of the Proposed Project) of the RTS. As would be expected a robust design approach has considered how maintenance and inspections would be undertaken and this has been included into the information submitted as part of the SID planning application.

6.3.2.4 Adequacy of designed storage capacity

249. The Additional Submission from Richard Cahill has raised observations regarding the Applicants response on the adequacy of storage capacity. This is repeated in full below given the suggestion that the Applicant has provided a misleading response.

> "[Quoted from RTS within the Additional Submission from Mr Cahill] *'479. The Proposed Project including the TPR needs to be viewed in the wider context of the supply of water in the Eastern and Midlands Region and would work in parallel with all the other existing strategic storage reservoirs. Therefore, the Applicant does have the capacity, elsewhere, to store water for drinking supply purpose but this is not provided by the TPR, and it is not designed to do so.'*
>
> *This is simply a deliberately misleading statement: if there was adequate storage why is there a need for hosepipe bans at the moment. Ireland has experienced a wet winter and a late spring. We have had 1 month of relatively dry weather and we are banning hosepipes in the GDA... Why; because storage facilities are running low. It is a deliberately misleading statement, and in my opinion an untruth, to state the Applicant does have the capacity, elsewhere, to store water for drinking supply purpose. This is not about storing 'drinking water' specifically; it is about storing adequate water for the needs of the GDA. be that treated or untreated."*

250. The Applicant believes that paragraph 479 is being mis-interpreted. The original submission from Mr Cahill requested considered of additional reservoir capacity at the TPR and this was what was being responded to. The Applicant's response at paragraph 479 as quoted above refers to the fact the Proposed Project must be viewed in the context of existing infrastructure. The Proposed Project will

allow a direct new supply into the Greater Dublin Area (GDA) that does not currently exist. It is not intended to fill existing reservoirs but provides a supply at the time the demand occurs. However, with this new supply in place (if the Proposed Project is granted planning permission and built) that may allow the Applicant to utilise existing reservoirs storage capacity differently including storing water in anticipation of a drought.

6.3.2.5 Washout Valves and Ecological Risk

251. The Additional Submission from James Crowley states that, with regard to washout valves:

- Dechlorination prior to discharge must be guaranteed;
- The application should identify each location; and
- Assess the sensitivity of the receiving water and demonstrate controls to prevent ecological harm.

252. The Applicant can confirm that dechlorination is part of the design and is committed to in the Operational Strategy as set out in Appendix 4.1 of Chapter 4 (Proposed Project Description) in the EIAR.

253. Further, the location of each washout has been included within the SID planning application and are shown on the long sections for the length of the pipeline which were part of the planning application drawings submitted as part of the SID planning application. In addition, they are shown on the Project Component Overview figures in Figures 4.2 – 4.60 in EIAR Chapter 4 (Proposed Project Description), the components maps and are listed in EIAR Annex A of Appendix A4.1 (Operational Strategy) which is part of EIAR Chapter 4 (Proposed Project Description).

254. The Applicant aims to avoid discharging from the washouts as the discharge would be treated drinking water which is a valuable resource. Hence the draindown strategy and Line Valve design is based on being able to pump water from one section of the pipe to the next to avoid it being discharged. However, in the event of a draindown some discharge may be unavoidable and the Applicant recognises the potential for an environmental effect. A series of mitigation and managed measures are committed to in the Draindown Strategy contained in EIAR Annex B and C of Appendix A4.1 (Operational Strategy) which is part of EIAR Chapter 4 (Proposed Project Description). An assessment of the use of washouts has been included in the EIAR including for example, in Chapter 8 (Biodiversity) and Chapter 9 (Water) of the EIAR.

6.3.2.6 Chemicals at the Proposed Water Treatment Plant

255. Ballymore Eustace Trout and Salmon Anglers Association, in its Additional Submission, raised a series of matters in relations to the Applicants previous responses and each of these are considered in Table 6.3. Comments on the operation of Ballymore Eustace WTP were considered an Additional Matter in the RTS and covered in Chapter 27 of the RTS. This has not been addressed further. The Additional Submission does raise matters related to planning conditions which are addressed in Section 3.2.2.5 in Chapter 3 (Planning) in this report.

Table 6.3: Specific Matters Raised Regarding the Chemical Processes at the WTP

Matter Raised	Applicants Response
How can the Applicant claim that "No Chemicals will be produced at the WTP" when most of the chemicals used at the proposed WTP will react to form a waste sludge that will have to be transported to a suitable waste disposable landfill facility?	The residual produced from the coagulation/flocculation/settlement/filtration process contains aluminium hydroxide (commonly referred to as alum sludge) as Ballymore Eustace Trout and Salmon Anglers Association have stated, but that is simply a different form of aluminium. The alum sludge is dewatered and managed as set out in the EIAR. The previous statement that no chemicals will be produced at the WTP is still accurate. The primary purpose of the WTP is not to produce chemicals, it is to use imported chemicals to aid the removal of contaminants from raw water to make it suitable for human consumption.
When Aluminium Sulphate is added to water it reacts to form an insoluble precipitate or 'floc' Aluminium Hydroxide. The following reaction taken place ; AL(SO+)3 + 6(H20) – > 2AI (OH)3 I+ 3H2SO4Aluminium Sulphate plus Water – > Aluminium Hydroxide plus Sulphuric Acid Aluminium Sulphate is used as both a coagulant and a flocculant. The 'floc' formed is Aluminium Hydroxide, hence the term flocculation. The fine Aluminium Hydroxide 'flocs' formed are coagulated by the polyelectrolyte coagulant into larger and heavier 'flocs' to speed up faster settling in the sedimentation tanks. The finer 'flocs' that are not removed in the sedimentation tanks are carried over onto the Filters where they are removed by large volumes of 'backwash' water which also needs to be processed to separate the solids from the liquid.	The Applicant agrees this is correct and refers to the above response.
It is also proposed to produce Sodium Hypochlorite at the WTP by an electrochemical process (electrolysis of brine).	Sodium Hypochlorite will either be imported or generated on-site using electrolysis (OSEC). In electrolysis, Sodium Chloride (in brine) is changed to a different form, Sodium Hypochlorite, which is then added to the water as a disinfectant. This will not produce a separate chemical stream which has to be managed, all of the Sodium Hypochlorite generated is added to the water.
The proposed Birdhill WTP "could also be considered a chemical process factory" is fair comment.	The Applicant does not agree, to suggest the WTP is a chemical factory is misleading.
How can the Applicant confirm it is not proposed to use aluminium hydroxide at the WTP when the whole water treatment purification process is based on the formation of Aluminium Hydroxide? As mentioned above Aluminium Hydroxide will be produced as an insoluble precipitate or 'floc' at the WTP and plays a critical role in the water purification process, hence the term 'flocculation'. Tonnes of Aluminium Hydroxide will be formed and collected as sludge in the sedimentation tanks, and it will be contaminated with the polyelectrolyte which is dosed as a coagulant. Hence my reference to the treatment and disposal of this waste product as "aluminium hydroxide coagulated with polyelectrolyte sludge" The other impurities removed in the WTP process will also be collected in the aluminium hydroxide/polyelectrolyte sludge. Both aluminium and polyelectrolyte are considered toxic to aquatic life.	The Applicants previous response that it is not proposed to use aluminium hydroxide at the WTP, was based on the understanding that Ballymore Eustace Trout and Salmon Anglers Association were suggesting that aluminium hydroxide was to be used as a coagulant. On reading their statement again, this may not have been what Ballymore Eustace TSAA were suggesting, but rather that aluminium hydroxide (with polyelectrolyte) would be contained in the sludges to be taken off site for treatment and disposal. The solid fraction of the residuals from the coagulation/flocculation/settlement/filtration process will be managed off-site as set out in the EIAR for example in Chater 4 (Proposed project description) of the EIAR, and these residuals are not considered 'toxic'. They are classified as Class 1 residuals under Uisce Éireann's Technical Standard IW-TEC-900-07. The liquid fraction, including settled backwash water would be returned to the head of the treatment works following suitable treatment.

6.3.2.7 Effects of any future emergency discharges from the Water Treatment Plant

256. The NPWS within the response from Development Applications Unit has raised the issue of effects from any future discharges from the Water Treatment Plant. The Applicant previously responded on waste arising at the WTP (e.g Section 6.4.1 (Wastewater Infrastructure) in the RTS but acknowledges that the NPWS were not referred to in the relation to this. The specific matter raised in the Additional Submission relates to whether any unforeseen process difficulties would result in an emergency discharge, and that any unavailability of offsite recovery/disposal options do not result in emergency on-site sludge storage where run-off could be an issue.

257. The Applicant can confirm that the chemical processes are within buildings and will be subject of regular inspections. In the event of an unforeseen or unplanned event there would not be a discharge to the environment. This was considered within the EIAR in Chapter 20 (Risk of Major Accidents and/or Disasters), which identified that the chemical with the potential for the greatest impact on the aquatic environment would be the aluminium sulphate stored at the WTP, as it is particularly toxic to fish life, but the same principle applies to all water treatment chemicals. All chemicals will be stored in secure areas inside buildings within a bund area. Level monitoring will be used to detect any sudden change in the volume stored in each tank and detect a leak or damage to containers. Any sudden change in tank volume will be alarmed, and this would prevent an extensive release of chemicals into the environment.

258. With regard to the run-off from sludge storage the Applicant can confirm that there is sufficient storage capacity at the WTP for a years' worth of sludge storage which provides the capability to manage any potential issues with off-site re-use of the sludge. This storage would be within a bunded area and there would be no runoff to the wider environment.

6.3.2.8 Design Change Requests on Specific Landowner Lands

259. In his Additional Submission James Cullen Senior has repeated a number of matters raised in several previous submissions made in response to the Statutory Consultation.

260. The Applicant would reiterate that the purpose of the proposed access arrangement is to provide safe and reliable access to the associated Proposed Project infrastructure while avoiding unnecessary conflict with existing private and agricultural movements. The Additional Submission considers that the proximity of the proposed lay-by to the existing farm entrance may itself result in interaction between the respective sightlines and suggests that the existing entrance could instead be used.

261. As set out in Section 9.2.5 (Site Access Arrangements and Potential Conflicts with Existing Access Points) of the RTS, access points have been developed having regard to engineering feasibility, road safety, visibility requirements and the ability to safely accommodate the relevant vehicle movements. Where proposed accesses interface with existing residential, agricultural or third-party accesses, the TMP provides for measures including controlled vehicle movements, Traffic Management Operatives at constrained locations where required, appropriate signage and advance liaison with affected landowners and the relevant Roads Authority.

262. The Applicant's position on the requirement for the proposed lay-by remains as set out in Section 6.3.4 (Potential Safety Impact of Proposed Layby at Landowner Property Access) of the RTS and is repeated in Section 6.2.2.8 of this Report

263. The Additional Submission from him refers to an existing recess adjacent to the proposed lay-by providing suitable access. Based on the rest of the Additional Submission we understand that to refer to Mr Cullens existing agricultural access to his land south of the Planning Application Boundary. Consideration has been given into the use of the existing entrance and is considered potentially more detrimental to the landowner. The entrance is understood to serve the farmyard, agricultural lands and associated daily movements. Use of that entrance for permanent line valve access would require a permanent right of way from the entrance to the line valve compound and would introduce operational vehicle movements into an access used for livestock and machinery. It would also require coordination of gate access and operational activities with the farming enterprise. By contrast, the proposed lay-by would provide a dedicated access point. In contract the proposed lay-by would provide a dedicated access point. Therefore, the lay-by as proposed is preferred by the Applicant.

6.4 New Matters Raised in Additional Submissions

264. No new matters were raised regarding the Proposed Project Description in the Additional Submissions.

7. Construction and Commissioning

7.1 Overview

265. Thirteen of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Construction and Commissioning. These were responded to in the RTS Report submitted to the ACP in May 2026.

266. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Construction and Commissioning. This was responded to in the SRTS Report submitted to the ACP in June 2026.

267. There were three of the 43 Additional Submissions received by ACP which raised matters relevant to Construction and Commissioning and are responded to in this Report.

268. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Construction and Commissioning and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

269. This Report and its supporting Appendix comprise the response of the Applicant to the issues raised regarding:

- The construction of the Proposed Project (excluding comments on the environmental effects of the construction of the Proposed Project which, where relevant, are considered in Chapters 8 - 27); and
- Matters related to the construction approach such as Construction Compounds, Pipe Storage depots and the Construction Programme.

270. There were a large number of comments raised regarding the environmental effects of the Proposed Project and these are addressed in the relevant topics in Chapters 8 – 27 however, there were relatively few about the actual construction works. Most related to the impacts on land and the proposals specific to that land parcel.

271. No new matters were raised regarding the Construction and Commissioning of the Proposed Project and consequently, this Chapter is structured around the following sections:

- Matters raised regarding Construction and Commissioining and previously responded to; and
- Matters raised previously and further clarification being provided.

7.2 Response to Matters Raised Previously

7.2.1 Additional Submissions

272. Three responses raised matters that had been considered previously including:

- The design of the construction compounds; and
- Land acquisition for construction purposes.

273. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Submission Eamonn Dooley Previous: WSP_SUB_84	Eamonn Dooley	Proposed construction compound acquisition	RTS - Acquisition of Construction Compound Areas on Specific Landowner Lands - Section 7.3.4
Additional Submission Fintan Dunne Previous WSP_SUB_86	Fintan Dunne	Proposed construction compound acquisition	RTS - Acquisition of Construction Compound Areas on Specific Landowner Lands - Section 7.3.4
		Design of the Construction Compounds	RTS – Alternative Design on Specific Landowners Land – Section 5.3.3 RTS - Proposed Construction Compound Design - Section 7.3.5
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Snr	Proposed Pipe Storage Depot acquisition	RTS - Acquisition of Construction Compound Areas on Specific Landowner Lands - Section 7.3.4
		Design of the Pipe Storage Depot	RTS - Proposed Construction Compound Design - Section 7.3.5

7.2.2 Applicant's Summary Response on Matters Raised Previously

7.2.2.1 Acquisition of Construction Compound Areas and Pipe Storage Depots on Specific Landowner Lands

274. The Additional Submissions from Eamonn Dooley and, Fintan Dunne repeated requests that temporary construction compounds should be acquired by the contractor after award. James Cullen Senior also made the same observation regarding the Pipe Storage Depot. The Applicant responded to this in Section 7.3.4 (Acquisition of Construction Compound Areas on Specific Landowner Lands) and Section 5.3.3 (Alternative Design on Specific Landowner Lands) of the RTS and would reiterate the response previously provided.

7.2.2.2 Proposed Construction Compound and Pipe Storage Depot Design

275. The Additional Submissions from Fintan Dunne and James Cullen Senior also reiterated their comments that the construction compounds and depots did not take account of the current land use and agricultural activities. The Applicant acknowledges the landowner's concerns regarding farming activity during the temporary occupation period as previous set out in Section 7.3.5 (Proposed Construction Compound Design) in the RTS. However, it does not accept that agricultural considerations were disregarded during the design process. The extent and configuration of the temporary lands were developed to safely accommodate the construction activities required at this location while minimising land take insofar as reasonably practicable having regard to engineering, environmental, operational and health and safety requirements. As presented within Figure 5.16 Pipe Storage Depot Graiguepottle, Drawing No. 32105801/700/07038 and Figure 5.6 Construction Compound Killananny (Indicative), Drawing No. 32105801/700/07005, the layout of the construction compounds and pipe storage depots aim to minimise unusable space as much as is reasonably practicable.

7.3 Response to Matters Raised Previously – Further Clarification

7.3.1 Additional Submissions

276. Two responses raised matters that had been considered previously and that require further clarification regarding the duration of construction.

277. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Submission Fintan Dunne Previous WSP_SUB_86	Fintan Dunne	Duration of Construction	RTS - Duration of Construction Elements on Specific Landowner Lands Section - Section 7.3.2
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Snr	Duration of Construction	RTS - Duration of Construction Elements on Specific Landowner Lands Section - Section 7.3.2

7.3.2 Applicant's Summary Response providing further clarification on Matters Raised Previously

7.3.2.1 Duration of Construction Elements on Specific Landowner Lands

278. The Additional Submissions from Fintan Dunne and James Cullen Senior responded to the information provided by the Applicant regarding the duration that land would be affected by Construction Compounds and Depots but commented that it did not provide sufficient certainty. Mr Cullen requested that a maximum duration needed to be specified

279. The Applicant acknowledges that the duration of the temporary occupation is a material concern for Mr Cullen, particularly when considered together with the pipeline working area and the operational requirements of the retained sheep-breeding enterprise.

280. The programme information contained in the EIAR and the submitted Construction Environmental Management Plan is indicative and describes the anticipated construction sequence and the controls applicable during construction, decommissioning and reinstatement. In considering the duration of the temporary use of land for construction compounds and depots, it is necessary to distinguish between:

- The overall construction programme for the Proposed Project;
- The anticipated duration of construction effects at an individual agricultural holding;
- The period of active pipeline installation at a particular location; and
- The potentially longer period during which a Construction Compound / Pipe Storage Depot may be required to serve a wider pipeline section.

281. The agricultural assessment and the original rebuttal refer to an indicative construction period of approximately 18 to 24 months at holding level. That period relates to the anticipated temporary

construction effects on individual agricultural holdings. It does not constitute a defined maximum occupation period for depots / compounds.

282. A depot / compound may be required for longer than the period of active pipeline because it is intended to receive, store and distribute pipes serving a wider part of the Pipeline or in the case of a construction compound manage works over a wider area that an individual piece of land. Therefore, the Applicant has acknowledged that a depot/compound could remain in place for multiple years, depending upon the detailed construction programme, package sequencing, contractor methodology, weather conditions and the progress of the relevant pipeline works.

283. A fixed calendar end date or maximum occupation period cannot presently be provided because the detailed construction programme and sequencing have not yet been finalised. The absence of a fixed end date does not, however, convert the temporary acquisition into an indefinite entitlement, nor does it permit the lands to be retained for an unrelated purpose.

284. Possession and use of the land will be confined to the period reasonably necessary to:

- Undertake the required pre-construction preparation;
- Establish the Pipe Storage Depot / Construction Compound;
- Receive, unload, store and handle pipes serving the relevant pipeline section;
- Facilitate the onward transfer of those pipes to the Construction Working Width;
- Remove remaining pipes, plant, vehicles and temporary infrastructure;
- Decommission the depot; and
- Complete the required soil, drainage, boundary and agricultural reinstatement.

285. The route-wide construction period should not be treated as the automatic occupation period for a depot or compound. Equally, the indicative holding-level period of 18 to 24 months should not be represented as a fixed maximum occupation period for the depot.

286. The continuing requirement for the full depot / compound footprint will be reviewed as construction progresses. Where part of the site is no longer required and can be safely separated from continuing depot operations, the potential for early release or progressive reinstatement will be considered. Mr Cullen will be kept informed through the Landowner Liaison Officer of the anticipated programme for entry, establishment, operation, demobilisation and reinstatement as the detailed construction programme develops.

287. The CEMP provides the framework for the management of temporary construction areas, soil stripping and storage, monitoring, decommissioning, removal of temporary infrastructure and reinstatement. The appointed contractor will be required to prepare the relevant construction-stage plans and method statements in accordance with the minimum requirements and measures contained in the submitted CEMP.

7.4 Response to New Matters Raised in Additional Submissions

288. No new matters were raised regarding the Construction and Commissiong of the Proposed Project in the Additional Submissions.

8. Noise and Vibration

8.1 Overview

289. Twenty Seven of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Noise and Vibration, such as, for example, construction noise impacts. These were responded to in the RTS Report submitted to the ACP in May 2026.

290. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Noise and Vibration. This was responded to in the SRTS Report submitted to the ACP in June 2026.

291. Six of the 43 Additional Submissions received by ACP raised matters relevant to Noise and Vibration and are responded to in this Report.

292. An assessment of noise and vibration was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 6 – Noise and Vibration. The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

293. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Noise and Vibration and should be read in conjunction with the original RTS and SRTS. Cross references to the relevant chapter of the RTS have been included, where appropriate, to assist the reader.

294. Observations identified by the Applicant included in this chapter include topics such as the potential for construction noise and vibration impacts on identified Noise Sensitive Locations (NSLs) and the methodology used to characterise the receptors within the assessment. Effects relating to non-human receptors are covered within Chapter 10 (Biodiversity) and Chapter 14 (Agriculture) and effects relating to human health are covered within Chapter 18 (Human Health).

295. No new noise and vibration matters were raised in the Additional Submissions and consequently, this Chapter is structured around the following section:

- Matters raised previously and further clarification is being provided.

8.2 Response to Matters Raised Previously

296. There were no Additional Submissions which the Applicant had responded to previously and needed no further clarification (see Section 8.3 for matters which had been raised previously and for which further clarification is being provided).

8.3 Response to Matters Raised Previously – Further Clarification

8.3.1 Additional Submissions

297. There were four Additional Submissions received relating to Noise and Vibration that required further clarification from the Applicant relating to:

- Noise impact on property and equine facility;
- Potential noise and vibration impacts on Peamount Hospital; and
- Control of Noise Levels and Proposed Conditions.

298. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Noise impact on property and equine facility.	RTS – General Noise Impacts Associated with the Proposed Project – Section 8.2.1 RTS – Potential Construction Noise Impacts at Specific Landowner Lands – Section 8.3.1
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne		
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	Potential noise impacts on Peamount Hospital. Potential vibration impacts on Peamount Hospital.	RTS – Potential Noise and Vibration Impacts from the TPR on Peamount Healthcare – Section 8.3.2 RTS - Potential Noise Impacts at Peamount Hospital – Section 8.4.1
Additional Sub – South Dublin County Council Previous: WSP_SUB_115	South Dublin City Council	Control of Noise Levels and Proposed Conditions.	SRTS – Recommended Planning Conditions for Noise and Vibration – Section 2.2.4.1

8.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

8.3.2.1 Noise Impact on Property and Equine Facility

299. The Additional Submissions from Robert Frayne and the one from John Quinn and Sandra Frayne are similar and make the same point about noise impacts on neighbouring pieces of land regarding the failure to mitigate construction noise during the construction phase and highlighted the duration of the stated disruption linked to the impact on equine welfare. The Applicant responded to the general points previously in the RTS in Section 8.3.1 (Potential Construction Noise Impacts at Specific Landowner Lands) and 14.3.4 (Potential Impact on Equine Stock / Enterprise). In relation to the Additional Submissions comment on the duration of the impact stated in the Applicants response, this is considered further in Section 14.3.2.2 (Potential Impact on Equine Stock / Enterprise) of this report.

300. Further to the previous response, the Additional Submissions also refer to a proposal to move horses from the land for the duration of the main pipeline installation works and the Applicant can confirm that this is being pursued in order to address the landowners concerns on the disturbance effects on the equine operations and welcomes the Landowners engagement with this proposal. This is also referred to in Section 14.3.2.2 (Potential Impact on Equine Stock / Enterprise).

8.3.2.2 Potential Noise Impacts from the TPR on Peamount Hospital

301. Peamount Healthcare's Additional Submission restates matters raised in its original submission regarding noise and vibration and contends that the Applicant's previous response in Section 8.3.2 of the RTS (Potential Noise and Vibration Impacts from the TPR on Peamount Hospital) is insufficient.

302. No new noise or vibration matters were raised. The matters restated included (i) that the assessment does not adequately reflect the sensitivity of the hospital's patient population; (ii) that the adopted noise and vibration criteria are generic and are not justified for this receptor; and (iii) the effectiveness of the mitigation is not certain.

Misclassification of Noise Sensitive Receptors

303. The Additional Submission requests confirmation on why the EIAR generic construction noise threshold (65 dB $L_{Aeq,T}$) is appropriate for its uniquely vulnerable patients (prolonged disorders of consciousness, acquired brain injury, St Brid's Neuro Disability Unit).

304. The construction noise and vibration assessment in EIAR Chapter 6 – Noise & Vibration applies recognised, threshold-based criteria derived from BS 5228-1:2009+A1:2014, DMRB LA 111 and the TII Noise Guidelines (TII 2014) for the purpose of determining the likelihood of significant environmental effects. The adopted criteria measure the change in the acoustic and vibration environment against established significance thresholds. These thresholds are not just for residential properties; they apply to other sensitive locations, including healthcare sites.

305. All NSLs within Peamount Hospital have been treated as being of the highest sensitivity. Following the site visit undertaken on 17th October 2024 with the project team and the Peamount Hospital facilities team, St Brid's was identified as the nearest NSL to the TPR works, and all noise and vibration calculations were undertaken at the closest distance between that building and the works. This provides the most conservative basis of assessment for the campus, as all other sensitive buildings are set back at greater distances.

306. The NSLs within Peamount Hospital have been assigned the most stringent daytime construction noise threshold of category A- 65 dB $L_{Aeq,T}$ available under BS 5228-1, reflecting both the measured baseline noise environment and the sensitivity of the facility. This methodology recognises that, although construction noise may represent a perceptible change from baseline, levels at or below the adopted Construction Noise Threshold (CNT) fall below the level at which significant effects would occur.

307. The issues raised by Peamount Healthcare in their Additional Submissions predominantly relate to the noise thresholds used in the assessment, rather than the noise levels assessed in EIAR Chapter 6 – Noise & Vibration. The Applicant would highlight that the noise level anticipated at the closest building within Peamount Hospital campus (St Brid's), as a result of constructing the TPR, would be 59 dB after the application of mitigation measures, and therefore no likely significant effects are anticipated to arise from this construction noise.

308. It should be noted that this is the noise level anticipated at the external façade of the building, and that the internal noise level would be substantially less than this. Based on BS 8233 Guidance on Sound Insulation and Noise Reduction for Buildings, a partially open window used for ventilation would typically provide an external-to-internal level difference of approximately 10 to 15 dB, increasing to 20 to 30 dB with windows shut (depending on factors such as whether the building has single or double glazed windows).

Construction Noise and Mitigation

309. Peamount Healthcare's Additional Submission refers to construction noise and the proposal to incorporate standard best practice mitigation. It notes the EIAR itself identifies significant pre-mitigation noise effects at the TPR and access road and requests site-specific noise & vibration justification and site-specific mitigation/management plans.

310. The Applicant acknowledges that, in the absence of mitigation, there would be likely significant effects at NSLs within Peamount Hospital arising from construction of the TPR and its associated access road, as reported in EIAR Chapter 6. With the mitigation set out in Section 6.5.2.1 of EIAR Chapter 6 and the Noise and Vibration Management Plan (NVMP) (Annex D of EIAR Appendix A5.1 – Construction Environmental Management Plan (CEMP)) in place, predicted construction noise levels will be reduced below the adopted thresholds and there will be no likely significant environmental effects.

311. Peamount Healthcare have challenged the Applicant's use of 'generic mitigation measures' and maintain that specific measures are required to protect their vulnerable patients. The Applicant does not agree that it has applied generic measures only. Peamount Hospital was identified as a sensitive receptor early in the assessment process, which is why embedded design measures were incorporated to reduce potential noise and vibration effects (this includes limiting the construction works that will be undertaken closest to St Brid's, as set out in Section 8.3.2 (Potential Noise and Vibration Impacts from the TPR on Peamount Hospital) of the RTS). Embedded mitigation is the most effective approach for avoiding or reducing effects, as it reduced the noise at source directly through the design. Additional, specific measures were then identified to avoid a significant noise effect, including the use of noise screening, as set out in the NVMP. The mitigation measures proposed are best available techniques for reducing noise (they are not generic, rather they are widely used and demonstrably effective at reducing noise levels).

312. In direct response to the request for a site-specific plan, and consistent with the position at Section 8.4.1 (Potential Noise Impacts at Peamount Hospital) of the RTS in respect of the original HSE submission, a dedicated NVMP for the TPR located at Peamount Hospital will be prepared and developed in consultation with Peamount Healthcare. It will contain the specific measures for managing construction noise from the TPR, based on Annex D of EIAR Appendix A5.1 as a minimum. These measures include, but are not limited to, careful planning of site layout, boundary hoarding and localised screening, restriction of particularly noisy activities during sensitive periods, real-time noise monitoring at hospital-adjacent locations against the trigger levels defined in Section 1.5.6 of the NVMP, and ongoing liaison with the hospital throughout construction. As set out in the RTS and in Section 2.2.2.3 (Environmental Mitigation) of this Report, in the event of a grant of permission the CEMP, including the Noise and Vibration Management Plan, will form part of the conditions which the Applicant must comply with. The Applicant will be required to demonstrate to each local authority in which works are undertaken how it has complied with the planning conditions and proposes to do this via a Compliance Framework, as set out in Section 2.9 (Consent Condition) of the RTS.

313. In the unexpected circumstance where monitoring indicates an exceedance of the applied thresholds, the adopted on-site mitigation will be reviewed and improved where feasible. These measures afford protection to vulnerable patients beyond that required solely to demonstrate the absence of likely significant environmental effects.

8.3.2.3 Potential Vibration Impacts from the TPR on Peamount Hospital

314. With regard to vibration, the Additional Submission from Peamount Healthcare has repeated its concerns regarding the sensitivity of the receptors at the hospital. The Applicant would reiterate its previous position that there is no higher assessment category in guidance to be applied, the receptors have already been classified as highly sensitive and restrictions put in place on the construction methodology to prevent likely significant effects as outlined in Section 8.3.2 (Construction Vibration Response) of the RTS.

315. The Additional Submission also requested the following:

- A site-specific management plan to achieve vibration thresholds;
- A commitment to install vibration monitoring equipment at each of the four Protected Structures within the Peamount Hospital site or, at agreed locations, distributed along the site boundary, to continuously monitor vibration and report in real time on any exceedance above agreed thresholds;
- German Standard DIN 4150 should be the threshold applied as per its previous submission; and
- Peamount Healthcare would engage experts to review the site-specific mitigation plans put forward by the Applicant.

316. The Applicant has committed to these however, for avoidance of doubt, it confirms that it agrees to the monitoring and it is applying a standard more onerous that the German Standard DIN4150. There is already a commitment for a Noise and Vibration Management Plan to be put in place and the Applicant confirmed in the RTS that it will be divided into site specific measures for each of the major infrastructure sites including the TPR. Further it agrees to provide the opportunity to Peamount Healthcare to review the management plan.

8.3.2.4 Control of Noise Levels and Proposed Conditions

317. The Additional Submission from South Dublin County Council did not include an objection on noise grounds, but identified that there were points of difference between SDCC and Uisce Eireann relating to the environmental impact of the development at the construction stage, and the appropriate avoidance, mitigation or restorative measures in relation to same which included:

- Appropriate means by which noise levels would be controlled.

318. The Applicant responded to each of the recommended conditions in Section 2.2.4.1 (Recommended Planning Conditions for Noise and Vibration) of the SRTS report. The Applicant has set out its position on the points of difference in Table 8.1.

Table 8.1: Applicant's position on matters raised previously by South Dublin County Council

Matter raised by South Dublin County Council	Point of difference
No equipment or machinery shall be operated on or adjacent to the construction site before 07:00 hours on weekdays and 09:00 hours on Saturdays nor after 19:00 hours on weekdays and 13:00 hours on Saturdays, nor at any time on Sundays, Bank Holidays or Public Holidays.	Working hours on a Saturday. The Applicant is proposing longer hours on a Saturday finishing at 16.30. Certain construction activities would need to be undertaken outside these typical working hours. These activities are detailed in Section 5.6 of EIAR Chapter 5.
Where intrusive machinery is required to be used at short notice, the main contractor shall ensure that nearby sensitive locations are informed prior to works commencing. Special consideration and consolation must be given to Peamount Hospital.	The Applicant is in agreement with outcome being sought.
Operational noise levels from the proposed development shall not be so loud, so continuous, so repeated, of such duration or pitch or occurring at such times as to give reasonable cause for annoyance to a person in any residence, adjoining premises or public place in the vicinity.	The Applicant is in agreement with outcome being sought.
Noise due to the normal operation of the proposed development, expressed as L_{Aeq} over 15 minutes at the façade of a noise sensitive location, shall not exceed the daytime background level by more than 3 dB(A) and shall not exceed the background level for evening and night-time.	The operational noise thresholds suggested by South Dublin County Council are not consistent with the thresholds set out in the Proposed Project EIAR. The operational noise thresholds in the EIAR are: • Daytime – 45 dB $L_{Ar,T}$ • Evening – 40 dB $L_{Ar,T}$ • Night-time – 35 dB $L_{Aeq,T}$ While differing slightly from those set out in the Additional Submission, these thresholds are derived from established guidance documents, based on criteria for areas with low background noise, and reflect current best practice and are therefore considered acceptable and appropriate for the Proposed Project. The Applicant would point out that the assessment in EIAR Chapter 6 – Noise & Vibration has demonstrated that these thresholds would not be exceeded during the operation of the Proposed Project.
Clearly audible and impulsive tones at noise sensitive locations during evening and night shall be avoided irrespective of the noise level.	The Applicant is in agreement with outcome being sought.
The Applicant shall ensure that the design of the noise sources at the facility and the associated abatement measures will ensure that tonal or nuisance noise will not arise at the Noise Sensitive Locations due to the facility operation.	The Applicant is in agreement with outcome being sought.

8.4 New Matters Raised in Additional Submissions

319. No new matters relating to Noise and Vibration were identified in the Additional Submissions.

9. Traffic and Transport

9.1 Overview

320. Thirty of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Traffic and Transport. These were responded to in the RTS Report submitted to the ACP in May 2026.

321. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Traffic and Transport. The response to this was included in the SRTS Report submitted to the ACP in June 2026.

322. Four of the 43 Additional Submissions received by ACP raised matters relevant to Traffic and Transport and these are responded to in this Report.

323. An assessment of Traffic and Transport was carried out and reported in the Environmental Impact Assessment Report (EIAR) submitted as part of the SID Planning Application in Chapter 7 (Traffic & Transport). The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process of the EIAR).

324. This Report and its supporting Appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Traffic and Transport and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

325. This Chapter responds specifically to Traffic and Transport matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 5 – Consideration of Reasonable Alternatives;
- Chapter 6 – Proposed Project Description;
- Chapter 7 – Construction and Commissioning; and
- Chapter 21 – Material Assets.

326. Cross references to these other relevant Chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

327. The National Transport Authority raised potential conditions related to the protection of its assets. These were previously considered in the RTS in Section 21.3.1 (Recommended Conditions for Planning) on Materials Assets and so this Additional Submission is considered in Chapter 21 (Material Assets) of this Report.

328. The Traffic and Transport matters raised in the Additional Submissions include matters previously considered in the RTS relating to construction traffic impacts, including road safety, including the suitability and width of rural roads, visibility and interaction with existing traffic; disruption to local communities; impacts on agricultural access and farm operations; suitability of the existing road network to accommodate construction traffic; and site access arrangements and potential conflicts with existing access points.

329. No new matters were raised in the Additional Submissions regarding Traffic and Transport and so this Chapter is structured around the following sections:

- Matters raised regarding Traffic and Transport and previously responded to; and
- Matters raised previously and for which further clarification is being provided.

9.2 Response to Matters Raised Previously

9.2.1 Additional Submissions

330. Two Additional Submission raised Traffic and Transport matters that had been considered previously. The matters raised related to:

- Potential Traffic Impacts in the Tipperary Country Council Area; and
- Construction and operational traffic associated with the Termination Point Reservoir (TPR), including the proposed construction access adjoining Peamount Healthcare and the alternative use of the Grange Castle West Access Road.

331. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Concerns regarding the proposed temporary construction compound access onto the N52 at Lisgarriff and sightlines at accesses onto the public road network.	RTS – General Construction Traffic Impacts – Section 9.2.1 RTS – Potential Traffic Impacts in the Tipperary Country Council Area – Section 9.4.6 RTS – Planning Conditions Specific to the Tipperary Country Council Area – Section 9.4.7 RTS – Alternative Access to the Construction Compound at Lisgarriff – Section 5.4.3
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	Concerns regarding the proposed TPR construction access adjoining Peamount Healthcare and the R120. Concerns regarding construction and operational traffic in proximity to vulnerable residents.	RTS – Potential Traffic Impacts at Peamount Hospital – Section 9.3.1 RTS – Alternative Access on Specific Landowner Lands - 5.3.2

9.2.2 Applicant's Summary Response on Matters Raised Previously

9.2.2.1 Potential Traffic Impacts in the Tipperary Country Council Area

332. Tipperary County Council reiterate the matters raised regarding the impact on the road network within is boundary and specifically noted:

- The proposed access onto the N52 at Lisgarriff and the Council recommendation that the option of providing access to the compound from the L5079 be explored;
- The concerns over the temporary access from the N52 including sightlines; and
- The concerns regarding sightlines remain.

333. The Applicant acknowledges the matters raised by the Council and considers that responses were provided to these previously in the RTS in Sections 9.4.6 (Potential Traffic Impacts in the Tipperary County Council Area), 9.4.7 (Planning Conditions Specific to the Tipperary County Council Area) and 5.4.3 (Alternative Access to the Construction Compound at Lisgarriff). The Applicant does not have any

further response to that provided previously in those sections of the RTS, but would reiterate the following.

334. The proposed access at Lisgarriff is a temporary construction access associated with the proposed construction compound. The traffic implications associated with construction traffic in County Tipperary, including HGV movements and interaction with the public road network, were assessed in EIAR Chapter 7 – Traffic & Transport and addressed in Sections 9.2.1 (General Construction Traffic Impacts) and 9.4.6 (Potential Traffic Impacts in the Tipperary County Council Area) of the RTS.

335. Detailed site-specific temporary traffic management arrangements will be developed by the appointed Contractor(s) in consultation with the relevant Roads Authority, An Garda Síochána and other relevant stakeholders and submitted for approval prior to commencement of the relevant works. These measures will include management of HGV movements, designated haul routes, appropriate signage and traffic control, road closures and diversions where necessary and monitoring of compliance with the agreed arrangements.

336. The alternative access to the construction compound from the L5079 was previously considered in Section 5.4.3 of the RTS – Alternative Access to the Construction Compound at Lisgarriff, while the design and sightline matters raised by Tipperary County Council were addressed in Section 6.4.9 of the RTS – Access Design and Sightlines.

337. The Applicant confirms that the detailed access arrangements will continue to be developed having regard to the applicable design and road safety requirements and in consultation with Tipperary County Council and TII, as relevant.

9.2.2.2 Potential Traffic Impacts at Peamount Hospital

338. Within its Additional Submission Peamount Healthcare continues to seek use of the Grange Castle West Access Road in place of the proposed access adjoining Peamount Hospital and the R120. Peamount Healthcare state that the alternative is set out in planning policy and suggests that this invalidates the Applicants suggestion that the option of using the Grange Castle West Access Road is not sufficiently certain to be adopted within the Proposed Project.

339. The Applicant does not accept that the existence of a route shown in a masterplan, without a committed delivery programme or planning permission and without demonstrated alignment with the Proposed Project programme, constitutes a presently available alternative capable of meeting the Project's requirements.

340. The Applicant has previously discussed the matter with South Dublin County Council and is not aware of any committed proposal for delivery of the Grange Castle West Access Road. As stated in the RTS in Sections 5.3.2 (Alternative Access on Specific Landowner Lands) and 9.3.1 (Potential Traffic Impacts at Peamount Hospital), there is no current specific timeline for delivery of the north-south road within Grange Castle West (identified as Phases 3 and 4), and its delivery is dependent on future demand. In particular, there is presently no basis on which the Applicant can rely on that road being consented, constructed and available in time to facilitate construction of the TPR from spring 2028.

341. Accordingly, while the Applicant remains willing to consider an alternative access arrangement for the TPR site if the relevant part of the Grange Castle West road network becomes committed and deliverable within the required timeframe, the current proposal is not selected merely as a matter of preference. On the information presently available, it is the access arrangement that is sufficiently certain and deliverable to enable the Proposed Project to proceed in accordance with its programme.

342. This is also considered in Section 5.2.2.6 in Chapter 5 (Consideration of Reasonable Alternatives) in this Report and cross referred to in Section 6.2.2.7.

9.3 Response to Matters Raised Previously – Further Clarification

9.3.1 Additional Submissions

343. There were two Additional Submissions received that required further clarification regarding Traffic and Transport relating to:

- Potential conflicts between proposed construction accesses and existing agricultural and property accesses;
- The proposed construction compound access onto the N52 and N62, crossings of the N52, N62, N80 and M7 and the permanent lay-by at the N62;
- Sightline requirements associated with proposed accesses onto the public road network; and
- Measures relating to the protection, monitoring and reinstatement of the public road network during construction.

344. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Senior	Concerns regarding the proposed lay-by/access arrangement on the R407, including its relationship with the existing farm entrance, available sightlines and interaction with farm traffic.	RTS – Potential Safety Impact of Proposed Layby at Landowner Property Access – Section 6.3.4 RTS – Alternative Access on Specific Landowner Lands – 5.3.2
Additional Sub – Transport Infrastructure Ireland (TII) Previous: WSP_SUB_99	TII	Matters relating to direct access to the national road network, Road Safety Audits, national-road crossings and the use of the national road network for construction haul routes and associated traffic management.	RTS – Traffic Management Plan (TMP) – Section 9.4.1 RTS – Road Safety Audits – Section 9.4.2. RTS - Impact on the Strategic Road Network – 21.4.1.

9.3.2 Applicant's Summary Response to Matters Raised Previously – Further Clarification

9.3.2.1 Site Access Arrangements and Potential Conflicts with Existing Access Points

345. The Applicant notes the further concerns raised in relation to the proposed lay-by adjoining the existing farm entrance at the landholding of James Cullen Senior. This is also considered in Section 5.2.2.6 (Alternative Access on landowner Lands) in Chapter 5 – Consideration of Reasonable Alternatives in this Report.

346. The purpose of the proposed access arrangement is to provide safe and reliable access to the associated Proposed Project infrastructure while avoiding unnecessary conflict with existing private and agricultural movements. The Additional Submission considers that the proximity of the proposed lay-by to the existing farm entrance may itself result in interaction between the respective sightlines and suggests that the existing entrance could instead be used.

347. As set out in Section 9.2.5 (Site Access Arrangements and Potential Conflicts with Existing Access Points) of the RTS, access points have been developed having regard to engineering feasibility, road safety, visibility requirements and the ability to safely accommodate the relevant vehicle movements. Where proposed accesses interface with existing residential, agricultural or third-party accesses, the TMP provides for measures including controlled vehicle movements, Traffic Management Operatives

at constrained locations where required, appropriate signage and advance liaison with affected landowners and the relevant Roads Authority.

348. The Applicant's position on the requirement for the proposed lay-by remains as set out in Section 6.3.4 (Potential Safety Impact of Proposed Layby at Landowner Property Access) of the RTS. However, the detailed interface between the proposed lay-by and the existing farm entrance, including visibility and safe operation of the accesses, will continue to be considered as the design is developed, in agreement with the relevant local authority and affected landowner.

9.3.2.2 Proposed Conditions

349. The Additional Submission from TII repeats the matters raised in its original submission. However, it suggests that these matters could be dealt with through conditions.

350. The Applicant welcomes this and is committed to ongoing consultation with TII throughout the development of the Proposed Project. It accepts the principle, spirit, and intent of the suggested conditions and requirements. The Applicant will comply with the conditions attached to any grant of planning approval, in addition to those already included as mitigation or monitoring measures in the EIAR, CEMP and TMP which are all included in the planning application documentation. A summary of the response to proposed conditions is set out in Table 9.1.

Table 9.1: Applicants Response to Proposed TII Conditions

Content of condition	Applicants Response
Proposed Condition: Recommended national roads network mitigation measures for proposed direct accesses to the national roads network where a 100kph speed limit applies	
Prior to commencement of development, a Stage 1 and 2 Road Safety Audit (RSA) shall be carried out in accordance with TII Publications for:- a) The proposed Temporary Construction Compound (ref. CC2 at Lisgarriff. Co. Tipperary) and associated new entrances on the N52 b) The proposed Temporary Pipe Storage Depot (ref. PSD3 at Boveen, Co. Offaly) and associated new entrance on the N62. c) The proposed permanent layby adjacent a proposed typical line valve opposite the proposed pipe storage depot (ref. PSD3 at Boveen. Co. Offaly) on the N62 Any recommendations arising shall be incorporated in the design of the proposed development(s). The Road Safety Audit (RSA) report shall be submitted for the written agreement of the planning authorities in consultation with TII. The developer shall be responsible for the cost of the audit, which shall be undertaken by an independent qualified engineer. Any additional works required as a result of the RSA should be funded by the developer.	Agreed
Prior to bringing into operation the proposed permanent layby adjacent a proposed typical line valve opposite the proposed pipe storage depot (ref. PSD3 at Boveen, Co. Offaly) on the N62 , a Stage 3 Road Safety Audit (RSA) shall be carried out in accordance with TII Publications. The Stage 3 Road Safety Audit (RSA) report shall be submitted for the written agreement of planning authority subject to consultation with TII. The developer shall be responsible for the cost of the Road Safety Audit, which shall be undertaken by an independent qualified engineer. Any additional works required as a result of the RSA should be funded by the developer.	Agreed
Prior to commencement of development, a Design Report shall be required to be completed and submitted for TII review and written agreement for works associated with the proposed permanent layby adjacent a proposed typical line valve opposite the proposed pipe storage depot (ref. PSD3 at Boveen,Co. Offaly) on the N62. The Design Report shall demonstrate compliance with relevant TII Publications (Standards and Technical) and shall be prepared and submitted in accordance with the procedures set out in TII Publication (Standards) DN-GEO-03030 - Design Phase Procedure for Road Safety Improvement Schemes, Urban Renewal Schemes and Local Improvement Schemes.	Agreed
Recommended national roads network mitigation measures for proposed pipeline crossings of the national roads network	
This permission does not approve nor imply consent for any works within the M7 Motorway reservation which shall be required to be achieved under Section 53 of the Roads Act 1993, as amended	Agreed
Prior to commencement of development, the Construction Environmental Management Plan (CEMP) shall be submitted for the written agreement of the planning authorities subject to the written agreement of TII. The Construction Environmental Management Plan (CEMP) shall include the following commitments in relation to trenchless underground crossings of the national roads network (M7, N52, N62 and N80) as appropriate:-	The Applicant agrees to undertake items a-e. However, the Applicant previously stated in the RTS that the CEMP is not

Content of condition	Applicants Response
Proposed Condition: Recommended national roads network mitigation measures for proposed direct accesses to the national roads network where a 100kph speed limit applies	
a) a pre-construction survey along the length of the crossing over the extents of the motorway/dual carriageway boundary b) a commitment to and methodology for. the preparation and submission of, a post-construction survey along the length of the crossing over the extents of the motorway/dual carriageway boundary c) a record of consultation with the Motorway Maintenance and Renewals Contract (MMaRC) Network B Contractors, via TII and the relevant road authority; d) record of works specific indemnities, Section 53 consent and arrangements for third party access as arise following consultation with thirdpartyworks@tii.ie; and e) details demonstrating compliance of works on, or in the vicinity of the national road with TII Publications, including TII Publication (Standard) CC-PAV-04007 - Requirements for the Reinstatement of Openings in National Roads	the appropriate document for these but is committed to delivering items a – e.
No works shall be commenced in the vicinity of the national roads network pending agreement from the relevant road authority in consultation with TII Third Party Works and/or TII Structures Section and the requirements of TII Publications (Standards and Technical). Prior to the commencement of development appropriate plans and details shall be submitted to the satisfaction of the planning authority to be agreed with TII via thirdpartyworks@}tii.ie and structures@tit.ie	Agreed
In accordance with TII Publication (General) GE-TB U-01037 Implementation of CC-PAV-04007Specification for the Reinstatement of Openings in National Roads , TII Publication (Technical) CC-PA V04007- Requirements for the Reinstatement of Openings in National Roads shall apply for proposed national roads network crossings which shall include within the extent of the MMaRC Network Area B managed area for the M7. Proposed national roads network crossings shall avoid all impacts to existing TII infrastructure such as traffic counters, weather stations, embankments, drainage and structures Works required to such infrastructure shall only be undertaken in consultation with and subject to the agreement of the local roads' authority and TII, any costs attributable shall be borne by the applicant/developer.	The Applicant agrees with the principle of a condition but would note the previous response in the RTS Section 24.4.1 (Impact on the Strategic Road Network) regarding the extent of settlement and the Applicant does not consider that it can agree to avoid 'all impacts'. This is consistent with all major infrastructure projects of a similar size and scale to the Proposed Project where a level of tolerance/flexibility would be applied.
Recommended national roads network mitigation measures for proposed construction haul routing utilising the national roads network	
Prior to commencement of development, a finalised Construction Traffic Management Plan (TMP) shall be submitted for the written agreement of Clare, Limerick, Tipperary, Offaly, Kildare, and South Dublin County Councils subject to the written agreement of TII where elements of the national roads network form part of the TMP and shall include the following information in relation to the national roads network:- a) details demonstrating compliance of proposed works to the national road network, including signage, to facilitate construction traffic with TII Publications; b) details demonstrating commitment that any damage caused to the pavement of the existing national road network due to construction traffic shall be rectified in accordance with TII Pavement Standards c) demonstration of consultation with TII Bridge Management Section to ensure that national road structures are not adversely affected and to ensure adherence to required standards and procedures; d) demonstration of consultation with all relevant PPP Companies, MMaRC Contractors and road authorities over which the haul route traverses to ascertain any operational requirements such as delivery timetabling, etc. to ensure that the strategic function of the national road network is maintained; e) copies of any proposals agreed between the road authority, PPP Concessions and MMaRC Companies and the applicant impacting on national roads; and f) demonstration of consultation with thirdpartvworks@tii.ie where temporary works within national road network maintenance boundaries are required to facilitate construction traffic to site. as a works specific Deed of Indemnity may be required by TII before the works can take place	Agreed

351. The Applicant has provided a general response to conditions, including how the Applicant proposes to manage pre-commencement conditions, in Chapter 2 – Overarching Matters of the RTS. To the extent that pre-consent conditions related to TII may cross geographical packages the applicant would seek to apply a similar approach to that set out in Chapter 2 – Overarching Matters of the RTS.

9.4 Response to New Matters Raised in Additional Submissions

352. No new Traffic and Transport matters were identified in the Additional Submissions.

10. Biodiversity

10.1 Overview

353. Seventy-three of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Biodiversity. These issues were considered in the RTS report submitted to the ACP in May 2026.

354. Both of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Biodiversity. These issues were considered in the SRTS report submitted to the ACP in June 2026.

355. Fifteen of the 43 Additional Submissions received by ACP raised matters relevant to Biodiversity and are responded to in this Report.

356. An assessment of biodiversity was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 9 – Biodiversity. This assessment complied with the relevant legislation, standards and guidance as set out in those documents and were prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

357. This report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Biodiversity and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS and SRTS have been included, where appropriate, to assist the reader.

358. This Chapter responds specifically to Biodiversity matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 2 – Overarching Matters;
- Chapter 6 – Proposed Project Description;
- Chapter 7 – Construction and Commissioning;
- Chapter 11 – Water (Hydrological Modelling and Water Levels);
- Chapter 12 – Water (General); and
- Chapter 25 – Natura Impact Statement.

359. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

360. The Additional Submissions concerned potential impacts on habitats and protected species, potential impacts arising from the proposed abstraction, including effects on water quality and fish, and the potential spread of invasive non-native species (INNS). These matters have been assessed in the EIAR, and appropriate mitigation measures have been proposed.

361. This Chapter is structured around the following sections:

- Matters raised regarding Biodiversity and previously responded to;
- Matters raised previously and further clarification being provided; and
- New matters raised regarding Biodiversity in the Additional Submissions.

10.2 Response to Matters Raised Previously

10.2.1 Additional Submissions

362. Twelve responses raised matters that had been considered previously including:

- Abstraction at Parteen will cause ecological damage in Lough Derg;
- Invasive species risk under altered flow;
- Groundwater dependent terrestrial ecosystems;
- Decline of fish life;
- Atlantic salmon at approximately 5% of conservation limits;
- Invasive non-native species inter-catchment transfer;
- Failure to assess impacts on ecosystem services;
- Impacts of project on biodiversity, habitats and species;
- Loss of ecological resilience;
- Ecological impacts of the pipeline project;
- Ecological impact of water abstraction from Lough Derg and River Shannon;
- Adequacy of environmental surveys;
- Ecological impacts;
- Hedgerow loss and the biodiversity methodology focused on Annex I habitats; and
- Matters NPWS have no further comments on.

363. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Abstraction at Parteen will cause ecological damage in Lough Derg	RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Potential Fisheries Impacts – Section 10.4.6
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Invasive species risk under altered flow	RTS – Pathways for Invasive Species Introduction or Pathogen Transfer – Section 25.4.17 RTS – Impact of Aquatic Invasive Species on Native Fauna – Section 10.4.33
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Groundwater dependent terrestrial ecosystems	RTS – Assessment of Groundwater Dependent Terrestrial Ecosystems – Section 10.4.32 RTS – Landscape Abstraction Impacts and Changes to Seasonal Flow – Section 12.4.6 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.		

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Decline of fish life	RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Atlantic salmon at approximately 5% of conservation limits	RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Adequacy of the Ecological Assessment for the Shannon – Section 10.3.8 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Invasive non-native species inter-catchment transfer	RTS – Impact of Aquatic Invasive Species on Native Fauna – Section 10.4.33 RTS – Pathways for Invasive Species Introduction or Pathogen Transfer – Section 25.4.17
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Failure to assess impacts on ecosystem services	RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Impacts of project on biodiversity, habitats and species	RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5
Additional Sub – James Crowley Previous: WSP_SUB_50	James Crowley	Loss of ecological resilience	RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5 RTS – Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth – Section 12.2.3
Additional Sub – James Crowley Previous: WSP_SUB_50	James Crowley	Ecological impacts of the Pipeline Project	RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6
Additional Sub – Senator Dee Ryan Previous: WSP_SUB_67	Senator Dee Ryan	Ecological impact of water abstraction from Lough Derg and River Shannon	RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Assessment of Abstraction from the Parteen Basin – Section 10.4.1
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Adequacy of environmental surveys	RTS – Biodiversity Surveys on Landowner Lands – Section 10.3.3

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council	Ecological impacts	RTS – Potential Biodiversity Impacts to the River Shannon – Section 10.2.2 RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact on Restoring Fish Passage – Section 10.4.26 RTS – Potential Impact of the Proposed Project on Fish – Section 10.4.27 RTS – Potential Impact on Special Conservation Areas and Special Protection Areas in Limerick – Section 25.4.13
Additional Sub – South Dublin County Council Previous: WSP_SUB_115	South Dublin County Council	Hedgerow loss and the biodiversity methodology focused on Annex I habitats.	SRTS – Potential Impact of Hedgerow Removal – Section 2.2.6.3 SRTS – Biodiversity Methodology Focused on Annex I Habitats – Section 2.2.6.4
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Matters NPWS have no further comments on	RTS – Effects on Severe Drought Low Water Level Duration in Designated Sites – Section 25.4.6 RTS – Proposed New Water Treatment Plant Access Road – Section 10.4.17 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18 RTS – Potential Disturbance Effect on Wintering Waterfowl in Parteen Basin – Section 10.4.19 RTS – Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS – Potential Impacts on Alkaline Fen Habitat – Section 25.4.4 RTS - Assessment of Potential Impacts on White-Clawed Crayfish – Section 25.4.2

10.2.2 Applicant's Summary Response on Matters Raised Previously

10.2.2.1 Abstraction at Parteen will Cause Ecological Damage in Lough Derg

364. The Additional Submission from Christopher Campion contends that the proposed abstraction would cause ecological damage during low-flow and drought conditions and that the environmental acceptability of the project should be determined by these sensitivity scenarios. The Applicant acknowledges that the greatest potential influence of the proposed abstraction occurs during extreme drought periods and notes that these scenarios were specifically examined in detail through the Environmental Impact Assessment Report (EIAR), NIS, and supporting hydrological modelling.

365. The potential effects of the proposed abstraction on biodiversity and designated sites have been comprehensively assessed in the EIAR and NIS (refer also to Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species) of the RTS). These assessments were informed by detailed hydrological and water quality modelling of Lough Derg and Parteen Basin using monitoring data and a 52-year simulation period (1972 to 2023).

366. The Applicant would reiterate that the modelling found that impacts on lake levels and downstream flows are negligible and largely indistinguishable from baseline conditions. Any measurable effects occur only during exceptional drought events, such as those experienced in 1995 and 2018, with no perceptible impact on lake levels during approximately 99% of the simulation period. Even under severe drought conditions and future climate change scenarios, modelled drawdown remains within the

Electricity Supply Board's (ESB's) normal operating range and established operating limits for Lough Derg and Parteen Basin.

367. As outlined in the Planning Application, ESB will continue to manage Lough Derg and Parteen Basin within its existing operating framework, taking account of abstraction volumes while maintaining statutory compensation flows and water levels within the established operating bands. The modelling also demonstrates that forward flows to the Old River Shannon remain unchanged, including minimum compensation and fish pass flows.

368. The assessments conclude that abstraction-related changes would not affect flood magnitude, duration, timing or frequency and would not result in likely significant effects on habitats or species within Parteen Basin or the wider River Shannon catchment (including Lough Derg). The NIS further concludes that the Proposed Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the Lower River Shannon SAC or its conservation objectives. Mitigation measures are included to protect qualifying interest habitats and species, maintain water quality, prevent the spread of INNS, and avoid impacts on otter, salmon and lamprey populations.

369. Further relevant responses are provided in Sections 10.3.5 (Potential Impact of the Proposed Project on Fish Migration and Passage), 10.3.12 (Potential Impacts to Littoral and Shoreline Habitats) and 10.4.6 (Potential Fisheries Impacts) of the RTS. The Applicant has nothing further to add to the previous response provided.

10.2.2.2 Invasive Species Risk Under Altered Flow

370. The Additional Submission from Joe Mayo raises concern that changes to flow regimes and water levels resulting from the Proposed Project could create conditions favourable to the establishment or spread of INNS. It is suggested that this impact pathway has not been sufficiently assessed and that associated biodiversity risks remain uncertain.

371. The issue raised has already been considered in detail within Chapter 8 – Biodiversity of the EIAR and in the NIS and is also addressed in the RTS under Section 25.4.17 (Pathways for Invasive Species Introduction or Pathogen Transfer) and Section 10.4.33 (Impact of Aquatic Invasive Species on Native Fauna). The Applicant has nothing further to add to the previous responses provided, but would reiterate the following key points.

372. The Applicant would reiterate that the potential for the introduction and spread of INNS during both Construction Phase and Operational Phase was specifically assessed. The assessment considered aquatic INNS including zebra mussel, quagga mussel and Asian clam, as well as the potential for the transfer of INNS between catchments. The Applicant concluded that the Proposed Project would not significantly influence the introduction, spread, distribution or ecological effects of INNS beyond existing baseline conditions. This conclusion was informed by the hydrological modelling presented in EIAR Appendix A9.1 Annex A – Hydrological Modelling Report, further addressed in responses in Chapter 11 – Water (Hydrological Modelling and Water Levels) of the RTS, which demonstrated that the proposed abstraction would not result in significant changes to water levels, flow regimes, hydrodynamic connectivity or other environmental conditions that could facilitate the spread of INNS.

373. The Applicant further reiterates that a comprehensive mitigation and biosecurity framework has been incorporated into the Proposed Project design and CEMP (EIAR Appendix A5.1). As described in Section 25.4.17 and Section 10.4.33 of the RTS, these measures include a dedicated Non-Native Invasive Species Management Plan, Ecological Clerk of Works (ECoW) oversight, implementation of Inland Fisheries Ireland (IFI) biosecurity protocols, and operational controls at the Raw Water Intake and Pumping Station (RWI&PS) designed to prevent the transfer and establishment of aquatic INNS species.

374. Accordingly, the Applicant considers that the risk of INNS introduction, spread or transfer has been comprehensively assessed and mitigated. The conclusions of the EIAR, NIS and previous responses remain unchanged, namely that the Proposed Project will not result in significant adverse effects arising from INNS.

10.2.2.3 Groundwater Dependent Terrestrial Ecosystems

375. The Additional Submission from Joe Mayo raises concerns regarding hydrological connectivity and potential effects on Groundwater Dependent Terrestrial Ecosystems (GWDTEs). It is suggested that the assessment may underestimate impacts, particularly where hydrological changes could affect wetlands, peatland habitats, groundwater-dependent habitats and ecologically sensitive receptors connected to the Shannon catchment. Similarly, the Additional Submission from River Shannon Environmental Protection Alliance. raises concerns that the assessment of GWDTEs is confined to areas immediately adjacent to Parteen Basin and does not adequately consider hydrologically connected areas further downstream along the Old River Shannon corridor. In particular, it is suggested that wetlands and other groundwater-dependent habitats connected to the river could be affected by altered flow variability and reduced flood pulses during drought periods.

376. The matters raised have been considered previously by the Applicant and are addressed specifically in Section 10.4.32 (Assessment of Groundwater Dependent Terrestrial Ecosystems) of the RTS. Related responses are also provided in Section 10.3.12 (Potential Impacts to Littoral and Shoreline Habitats) and Section 12.4.6 (Landscape Abstraction Impacts and Changes to Seasonal Flow) of the RTS. The Applicant has nothing further to add to the previous responses provided, but would reiterate the following key points.

377. As outlined in Section 10.4.32 of the RTS, the Applicant's assessment considered groundwater levels, groundwater gradients, groundwater flow pathways and groundwater-supported ecological receptors. The hydrological modelling concluded that the Proposed Project would not result in significant changes to surface water levels, flow regimes or hydraulic boundary conditions and, consequently, would not result in significant changes to groundwater levels or groundwater flow regimes. On this basis, the Applicant concluded that no viable impact pathway exists through which the Proposed Project could adversely affect GWDTEs.

378. The Additional Submission's concerns regarding peatlands, wetlands and GWDTEs along the pipeline route and connected to the River Shannon were considered in the biodiversity assessment. As noted in EIAR Chapter 8 – Biodiversity, Section 8.5.2.1.3, and Section 10.4.32 of the RTS, ecological surveys undertaken for the Proposed Project found that no peatlands functioning as GWDTEs were identified within the Zone of Influence (ZoI) of the Proposed Project. The Applicant further concluded that no active raised bog habitats, central or sub-central raised bog ecotopes, or other groundwater-dependent peatland habitats would be affected by the Proposed Project.

379. In relation to the specific concern regarding hydrologically connected habitats along the Old River Shannon corridor, the Applicant notes that the assessment was not limited solely to areas immediately adjacent to Parteen Basin. The hydrological and ecological assessments considered both direct and indirect pathways of potential effect, including downstream hydrological conditions. As discussed in Section 12.4.6 (Landscape Abstraction Impacts and Changes to Seasonal Flow) of the RTS, the modelling demonstrates that operation of the Proposed Project would not give rise to significant changes in seasonal flows, water levels or hydrological conditions beyond the range of existing operational and natural variability. Accordingly, significant effects on hydrologically connected habitats arising from altered flow variability or reduced flood pulses were not identified.

380. Furthermore, concerns regarding shoreline, littoral and riparian habitats are addressed separately in Section 10.3.12 (Potential Impacts to Littoral and Shoreline Habitats) of the RTS. As outlined therein, the hydrological modelling predicts only very small changes in water levels and flow conditions, which

are not of a magnitude capable of adversely affecting the structure, function or ecological integrity of littoral, shoreline or associated wetland habitats within Parteen Basin, the Old River Shannon, or connected downstream environments.

381. The Applicant also notes that the NIS considered groundwater and hydrological connections to European sites through a source-pathway-receptor assessment. No GWDTEs were identified within the ZoI, and the modelling demonstrates no significant alteration to the hydrological conditions that support groundwater-dependent habitats or hydrologically connected ecological receptors. Consequently, no adverse effects on the integrity of any European site arising from groundwater-related or hydrological pathways were identified.

382. Accordingly, the concerns raised repeat matters already assessed within the EIAR, NIS, hydrological modelling and further addressed in the RTS responses cited above. Therefore, the Applicant remains satisfied that the Proposed Project will not result in significant adverse effects on GWDTEs, hydrologically connected wetlands, littoral or shoreline habitats, or other groundwater-supported biodiversity receptors along the Old River Shannon corridor or the route of the Proposed Project.

10.2.2.4 Decline of Fish Life

383. The Additional Submission from Michael Reidy raises the historical ecological challenges within the Shannon catchment and the importance of ongoing measures aimed at improving biodiversity and the ecological functioning of the river system. However, the matters raised in relation to fish populations, aquatic ecology, compensation flows and future ecological restoration have already been comprehensively assessed as part of the Planning Application and are addressed within the RTS, specifically Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species), Section 10.3.5 (Potential Impact of the Proposed Project on Fish Migration and Passage) and Section 10.4.18 (Barriers to Connectivity: Salmon and Lamprey Species) of the RTS. The Applicant has nothing further to add to the previous responses provided, but would reiterate the following key points.

384. As outlined in Section 10.3.5 of the RTS, the potential effects of the proposed abstraction on aquatic habitats and protected species, including migratory fish species associated with the Lower River Shannon SAC, were specifically assessed. These assessments concluded that the Proposed Project would not adversely affect the integrity of any European site, would not adversely affect the conservation objectives of qualifying interest habitats or species and would not result in deterioration of ecological status under the WFD.

385. The concerns regarding compensation flows and the operation of the Shannon system are also addressed in Section 11.2.1 (Assessment of Low Flow and Drought Conditions), Section 11.3.2 (Source of Water During a Drought Event), Section 11.3.3 (Availability of Water in a Drought) and Section 11.3.5 (Test the Impact of the Abstraction) of the RTS. These sections explain that the proposed abstraction has been assessed on the basis that the existing statutory compensation flow to the Old River Shannon will continue to be maintained. The proposed abstraction does not involve any reduction in the statutory compensation flow and does not alter the legal or operational framework governing such flows.

386. Furthermore, the Applicant notes that the Proposed Project would not constrain or prejudice any future decisions by the relevant authorities regarding ecological flow enhancements, freshets or other restoration measures that may emerge through future River Basin Management Plans (RBMPs), the Shannon Connectivity Project or other environmental initiatives. Any future changes to compensation flow requirements would be subject to separate regulatory and operational processes independent of the Proposed Project.

387. Accordingly, while the Additional Submission raises broader concerns regarding the historical decline of fish populations within the Shannon catchment, the detailed EIAR and NIS assessments submitted with the Planning Application conclude that the proposed abstraction would not result in significant

adverse effects on fish populations, aquatic habitats, SAC conservation objectives or future opportunities for ecological restoration. The Applicant therefore considers that these matters have been appropriately assessed and addressed.

10.2.2.5 Atlantic Salmon at Approximately 5% of Conservation Limits

388. The Additional Submission from River Shannon Environmental Protection Alliance. highlights the poor conservation status of Atlantic salmon in the Lower Shannon and argues that, given reported population levels of approximately 5% of conservation limits, any additional pressure on the species would be unacceptable. The Applicant acknowledges the concern regarding the status of Atlantic salmon populations and the importance of the remaining spawning habitats within the Shannon catchment. However, the concern that the Proposed Project would place additional pressure on Atlantic salmon populations has been comprehensively assessed within the Proposed Project Planning Application documentation and further considered in RTS.

389. As set out in Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species) of the RTS, the potential effects of the proposed abstraction on habitats and species, including Atlantic salmon, were assessed in EIAR Chapter 8 – Biodiversity and the NIS. These assessments were informed by detailed hydrological modelling and considered the potential for hydrological change, habitat effects, disturbance, mortality risk and indirect ecological impacts. The modelling demonstrates that the proposed abstraction would not result in significant changes to water levels or flow regimes within Parteen Basin, the Lower River Shannon SAC, or the wider Shannon catchment.

390. The assessments were also informed by fisheries datasets including IFI National Research Programme fish stock surveys undertaken in Parteen Basin and Lough Derg, over sixty years of ESB fish counter and fisheries monitoring records (1960 to 2022), and fisheries monitoring data for the Shannon system. These datasets provided a robust baseline understanding of the status, distribution and migration patterns of Atlantic salmon within the catchment and informed the assessments of potential effects associated with the Proposed Project. The IFI assessment of Irish salmon stocks identified the Upper Shannon stock as achieving approximately 5% of its conservation limit and therefore being below its conservation limit. While this confirms that Atlantic salmon within the Shannon catchment are in unfavourable condition, it represents an existing baseline characteristic of the receiving environment rather than an effect attributable to the Proposed Project. Accordingly, the assessment focused on whether the Proposed Project would introduce any additional pressure capable of causing deterioration, reducing migration success, limiting access to habitat, or preventing recovery of the stock.

391. Having regard to the baseline fisheries data, hydrological modelling results and the assessment of potential impact pathways, the EIAR concluded that the Proposed Project would not result in significant adverse effects on Atlantic salmon, their habitats, spawning areas, migration routes, or the wider aquatic ecology of the Shannon system.

392. Furthermore, the NIS concluded that the Proposed Project, either alone or in-combination with other plans or projects, would not adversely affect the integrity of the Lower River Shannon SAC. Specifically, it was determined that the Proposed Project would not undermine the conservation objectives of the SAC, including those relating to Atlantic salmon, and would not result in deterioration of habitats, disruption of ecological processes, or impacts that would compromise the achievement of favourable conservation condition for the qualifying interests of the site.

393. The issues raised regarding salmon migration and access to spawning habitat are specifically addressed in Section 10.3.5 (Potential Impact of the Proposed Project on Fish Migration and Passage) of the RTS. The EIAR Chapter 8 – Biodiversity and the NIS considered the results of Proposed Project baseline scuba surveys undertaken at the proposed RWI&PS. These surveys confirmed that the RWI&PS area does not conform with Atlantic salmon spawning habitat. The assessment concluded that the Proposed Project would not create any new barriers to fish migration and would not alter the

operation of existing fish passage facilities at Parteen Weir or Ardnacrusha. The statutory compensation flow and fish pass flows would continue to be maintained. Furthermore, the RWI&PS has been designed with embedded fish protection measures, including Passive Wedge-Wire Cylinder (PWWC) intake screens, low intake velocities and a bubble curtain system, to avoid entrainment and impingement of fish, including juvenile salmon. The assessment concluded that there would be no likely significant effects on migration, passage, spawning habitat accessibility or the conservation objectives for Atlantic salmon.

394. The broader criticism that the ecological assessment has failed to account for the poor status of Shannon salmon is addressed in Section 10.3.8 (Adequacy of the Ecological Assessment for the Shannon) of the RTS. The Applicant notes that the ecological assessment was based on the best available scientific information and incorporated hydrological modelling under normal, flood, drought and climate change scenarios. The assessment considered Atlantic salmon explicitly and concluded that the proposed abstraction would not reduce statutory compensation flows, would not create new migration barriers, would not prevent future ecological restoration measures or fish passage improvements, and would not result in deterioration, prevent recovery, or undermine the favourable conservation status objectives for salmon populations within the Lower River Shannon SAC.

395. In relation to the existing barriers to connectivity affecting Atlantic salmon, these matters are considered in Section 10.4.18 (Barriers to Connectivity: Salmon and Lamprey Species) of the RTS. The Applicant acknowledges that existing migration constraints associated with the Ardnacrusha hydroelectric station and Parteen Weir are established baseline conditions. However, the assessment demonstrated that the Proposed Project would not create any additional barriers, would not interfere with future implementation of the Shannon Connectivity Project, environmental flow measures, fish passage improvements or other restoration initiatives, and would not prejudice the achievement of SAC conservation objectives for Atlantic salmon.

396. While the Applicant recognises concerns regarding the current conservation status of Atlantic salmon, the relevant assessment under the Appropriate Assessment (AA) process is whether the Proposed Project, either alone or in-combination with other plans or projects, would adversely affect the integrity of the Lower River Shannon SAC in view of its conservation objectives. Based on the detailed hydrological and ecological studies undertaken, and having regard to the findings of the NIS, it can be concluded beyond reasonable scientific doubt that the Proposed Project will not result in adverse effects on the integrity of the Lower River Shannon SAC. In particular, the Proposed Project will not adversely affect Atlantic salmon populations, migratory movements, habitat connectivity, or the supporting ecological conditions necessary to achieve the site's conservation objectives. Furthermore, the Proposed Project will not impede the implementation or effectiveness of future restoration measures aimed at improving the conservation status of Atlantic salmon within the Shannon catchment.

10.2.2.6 Invasive Non-Native Species Inter-Catchment Transfer

397. The Additional Submission from River Shannon Environmental Protection Alliance. raises concerns regarding the potential for the Proposed Project to facilitate inter-catchment transfer of INNS, including zebra mussel, and the assertion that an INNS-specific inter-basin risk assessment has not been provided. However, the issue of aquatic INNS introduction, establishment and transfer has been specifically assessed in Chapter 8 – Biodiversity of the EIAR and the NIS. Reference should also be made to Section 10.4.33 (Impact of Aquatic Invasive Species on Native Fauna) and Section 25.4.17 (Pathways for Invasive Species Introduction or Pathogen Transfer) of the RTS.

398. The Applicant does not agree that the EIAR fails to assess the potential spread of INNS. The assessment considered both construction and operational pathways for INNS introduction and pathogen transfer and identified a comprehensive suite of embedded design measures and mitigation measures to prevent, minimise and manage such risks.

399. In particular, the Proposed Project includes multiple physical, operational and treatment barriers specifically designed to prevent the transfer of aquatic INNS between catchments. These include:

- Passive Wedge-Wire Cylinder intake screens manufactured from copper-nickel alloy, which inhibits the attachment and colonisation of species such as zebra mussel, quagga mussel and Asian clam;
- Intake infrastructure that can be isolated, inspected and cleaned, together with Raw Water Rising Mains (RWRMs) that can be subject to pigging, chemical treatment or drying should INNS management be required;
- Microfiltration systems with filtration performance sufficient to remove juvenile mussels and veligers from the water stream;
- The ultraviolet (UV) treatment of washwater and dedicated INNS debris retention systems to ensure captured organisms are neutralised and appropriately managed; and
- Additional treatment and storage barriers within the Water Treatment Plant (WTP) which further reduce the potential for any INNS breakthrough into the treated water system.

400. For the Construction Phase, a Non-Native Invasive Species Management Plan will be implemented through the CEMP (Annex F of EIAR Appendix A5.1). This will include species-specific controls, ecological supervision, biosecurity procedures, treatment/removal of INNS where required, equipment wash-down protocols, staff training and compliance with relevant IFI, Transport Infrastructure Ireland (TII) and Uisce Éireann guidance.

401. Accordingly, the Applicant considers that the potential for INNS introduction and inter-catchment transfer has been comprehensively assessed and that the Proposed Project incorporates appropriate design features, treatment processes, operational controls and biosecurity measures to ensure that the risk of transfer of INNS between catchments is avoided or minimised to the greatest extent practicable. The conclusions of the EIAR and NIS are that no significant adverse effects are predicted arising from INNS transfer pathways when these measures are implemented.

10.2.2.7 Failure to Assess Impacts on Ecosystem Services

402. The Additional Submission from Environmental Trust Ireland states that the EIAR fails to adequately assess impacts on downstream ecosystem services, including recreational, amenity, cultural and economic activities associated with the Lower River Shannon, and contends that reduced flows would increase the occurrence of harmful algal blooms, resulting in adverse effects on tourism, festivals, recreation and local businesses in areas such as Castleconnell and Limerick City. The Applicant does not agree with this Additional Submission. The matters raised in relation to ecosystem services are intrinsically linked to the concerns regarding water levels, water quality, nutrient concentrations and the potential for harmful algal blooms. These matters have been comprehensively assessed within the EIAR, NIS, Water Status Impact Assessment Report and supporting technical appendices submitted as part of the SID Planning Application.

403. As outlined in Section 10.2.5 (Potential Impacts of Algal Bloom in Lough Derg) of the RTS, similar concerns were raised by a number of observers regarding the potential for reduced water levels to increase nutrient concentrations, promote cyanobacterial (blue-green algae) blooms and consequently affect recreation, tourism, amenity value, water sports, swimming and other ecosystem services associated with Lough Derg and the wider Shannon catchment.

404. The Applicant's assessment was informed by detailed hydrological and water quality modelling, including scenarios that considered drought conditions and future climate change. The modelling examined the potential effects of the Proposed Project on key water quality parameters, including nitrate and orthophosphate concentrations, which are recognised as principal nutrients associated with harmful algal bloom development.

405. The results demonstrated that:

- Predicted changes in water quality resulting from the Proposed Project are negligible and within the natural variability of the system;
- The Proposed Project would have a neutral effect on nitrate and orthophosphate concentrations;
- The Proposed Project would not cause, increase or exacerbate harmful algal blooms in Lough Derg, Parteen Basin or downstream waters; and
- No significant deterioration in water quality is predicted as a consequence of the proposed abstraction.

406. Accordingly, the Applicant does not accept the Additional Submission that the Proposed Project would give rise to ecosystem service impacts resulting from harmful algal blooms. Since the assessment demonstrates that the Proposed Project would not worsen algal bloom conditions or significantly affect water quality, no significant effects on recreational activities, tourism, amenity value, festivals, hospitality businesses or other water-dependent ecosystem services are predicted.

407. Therefore, the Applicant considers that ecosystem services have been appropriately considered through the assessment of the environmental receptors and pathways upon which those services depend, including water quality, hydrology, biodiversity, recreation and tourism. The assessment concludes that the Proposed Project would not cause significant adverse effects on these receptors and, consequently, would not result in significant adverse effects on the ecosystem services identified by the observer.

10.2.2.8 Impacts of Project on Biodiversity, Habitats and Species

408. The Additional Submission from Futureproof Clare Environmental CLG contends that the assessment of impacts on biodiversity, habitats and species is flawed because the hydrological and water quality modelling relies on a long-term dataset extending back to the 1970s, when levels of pollution in the River Shannon were different to those experienced today. It also argues that increasing occurrences of harmful algal blooms in Lough Derg, attributed to climate change and pollution, were not adequately reflected in the assessment. The Applicant does not agree with this Additional Submission.

409. The concerns raised are substantially similar to those addressed in Section 10.2.5 (Potential Impacts of Algal Bloom in Lough Derg) of the RTS and herein in Section 10.2.2.7(Failure to Assess Impacts on Ecosystem Services). As set out in those sections, concerns regarding harmful algal blooms, nutrient enrichment, water quality deterioration and associated effects on biodiversity, recreation and ecosystem services were comprehensively assessed within the EIAR, NIS, Water Status Impact Assessment Report and supporting technical appendices submitted as part of the SID Planning Application.

410. The Additional Submission appears to suggest that the use of a long-term hydrological dataset invalidates the modelling results because historical environmental conditions differed from current conditions. However, the purpose of the long-term hydrological record (1972 to 2023) was to capture the full range of natural hydrological variability, including wet periods, droughts and extreme events, and thereby provide a robust basis for assessment. As outlined in Section 10.2.5 (Potential Impacts of Algal Bloom in Lough Derg) of the RTS, the assessment did not rely solely on historic conditions. The water quality assessment was informed by a specialist 3D hydrodynamic and water quality model developed by MarCon Computations International, which was informed by eight years of monitoring data, including automatic monitoring stations, weather and climate datasets, bathymetric surveys and water quality datasets used to validate model predictions. The assessment also included drought and climate change sensitivity testing to evaluate the potential effects of the Proposed Project under a range of environmental conditions.

411. The Additional Submission also references the use of 2018 as a modelling year and suggests that an assessment of algal bloom risk should have been based on the year when algal blooms were at their worst. The Applicant notes that 2018 was specifically selected because it represented the most severe drought conditions in the available record and therefore constituted an appropriate stress-test of the Proposed Project under low-flow conditions. As explained in Section 10.2.5 of the RTS, the modelling was not limited to a single-year assessment. While 2018 was selected because it represented the most severe drought event within the available record and therefore a robust stress-test scenario, the assessment also included climate change sensitivity testing, including a reasonable worst-case 2080s climate scenario, to evaluate potential future effects on hydrology and water quality.

412. As outlined in Section 10.2.5 of the RTS, the water quality modelling specifically examined parameters associated with harmful algal bloom formation, including nitrate and orthophosphate concentrations. The results demonstrated that:

- Predicted changes in water quality resulting from the Proposed Project are negligible and within the natural variability of the system;
- The Proposed Project would have a neutral effect on nitrate and orthophosphate concentrations;
- The Proposed Project would not cause, increase or exacerbate harmful algal blooms in Lough Derg, Parteen Basin or downstream waters; and
- No significant deterioration in water quality is predicted as a result of the proposed abstraction.

413. The Additional Submission further suggests that climate change effects were not adequately assessed. The Applicant does not agree. The assessment incorporated future climate change scenarios and specifically examined how the Proposed Project would operate under future drought and hydrological stress conditions. The modelling therefore considered both present-day and future climatic influences and concluded that the Proposed Project would not significantly alter nutrient concentrations, water quality conditions or the factors that drive harmful algal bloom development.

414. Consequently, the Applicant does not accept the assertion that the EIAR failed to adequately assess impacts on biodiversity, habitats, and species arising from harmful algal blooms. The assessment demonstrates that the Proposed Project would not worsen algal bloom conditions or significantly affect water quality. The nature, extent and magnitude of the predicted effects are such that no significant adverse effects on biodiversity, habitats, or species were identified. The EIAR therefore adequately assesses these effects and appropriately concludes that the Proposed Project would not result in likely significant effects on biodiversity in this regard.

10.2.2.9 Loss of Ecological Resilience

415. The Additional Submission from James Crowley raises concerns that the stated abstraction of up to 300Mld represents only a small percentage of the long-term average flow at Parteen, but does not adequately explain what proportion of available flows could be abstracted during drought or low-flow conditions. The Additional Submission also expresses concern regarding potential impacts on Lough Derg, the Lower River Shannon, and the operational requirement to maintain water supply through the proposed pipeline during prolonged droughts.

416. The Applicant acknowledges that average annual flow statistics alone do not provide a complete understanding of system performance during drought conditions. For this reason, the EIAR did not rely solely on average flow conditions. Rather, detailed hydrological modelling was undertaken specifically to assess the operation of the Proposed Project during low flows, drought events and future climate change scenarios.

417. As set out in Chapter 11 – Water (Hydrological Modelling and Water Levels) of the RTS, the hydrological model incorporated the operating rules currently applied by ESB and assessed conditions equivalent

to the most severe drought on record, including future climate change allowances. The modelling demonstrates that:

- The statutory minimum compensation flow of 10m³/s to the Old River Shannon is maintained at all times;
- The proposed abstraction does not reduce the compensation flow from 10m³/s to 6.53m³/s, as suggested in the Additional Submission; and
- During severe droughts, water for the proposed abstraction would be supplied from available storage within Parteen Basin, while maintaining statutory compensation and fish-pass flow requirements.

418. The Additional Submission suggests that a future abstraction licence process may impose constraints not currently reflected in the application. The Applicant agrees that a Water Abstraction Licence will be required from the Environmental Protection Agency (EPA) and that any licence granted will establish legally enforceable abstraction conditions. However, the EIAR has assessed the maximum abstraction sought, namely 300Mld (3.47m³/s), together with the associated environmental effects. The Applicant has committed that there is no intention to abstract volumes greater than 300Mld, and any future increase would require separate consents, environmental assessment and regulatory approval.

419. The Additional Submission also raises concerns regarding a potential conflict between maintaining water supply through the pipeline and protecting river flows during extreme droughts. The operational strategy assessed for the Proposed Project does not prioritise abstraction over statutory environmental obligations. As described in the hydrological modelling and operational assessments, the system hierarchy gives priority to:

- Dam safety and reservoir management obligations;
- Maintenance of statutory compensation and fish-pass flows;
- Compliance with the Normal Operating Band; and
- Abstraction for public water supply.

420. Accordingly, the Applicant does not agree that the Proposed Project creates a circumstance whereby abstraction would continue regardless of environmental constraints or statutory flow requirements. It is also important to note that ESB will continue to manage water flows and levels at the Parteen Basin within its normal operating regime (this was addressed in Section 11.2.2 (Reduction in the Flow Down the Old River Shannon) of the RTS).

421. Concerns regarding potential worsening of algal blooms due to lower water levels have also been assessed. As outlined under Section 10.2.5 (Potential Impacts of Algal Bloom in Lough Derg) and Section 12.2.3 (Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth) of the RTS, water quality modelling demonstrated that changes in water levels and water quality resulting from the proposed abstraction are negligible, would remain within natural system variability, and would not increase the likelihood or severity of harmful algal blooms.

422. For these reasons, the Applicant considers that low-flow, drought and climate change conditions have been comprehensively assessed and that the Proposed Project has demonstrated that it can operate while maintaining statutory compensation flows and protecting environmental objectives. The Applicant therefore does not agree that there is an unacceptable risk that abstraction would represent a disproportionate share of available flows during extreme drought conditions.

10.2.2.10 Ecological Impacts of the Pipeline Project

423. The Additional Submission from James Crowley raises concerns regarding the ecological impacts of the Proposed Project and the status of the Shannon River as a heavily modified water body (HMWB).

However, the assertion that the Proposed Project must itself improve the ecological condition of the Shannon River is not supported by the applicable legislative framework.

424. The Applicant has responded to this point in detail in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS. The Applicant would reiterate that the key test under the WFD is whether the Proposed Project would cause deterioration in the status of any water body or prevent the achievement of the relevant environmental objectives, including Good Ecological Potential for HMWBs. The assessment undertaken in the Water Status Impact Assessment Report demonstrates that the Proposed Project will not cause deterioration of any WFD quality element, will not prevent the achievement of WFD objectives, and will not impede the implementation of future ecological restoration measures.

425. The assessment does not assume that the current compensation flow regime is ecologically optimal. Rather, it evaluates whether the Proposed Project would constrain future environmental improvements, including the implementation of enhanced environmental flows, fish passage measures, and other restoration actions identified through the Shannon Connectivity Project, RBMPs, or future regulatory processes. Sensitivity testing undertaken as part of the hydrological modelling confirmed that the proposed abstraction would not prevent the future introduction of such measures.

426. Accordingly, the Proposed Project does not limit or prejudice the State's ability to improve the ecological condition of the Shannon River in the future. The relevant planning and environmental assessment question is whether the Proposed Project would adversely affect current or future WFD objectives. The assessments completed for the Proposed Project conclude that it would not.

427. Therefore, while the ongoing improvement of the ecological condition of the Shannon River remains an important objective of national water policy, the evidence demonstrates that the Proposed Project is compatible with those future improvement measures and does not compromise the achievement of ecological enhancement objectives for the Shannon River HMWB.

10.2.2.11 Ecological Impact of Water Abstraction from Lough Derg and River Shannon

428. The Additional Submission from Senator Dee Ryan raises concerns regarding the potential ecological effects of the proposed abstraction, particularly in relation to biodiversity, drought resilience, climate change, water quality, shoreline habitats and the long-term sustainability of water resources.

429. These matters have been comprehensively assessed within the EIAR and NIS, and have been previously responded to in the RTS. In particular:

- Potential impacts of abstraction on aquatic habitats, protected species and the wider Lower River Shannon ecosystem are addressed in Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species) of the RTS. The assessments concluded that the proposed abstraction would not result in significant adverse effects on habitats or species and would not adversely affect the integrity of any European site;
- Concerns regarding reduced flows, water quality deterioration, and climate change are addressed in Section 10.2.5 (Potential Impacts of Algal Bloom in Lough Derg) of the RTS. The detailed hydrodynamic and water quality modelling undertaken for the Proposed Project concluded that abstraction would not significantly alter nutrient concentrations or increase the likelihood, frequency or severity of algal bloom events;
- Concerns regarding potential impacts on littoral, shoreline and nearshore habitats as a result of changes in water levels are addressed in Section 10.3.12 (Potential Impacts to Littoral and Shoreline Habitats) of the RTS. The assessment demonstrated that predicted changes in water levels attributable to the Proposed Project are negligible, occur only during extreme drought conditions and remain within the range of existing operational and natural variability. Accordingly, no significant effects on shoreline or littoral habitats were identified; and

- The specific consideration of abstraction from Parteen Basin, including assessment of low-flow and drought conditions, is addressed in Section 10.4.1 (Assessment of Abstraction from the Parteen Basin) of the RTS. This assessment concluded that the proposed abstraction could operate while maintaining required environmental flow conditions and without causing significant adverse hydrological or ecological effects within the Shannon system.

430. Accordingly, the concerns raised in relation to ecological impacts have been considered in the EIAR and NIS, and Section 10.2.3, Section 10.2.5, Section 10.3.12 and Section 10.4.1 of the RTS. The Applicant has nothing further to add to the previous responses provided.

10.2.2.12 Adequacy of Environmental Surveys

431. The Additional Submission from John Quinn and Sandra Frayne reiterates concerns regarding the 'adequacy of environmental surveys', following on from their previous Additional Submission which stated 'no proper wildlife survey or habitats survey has been carried out on our lands'. The Applicant considers that Section 10.3.3 (Biodiversity Surveys on Landowner Lands) of the RTS addresses in detail the matter of biodiversity surveys undertaken on landowner lands and the approach adopted in relation to areas where access was unavailable.

432. The Applicant does not agree that the ecological assessment for the Proposed Project is inadequate on the basis of survey access constraints. As outlined in Chapter 8 – Biodiversity of the EIAR and further discussed in Section 10.3.3 of the RTS, extensive ecological surveys were undertaken between 2016 and 2025 to inform the assessment. Where land access was not available, a precautionary approach was applied in accordance with relevant best practice guidance, using a combination of observations from accessible lands, aerial photography, Light Detection and Ranging (LiDAR), GIS datasets and desktop information sources.

433. The limited extent of inaccessible lands did not prevent the establishment of a robust ecological baseline or the completion of a comprehensive assessment of likely significant effects. Any uncertainty associated with such areas was taken into account during both the route selection process and the ecological assessment, with mitigation measures developed on a precautionary basis.

434. Furthermore, confirmatory pre-construction surveys will be undertaken in advance of construction works. These surveys will verify baseline conditions and inform any required refinements to mitigation measures. The implementation of mitigation measures and ecological monitoring will be overseen by an ECoW.

435. Accordingly, and having regard to the detailed response provided in Section 10.3.3 of the RTS, the Applicant is satisfied that sufficient information was available to inform the ecological assessment and mitigation strategy. The matters raised do not alter the conclusions of Chapter 8 – Biodiversity of the EIAR regarding the significance of biodiversity effects associated with the Proposed Project.

10.2.2.13 Ecological Impacts

436. The Additional Submission from Limerick City and County Council reiterates concerns regarding the potential ecological implications of the proposed abstraction, including effects on the Lower River Shannon SAC, the River Shannon and Fergus Estuaries SPA, future hydrological conditions, migratory fish populations and the need for adaptive management over the lifetime of the Proposed Project. The Applicant has responded to these issues in detail in the RTS, including the following sections:

- Potential Biodiversity Impacts to the River Shannon – Section 10.2.2 of the RTS;
- Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 of the RTS;
- Potential Impact on Restoring Fish Passage – Section 10.4.26 of the RTS;

- Potential Impact of the Proposed Project on Fish – Section 10.4.27 of the RTS; and
- Potential Impact on Special Conservation Areas and Special Protection Areas in Limerick – Section 25.4.13 of the RTS

437. The Applicant has nothing further to add to the responses previously provided, but would reiterate the following key points.

438. As outlined in Section 10.2.2 (Potential Biodiversity Impacts to the River Shannon) of the RTS, the potential operational impacts of the proposed abstraction on the River Shannon ecosystem, including designated European sites, have been comprehensively assessed within the EIAR and NIS. The assessment was informed by detailed hydrological modelling and considered a range of scenarios, including drought conditions and future climate change projections. The modelling demonstrates that the proposed abstraction would not result in significant changes to water levels or flow regimes upstream or downstream of the abstraction point. The assessment concluded that the Proposed Project would not adversely affect the integrity of the Lower River Shannon SAC or the River Shannon and River Fergus Estuaries SPA, either alone or in-combination with other plans and projects (Section 7 and Section 8 of the NIS).

439. Future climate change and hydrological variability were specifically considered as part of the hydrological and water quality assessments. The modelling was based on more than 50 years of hydrological data and included a precautionary climate change scenario for the 2080s, as well as testing during the extreme 2018 drought event. The results demonstrated that, even under these conservative scenarios, water levels remained within the existing Normal Operating Band on Lough Derg and the upper and lower water level on Parteen Basin, and statutory compensation flows and fish pass flows were maintained. The assessment also concluded that the proposed abstraction would not compromise future environmental flow (Eflow) measures, fish passage improvements or wider ecological restoration initiatives within the Shannon catchment.

440. In relation to migratory fish populations, Section 10.4.26 (Potential Impact on Restoring Fish Passage) of the RTS discussed whether the Proposed Project could impede current or future fish passage improvements. The NIS considered the objectives of the Shannon Connectivity Project, including proposed Eflow regimes and restoration measures. The modelling demonstrated that abstraction of up to 300Mld would not restrict the implementation of these measures at Parteen Weir or Ardnacrusha. As the Proposed Project does not introduce new migration barriers or alter existing fish passage infrastructure, it was concluded that fish connectivity and the conservation objectives for migratory fish species would not be adversely affected.

441. In relation to fish populations more broadly, Section 10.4.27 (Potential Impact of the Proposed Project on Fish) of the RTS considered both Construction and Operational Phase effects. Appropriate mitigation measures are proposed to avoid or minimise impacts on fisheries during the Construction Phase, while the intake design incorporates measures to prevent fish entrainment and entrapment. The NIS concluded that the Proposed Project, either alone or in-combination with other plans or projects, would not adversely affect the integrity of any European site (including those with fish species as qualifying interests), and no significant adverse effects on fish populations are therefore anticipated during either the Construction or Operational Phase of the Proposed Project.

442. The Proposed Project will operate within a robust regulatory framework and will be subject to abstraction licensing requirements. Abstraction rates are capped at the assessed maximum of 300Mld, and any material change to the abstraction regime would require separate consent and environmental assessment.

443. Accordingly, the Applicant is satisfied that the ecological implications of the Proposed Project have been comprehensively assessed. The findings of the EIAR, NIS and supporting hydrological modelling demonstrate that the Proposed Project will not adversely affect the integrity of the Lower River Shannon

SAC or River Shannon and River Fergus Estuaries SPA, fish populations, fish passage restoration objectives, or the habitats and species associated with the River Shannon system. The assessments further demonstrate that the Proposed Project can operate within an adaptive and regulated framework while maintaining the conservation objectives of the receiving environment.

10.2.2.14 Hedgerow Loss and the Biodiversity Methodology Focused on Annex I Habitats

444. The Additional Submission from South Dublin County Council (SDCC) did not include an objection on biodiversity grounds, but identified that there were points of difference between SDCC and Uisce Eireann relating to the environmental impact of the development at the construction stage, and the appropriate avoidance, mitigation or restorative measures in relation to same which included:

- Potential impact of hedgerow removal; and
- Biodiversity methodology focused on Annex I habitats.

445. The Applicant responded to each of these issues in Section 2.2.6.3 (Potential Impact of Hedgerow Removal) and Section 2.2.6.4 (Biodiversity Methodology Focused on Annex I Habitats) of the SRTS report and has nothing further to add to the previous responses provided.

446. The Applicant notes that SDCC does not consider that these issues are likely to result in significant effects to the environment, but that the details of the proposal should be agreed between the Applicant and SDCC prior to commencement of development. The Applicant confirms that this will be the case, and will be managed through the proposed Compliance Framework as set out in Section 2.9 of the RTS.

10.2.2.15 Matters NPWS have no Further Comments on

447. The Applicant notes that the NPWS have no further comments on the following matters:

- Effects of extended duration of low water during severe drought, and reduced duration of high water (non-flood peak) events, in Lough Derg – this was addressed in Section 25.4.6 of the RTS;
- Decommissioning of disused petrol station near Kilmastulla River – this was addressed in Section 10.4.17 of the RTS;
- Effects of barriers to fish connectivity in River Shannon – this was addressed in Section 10.4.18 of the RTS;
- Construction disturbance effects on wintering birds (including from Lough Derg) – this was addressed in Section 10.4.19 of the RTS;
- In-combination and cumulative effects in the hydrological model – this was addressed in Section 11.4.6 of the RTS;
- Effects on Lisduff Fen SAC – this was addressed in Section 25.4.4 of the RTS; and
- Effects on White-Clawed Crayfish – this was addressed in Section 25.4.2 of the RTS.

448. The Applicant has nothing further to add to the previous responses provided on these matters.

10.3 Response to Matters Raised Previously – Further Clarification

10.3.1 Additional Submissions

449. There were six Additional Submissions received that required further clarification regarding Biodiversity relating to:

- EU nature restoration law;

- Benthic communities in the Shannon SAC;
- Otters, bats and other protected species and habitats;
- Effects on otters;
- Effects on whooper swans;
- Mitigation for Habitat Loss (Local Continuity)
- Effects on lesser horseshoe bats;
- Effects on bat species;
- Effects on marsh fritillary;
- Effects on hen harrier;
- Effects on molluscs;
- Determining ecological significant effects;
- Environmental and ecological damage;
- Hedgerow retention; and
- Green infrastructure – Hedgerows, watercourse crossings and riparian vegetation.

450. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	EU Nature Restoration Law	RTS – Avoiding Impacts to Wetlands and Bogs – Section 10.4.21 RTS – Biodiversity Net Gain – Section 10.4.24 RTS – Assessment of Groundwater Dependent Terrestrial Ecosystems – Section 10.4.32
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Benthic Communities in the Shannon SAC	RTS – Potential for Aquatic Habitat Loss or Damage – Section 10.2.6 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Consideration of Baseline Conditions for the Conservation Objectives of the Lower River Shannon SAC – Section 25.4.8
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Otters, Bats and Other Protected Species and Habitats	RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Otters	RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Whooper Swans	RTS – Potential for Disturbance Impacts on Whooper Swans – Section 10.4.10

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Mitigation for Habitat Loss (Local Continuity)	RTS – Mitigation Measures/Survey Conditions – Section 10.4.3 RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9 RTS – Potential Impact of the Proposed Project on Bat Species – Section 10.4.11
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Lesser Horseshoe Bats	RTS – Potential Impact of the Proposed Project on Bat Species – Section 10.4.11
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Bat Species	RTS – Potential Impact of the Proposed Project on Bat Species – Section 10.4.11
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Marsh Fritillary	RTS – Potential Impact of the Proposed Project on Marsh Fritillary – Section 10.4.12
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Hen Harrier	RTS – Potential Impact of the Proposed Project on Hen Harrier – Section 10.4.13
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on Molluscs	RTS – Potential Impact of the Proposed Project on Molluscs – Section 10.4.14
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Determining Ecological Significant Effects	RTS – Determining Ecological Significant Effects – Section 10.4.15
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Environmental and Ecological Damage	RTS – Mitigation Measures/Survey Conditions – Section 10.4.3
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne		

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Hedgerow Retention	RTS – Potential Biodiversity Impact of Hedgerow Removal on Specific Landowner Lands – Section 10.3.2
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne		
Additional Sub – South Dublin County Council Previous: WSP_SUB_115	South Dublin County Council	Green infrastructure – Hedgerows, watercourse crossings and riparian vegetation	SRTS – Potential Impact of Hedgerow Removal – Section 2.2.6.3

10.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

10.3.2.1 EU Nature Restoration Law

451. The Additional Submission from Environmental Trust Ireland asserts that the proposed abstraction is incompatible with the EU Nature Restoration Law. The Applicant does not agree with this assertion. The Nature Restoration Law establishes restoration objectives and targets for Member States to achieve through the development and implementation of national restoration measures and restoration plans. The Regulation does not prohibit new development or infrastructure projects. Rather, projects must be assessed against the applicable environmental legislative framework, including the Habitats Directive, Birds Directive, WFD, Environmental Impact Assessment Directive and relevant national legislation.

452. The Proposed Project has been designed in a manner that avoids creating barriers to future habitat restoration initiatives. As set out in EIAR Chapter 8 – Biodiversity and Section 10.4.24 (Biodiversity Net Gain) of the RTS, habitats temporarily disturbed during construction will be reinstated on a like-for-like basis, including reinstatement of soils, drainage features, fencing, vegetation, hedgerows and treelines, with native species planting where appropriate. Section 8.10.2.1 of EIAR Chapter 8 – Biodiversity further provides for post-construction monitoring of reinstated habitats for a minimum of five years together with remedial measures where necessary to ensure successful habitat establishment.

453. The RTS also addresses peatland and wetland habitats and confirms that the Proposed Project will not prejudice future ecological restoration opportunities. In Section 10.4.21 (Avoiding Impacts to Wetlands and Bogs) of the RTS, the Applicant details the route selection, avoidance and mitigation measures adopted to minimise impacts on wetlands and bog habitats. The assessment notes that no active raised bogs or degraded raised bogs capable of natural regeneration are affected by the Proposed Project, as discussed in Section 8.5.2.1.3 of EIAR Chapter 8 – Biodiversity. Where peat soils are encountered, reinstatement will be undertaken in accordance with EIAR Appendix A5.3 – Methods of Working in Peat, including replacement of excavated peat in its original stratigraphy to maintain hydrological functioning and support future restoration potential.

454. In addition, Section 10.4.32 (Assessment of Groundwater Dependent Terrestrial Ecosystems) of the RTS confirms that the Proposed Project will not adversely affect GWDTEs through alteration of groundwater conditions. The maintenance of hydrological connections and implementation of groundwater protection measures ensure that future habitat enhancement and restoration measures remain feasible.

455. The Applicant further notes that ecological mitigation measures are set out in Section 8.8 of EIAR Chapter 8 – Biodiversity, with detailed construction and operational mitigation and monitoring measures

identified in Tables 8.95 and 8.96 therein. These measures include protection of aquatic habitats, fisheries resources, riparian habitats and terrestrial habitats, thereby ensuring that the Proposed Project does not undermine ongoing or future habitat restoration objectives.

456. The restoration-focused approach is also reflected in the landscape and biodiversity enhancement proposals described in the Planning Application and RTS, including woodland planting, woodland habitat creation, mixed mosaic habitat creation, riparian woodland reinstatement, hedgerow reinstatement and wet grassland/meadow establishment associated with the proposed infrastructure.

457. Accordingly, the Applicant considers that the Proposed Project is not incompatible with the objectives of the EU Nature Restoration Law. As demonstrated throughout the EIAR, NIS and RTS, the Proposed Project incorporates habitat reinstatement, protection and enhancement measures, does not prevent future restoration initiatives, and maintains the ability of competent authorities to implement restoration measures required under future National Restoration Plans.

10.3.2.2 Benthic Communities in the Shannon SAC

458. The Additional Submission from Environment Trust Ireland asserts that benthic communities within the Lower River Shannon SAC are critical components of estuarine 'blue carbon' processes and that abstraction associated with the Proposed Project would substantially reduce river flows, causing desiccation of intertidal habitats, adverse salinity changes, loss of benthic communities, and consequent release of stored carbon.

459. The Applicant acknowledges the ecological importance of benthic communities and recognises that estuarine and coastal habitats can contribute to long-term carbon cycling and storage. However, the Applicant does not agree that the conclusions presented in the Additional Submission are supported by either the predicted hydrological changes associated with the Proposed Project or the findings of the environmental assessments undertaken as part of the Planning Application.

460. As outlined in the NIS, EIAR Chapter 8 – Biodiversity, EIAR Chapter 9 – Water, Appendix A9.1 – Abstraction Assessment and the associated Hydrological Modelling Report in Annex A of EIAR Appendix A9.1, the assessment considered operation of the Proposed Project under a range of scenarios, including low-flow conditions, severe drought events and future climate change scenarios. These assessments demonstrate that the statutory compensation flow to the Old River Shannon, together with fish pass flow requirements, will continue to be maintained during the Operational Phase of the Proposed Project. Consequently, the significant reductions in downstream flows described in the Additional Submission are not predicted to occur.

461. Furthermore, the assertion that abstraction would result in widespread habitat desiccation and damage to benthic communities is not supported by the ecological impact assessment. Section 10.2.6 (Potential for Aquatic Habitat Loss or Damage) of the RTS notes that no significant loss or damage to aquatic habitats would arise as a result of Proposed Project. The EIAR found that predicted changes in flow and water levels are limited in magnitude and are not expected to alter the physical habitat conditions required to maintain aquatic ecological communities, including benthic fauna and associated ecological processes.

462. Similarly, Section 10.3.12 (Potential Impacts to Littoral and Shoreline Habitats) of the RTS addressed the potential effects of operational water level fluctuations on shoreline and littoral habitats within the affected waterbodies. The assessment concluded that changes in water levels would be negligible, remain within the existing Normal Operating Band on Lough Derg and within the upper and lower water level on Parteen Basin, and would not result in significant habitat loss, shoreline exposure, habitat desiccation or deterioration of ecological function. Consequently, significant adverse effects on shoreline or intertidal ecological communities, including benthic assemblages, were not identified.

463. The NIS also specifically considered the conservation objectives of the Lower River Shannon SAC. As detailed in Section 25.4.8 (Consideration of Baseline Conditions for the Conservation Objectives of the Lower River Shannon SAC) of the RTS, the baseline assessment recognised the importance of estuarine habitats and associated ecological communities within the SAC and evaluated whether Project-related hydrological changes could undermine the attributes and targets of the relevant conservation objectives. The assessment concluded that the predicted changes in water levels, flows and estuarine conditions are negligible and would not adversely affect the structure, function or supporting ecological processes of the qualifying interests of the SAC.

464. The Additional Submission further suggests that altered flows would significantly affect sediment dynamics, bioturbation processes and carbon burial rates within the estuary. However, no evidence has been provided to demonstrate that the minor hydrological changes predicted by the Proposed Project would result in measurable alterations to estuarine sediment processes, widespread loss of benthic fauna, or impairment of carbon sequestration functions. The ecological and hydrological assessments undertaken for the Proposed Project did not identify any pathway by which the predicted operational changes would result in significant impacts on benthic habitat extent, benthic community structure, estuarine ecological functioning, or the conservation objectives of the Lower River Shannon SAC.

465. In addition, water quality assessments undertaken as part of the EIAR and Water Status Impact Assessment Report concluded that the Proposed Project would not result in deterioration of water quality, ecological status, or supporting conditions necessary to sustain aquatic and estuarine habitats. The assessment therefore does not predict conditions that would lead to large-scale benthic mortality, habitat degradation, or the release of stored carbon from estuarine sediments.

466. Accordingly, while the Applicant acknowledges the ecological value of benthic communities and the wider importance of estuarine carbon cycling processes, the comprehensive assessments contained within the EIAR, NIS and supporting technical reports conclude that operation of the Proposed Project will not result in significant adverse effects on aquatic, shoreline, littoral or estuarine habitats, will not adversely affect the integrity of the Lower River Shannon SAC, and will not adversely affect the ecological processes that support its conservation objectives. The Applicant therefore does not agree with the Additional Submission that the Proposed Project would cause significant damage to benthic communities, disrupt blue carbon storage processes, or result in the release of substantial quantities of greenhouse gases from habitats within the Lower River Shannon SAC.

10.3.2.3 Otters, Bats and Other Protected Species and Habitats

467. The Additional Submission from Futureproof Clare Environmental CLG challenges the Applicant's assertion that if works take place outside 20m of an existing habitat, that the habitat nor its inhabitants would be adversely affected. However, the Additional Submission appears to misunderstand the basis of the information presented in Section 10.4.9 (Potential Impact of the Proposed Project on Otter) of the RTS.

468. As set out in Section 10.4.9 of the RTS, the 20m distance is not presented as a general habitat protection zone nor as a threshold beyond which otter habitats or individuals are assumed to be unaffected. Rather, it is a species-specific disturbance threshold derived from the NRA/TII 'Guidelines for the Treatment of Otter Prior to the Construction of National Road Schemes' (NRA 2008) and relates specifically to the potential disturbance of active non-breeding holts by construction activities involving tracked vehicles. For active breeding holts, a substantially larger precautionary distance of 150m is applied in relation to piling and blasting activities.

469. The assessment of potential effects on otter was not based solely on distance criteria. As described in Section 10.4.9 of the RTS, the Applicant undertook a detailed assessment of otter habitats, holts, couches, commuting routes and foraging habitat within the ZoI of the Proposed Project. The

assessment also considered indirect effects, including disturbance, habitat fragmentation, habitat loss, water quality impacts and changes to ecological connectivity. Mitigation measures include pre-construction surveys, ecological supervision, buffer zones, habitat reinstatement, maintenance of habitat connectivity and, where required, derogation licensing.

470. Accordingly, the suggestion that the EIAR concludes that otter habitat or otters would not be adversely affected because works are located more than 20m from an existing habitat is not correct. The 20m criterion relates to a specific assessment threshold for disturbance to active non-breeding holts and is only one component of a broader ecological assessment. The overall conclusions regarding otter are based on detailed field surveys, application of recognised guidance, consideration of direct and indirect effects, and the implementation of species-specific mitigation measures, as set out in Section 10.4.9 of the RTS.

471. Furthermore, the Applicant has committed to pre-construction surveys and ecological oversight to verify otter activity immediately prior to works commencing and to ensure that any active holts, couches or other resting places identified are appropriately protected in accordance with legislative requirements and best practice guidance.

10.3.2.4 Effects on Otters

472. The Applicant submitted a revised Otter Derogation Licence Application to NPWS that addressed the concerns previously raised in relation to the holts and couches covered by the license. The licence was subsequently granted under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (Derogation Number: DER-OTTER-2026-20). The Additional Submission from NPWS reiterates their concern on the pre-construction survey timing.

473. While the EIAR does not explicitly state that otter surveys will be undertaken immediately prior to site clearance, this is inherent in the ECoW-led adaptive management approach and the requirement to verify protected species constraints before works proceed. The EIAR already commits to pre-construction otter surveys and acknowledges that ecological conditions may change between assessment and construction. The ecological assessment has therefore always envisaged that the ECoW would play a central role in verifying ecological conditions immediately before and during construction, with the precise survey intervals, trigger points and reporting requirements capable of being further specified through planning conditions and derogation licence requirements.

474. The revised Otter Derogation Licence Application explicitly clarified that pre-construction surveys will be supplemented by a further inspection of the Proposed Project, immediately prior to site clearance, to ensure that no new holts have been created in the intervening period and to check if any of the previously identified holts are in active use by breeding females or have otter cubs present. As such, the issue raised is not indicative of a deficiency in the ecological assessment but rather reflects the progression from strategic mitigation commitments in the EIAR to species-specific implementation measures through the licensing process.

475. Accordingly, the combination of (i) the ECoW commitments contained within the EIAR, (ii) the more detailed provisions now explicitly set out within the Otter Derogation Licence Application, and (iii) the ability of the Planning Authority to impose additional verification and reporting requirements by condition, provides a robust and proportionate framework to ensure the protection of otter and compliance with relevant wildlife legislation.

10.3.2.5 Effects on Whooper Swans

476. With regard to the assessment of effects on whooper swan, the principal issue arising from the Additional Submission from NPWS relates to the potential for disturbance associated with the trenchless crossing of the Kilmastulla River (WCX077). This was addressed in Section 10.4.10

(Potential for Disturbance Impacts on Whooper Swans) of the RTS, however further clarification is provided below.

477. The current EIAR assessment concludes that wintering whooper swan occur regularly within the wider Parteen Basin area, primarily along the western shoreline, but were not recorded within the Proposed Project footprint during baseline surveys. While baseline records confirm the presence of whooper swan within the wider area, the survey data did not identify a regularly occurring flock or a consistently used foraging or roosting area at the location subsequently highlighted by NPWS. Furthermore, this location was not identified during formal consultation with NPWS, nor was it highlighted through species sensitivity data requests undertaken as part of the baseline data-gathering process.

478. Given the limitations on survey visibility in this area arising from flat topography, mature hedgerows, tree cover and restricted access, it is possible that use of the area was under-recorded. However, the available baseline data do not indicate that the location supports regular or significant concentrations of wintering whooper swan.

479. Taking account of the separation distance from construction activities, the limited suitability of habitats within the Proposed Project area, and the availability of alternative foraging and roosting habitat, the disturbance/displacement impact is currently assessed in the EIAR as being of low magnitude, resulting in a short-term Slight negative effect.

480. Notwithstanding the above, based on the initial NPWS Additional Submission regarding the presence of whooper swan, a precautionary approach could be adopted on the assumption that the area supports a regularly occurring flock of wintering whooper swan which could be subject to disturbance impacts (given that published evidence indicates that whooper swan may be susceptible to disturbance at distances of approximately 200m to 600m (Goodship and Furness 2022) and that the proposed trenchless crossing of the Kilmastulla River (WCX077) would be located approximately 400m from the area identified by NPWS).

481. A simple and effective mitigation measure would be to restrict trenchless construction activities in the vicinity of WCX077 to the period outside the whooper swan wintering season. As this measure can be readily implemented and enforced through a planning condition, it does not present a constraint to the delivery of the Proposed Project. With the implementation of this measure, the potential for disturbance of wintering whooper swan would be avoided and there would be no likely significant effect.

10.3.2.6 Mitigation for Habitat Loss (Local Continuity)

482. The Additional Submission from NPWS comments on the importance of maintaining local habitat continuity, particularly in areas of high otter activity and in the vicinity of replacement badger setts and bat roosts. This was addressed in Section 10.4.3 (Mitigation Measures / Survey Conditions), Section 10.4.9 (Potential Impact of the Proposed Project on Otter) and Section 10.4.11 (Potential Impact of the Proposed Project on Bat Species) of the RTS, however further clarification is provided below.

483. The Environmental Masterplan (EIAR Figure 4.106 to Figure 4.184) and Chapter 8 – Biodiversity of the EIAR set out a range of mitigation measures designed to maintain ecological connectivity and reduce fragmentation effects for otters, badgers and bats. These measures include:

- Use of trenchless excavation techniques and clear-span crossings at rivers and canals to avoid in-stream habitat loss and maintain ecological connectivity along watercourses;
- Retention of buffer strips of vegetation/riparian corridors adjacent to watercourses at trenchless crossing locations, to maintain bankside habitat continuity for otter and other fauna;
- Retention, protection, and/or reinstatement of riparian habitats adjacent to watercourses at open trench crossing locations;

- Retention, protection, and/or reinstatement of hedgerows, treelines and other linear landscape features that function as important commuting, foraging and dispersal corridors for bats and badgers;
- Minimisation of vegetation clearance and vegetation trimming, including use of existing access routes where feasible, to reduce effects on ecological connectivity;
- Hedgerows, treelines and mature trees that are located directly adjacent to the Proposed Project and that are not directly impacted will be avoided and retained intact;
- To avoid the RWI&PS causing otter habitat fragmentation and presenting a barrier to otter movement, a 1m wide otter run/ledge will be provided between the site security fence and the edge of the intake structure (EIAR Figure 4.61);
- Mammal-resistant or mammal-proof fencing to guide species to passage facilities and to prevent animals entering the proposed infrastructure sites;
- Provision of replacement artificial badger setts and bat roost structures, where required;
- Habitat reinstatement and habitat enhancement measures post construction; and
- Species-specific mitigation measures identified through pre-construction surveys and any applicable derogation licence requirements.

484. Suitable areas for the provision of replacement artificial badger setts and replacement bat roost structures, where required, have been identified on the Environmental Masterplan (EIAR Figure 4.106 to Figure 4.184). These areas have been selected to provide appropriate habitat conditions and to maintain connectivity with existing hedgerows, treelines, woodlands, riparian corridors and other habitats used by badgers and bats for commuting, foraging and dispersal. Replacement badger setts will be located outside construction working areas and anticipated disturbance zones, while remaining sufficiently close to the affected social group to maintain territory continuity and facilitate continued use. Replacement bat roost structures will be provided in suitable locations with continued access to established flight lines and foraging habitat. Existing ecological linkages between replacement setts and roost structures, retained habitat features and surrounding foraging areas will be maintained or reinstated wherever practicable.

485. Mitigation measures will be implemented on a site-specific basis, where required, having regard to local ecological conditions and the findings of pre-construction surveys, and any requirements arising from species derogation licences. Particular attention will be given to locations where riparian corridors, hedgerows, treelines or other key ecological linkages are affected by the Proposed Project, in order to maintain habitat continuity and connectivity insofar as practicable.

486. Monitoring and ecological oversight measures will include pre-construction surveys, ecological supervision by the ECoW, and post-construction monitoring of replacement badger setts, bat roost structures and other habitat reinstatement measures, as required. The ECoW will review sensitive locations prior to and during construction and will advise on the selection, design and implementation of appropriate site-specific measures to maintain local habitat continuity and connectivity for otters, badgers and bats.

487. This approach will ensure that the mitigation measures outlined in the EIAR are applied in a coordinated manner at locations where maintaining local ecological continuity is of particular ecological importance.

10.3.2.7 Effects on Lesser Horseshoe Bats

488. The Additional Submission from NPWS raises concerns on the dimensions of the proposed bat house north of the WTP. This was addressed in Section 10.4.11 (Potential Impact of the Proposed Project on Bat Species) of the RTS, however further clarification is provided below.

489. The NPWS were made aware during pre-application consultation that Building 1 supported an Annex II and Annex IV lesser horseshoe bat night roost, but no specific requirements were provided regarding replacement roost size, design or the need for a like-for-like replacement building. In response to NPWS's original Additional Submission regarding bat usage of Building 1, additional surveys were undertaken in April and May 2026 (with further surveys planned for September 2026) following Additional Submission of the SID application to further investigate bat activity and address the matters raised by NPWS. These surveys have refined the understanding of bat use of the structure; however, they do not materially alter the ecological baseline or impact assessment and do not change the conclusions of the EIAR.

490. No lesser horseshoe bats were recorded emerging from Building 1 during either the April or May 2026 surveys, and internal static monitoring did not record lesser horseshoe bats roosting within the structure during either survey period. In addition, static monitoring of surrounding linear habitats failed to record lesser horseshoe bat activity despite targeted detector deployment around the building and wider landscape. The additional surveys therefore reinforce the original conclusion that lesser horseshoe bat usage of Building 1 is limited and intermittent and that the structure does not function as a maternity roost.

491. The additional survey data obtained in 2026 does not necessitate any change to the proposed mitigation strategy. The mitigation package was developed on a precautionary basis and already includes a replacement bat house, bat boxes, habitat enhancement, connectivity planting, bat-sensitive lighting, noise mitigation, post-construction monitoring and derogation licensing where required. The proposed replacement bat house remains appropriate and proportionate to the documented ecological baseline. The selected design is based on the Vincent Wildlife Trust (VWT) Mulkear Project Pump House design, which has been successfully used by lesser horseshoe bats and has been specifically developed and promoted for lesser horseshoe bat day roost provision. The design was developed in 2024 and subsequently published in the 2nd Edition of Schofield (2025), representing more recent guidance and practical experience than that available in Marnell *et al*. (2022).

492. As Building 1 was not identified as a maternity roost, a day roost design was considered the most appropriate form of mitigation. While VWT also provides a dedicated lesser horseshoe bat night roost design, this structure is intended for a more limited roosting function and would not accommodate the wider range of bat species recorded within the building and surrounding area. The proposed Pump House design therefore provides a more flexible and ecologically beneficial solution by supporting lesser horseshoe bats while also providing roosting opportunities for species such as soprano pipistrelle, Daubenton's bat and Natterer's bat.

493. It is also noted that the dimensions referenced in Marnell *et al*. (2022) are derived from the VWT Lesser Horseshoe Bat Roost Booklet and are generally used for the design of maternity bat houses. Given that neither the original surveys nor the subsequent April and May 2026 surveys identified maternity roost use within Building 1, there is no evidence to indicate that a maternity-scale replacement structure is required. The post-Additional Submission survey results therefore further support the suitability of the proposed replacement bat house and do not identify any ecological justification for a larger replacement structure or alternative mitigation approach.

494. In relation to survey effort, the bat surveys established the presence and function of the roost and informed the proposed mitigation strategy. Bat Conservation Trust guidance does not require October surveys as a standard requirement, and survey design is based on professional judgement and site-specific circumstances. October surveys are generally used where there is uncertainty regarding swarming, hibernation or unresolved roost classification. NPWS did not request October surveys during pre-application consultation, and the current request appears to be directed towards reducing uncertainty regarding possible autumn use rather than addressing a deficiency in the survey programme.

495. The concerns raised by NPWS regarding the maintenance of connectivity between the proposed replacement roost (bat house) and foraging habitat to the south of the WTP, together with the potential effects of lighting and operational noise, including during the winter period, have been considered within the EIAR.

496. EIAR Chapter 8 – Biodiversity sets out a suite of mitigation measures to maintain and enhance habitat connectivity for bats while minimising disturbance. These measures include native woodland, scrub and hedgerow planting, the restoration and strengthening of commuting corridors, long-term bat activity monitoring, the provision of bat boxes and the replacement bat house, bat-sensitive lighting design, restrictions on light spill, and reduced lighting specifications within the lesser horseshoe bat Core Sustenance Zone (CSZ). In particular, within the 2km CSZ around Building 1 of the WTP, lighting will be restricted to a maximum colour temperature of 2,200 Kelvin (refer to Section 8.10.2.2 of EIAR Chapter 8 – Biodiversity).

497. In relation to connectivity, the proposed landscaping measures at the WTP will establish a continuous network of native vegetation, including woodland and hedgerow planting, linking the replacement bat house with the wider landscape and identified foraging habitats surrounding the WTP. To further support lesser horseshoe bats during the establishment phase of the permanent planting, temporary screening is also proposed within the 2km CSZ. This measure will help maintain the linear landscape features on which the species relies for navigation between roosting and foraging areas.

498. The proposed bat house will be situated over 90m from the nearest WTP building (Sludge Storage Building No. 2). As shown on the operational noise contour plan for the WTP (Figure 6.7 in Volume 5 of the EIAR), operational noise levels from the WTP in the vicinity of the proposed bat house are predicted to be approximately 35 to 40 dB(A) during the night-time period. A double-row native hedgerow comprising hawthorn and alder whips will be planted approximately 5m from the bat house, providing screening, shelter and enhanced commuting habitat, while strengthening connectivity with adjacent woodland and treelines. Taking account of the low operational noise levels predicted, the separation distance between the bat house and operational infrastructure, and the proposed landscaping and screening measures, no likely significant effects on bat species arising from operational noise were identified.

499. In summary, the proposed mitigation is evidence-led, reflects current and recognised VWT guidance, is proportionate to the documented baseline conditions, and is supported by a comprehensive package of habitat, connectivity, lighting and noise mitigation and monitoring measures. While NPWS has expressed a preference for a larger replacement structure, this appears to be based principally on the potential future value of the existing building and broader landscape-scale considerations, rather than on its recorded ecological function or the specific effects identified and assessed for the Proposed Project. It should also be noted that the Applicant submitted a Bat Derogation Licence Application to NPWS, which included the removal of Building 1. The licence was subsequently granted under Regulation 54 of the European Communities (Birds and Natural Habitats) Regulations 2011 (Derogation Number: DER-BAT-2026-316). The licence recommends, as a condition of the derogation, that a lesser horseshoe bat roost of similar size be constructed to replace the smaller structure proposed in the Derogation Licence Application supporting information and Planning Application. Should ACP consider it appropriate, the provision of a replacement roost of the size recommended in the derogation licence could also be secured by way of a condition attached to a grant of planning permission. Accordingly, the issue raised by NPWS regarding roost dimensions can be addressed through the implementation of the derogation licence requirements and, if deemed necessary by the competent authority, through a condition of planning consent.

10.3.2.8 Effects on Bat Species

500. The Additional Submission from NPWS raise concerns that a newly identified soprano pipistrelle bat roost may have increased in size by summer and could potentially be a maternity roost. The NPWS

also noted that trees with potential bat roost features should be re-surveyed within one week of felling, and any newly identified roosts must be incorporated into an updated derogation licence before works proceed. This was addressed in Section 10.4.11 (Potential Impact of the Proposed Project on Bat Species) of the RTS, however further clarification is provided below.

501. In response to NPWS's concern that the soprano pipistrelle roost recorded in April 2026 (post Additional Submission of the SID Application) could potentially increase in size during summer 2026 and that the possibility of a maternity roost could not be discounted, additional surveys were undertaken in May 2026 during the principal maternity period following Additional Submission of the SID application. These surveys were specifically designed to investigate the status of the roost and address the uncertainty identified by NPWS.

502. While the April 2026 survey recorded approximately 10 soprano pipistrelles emerging from the building, the subsequent May 2026 survey did not confirm continued use at this level. Instead, only three soprano pipistrelles and one common pipistrelle were recorded emerging from the structure. Given that maternity colonies typically form during May, the survey results indicate that Building 1 is not functioning as a maternity roost and do not support the conclusion that the April roost represented the early stages of a maternity colony.

503. The additional surveys also found no evidence of lesser horseshoe bat use of the building. No lesser horseshoe bats were recorded emerging from Building 1 during either the April or May 2026 surveys, internal static monitoring did not record lesser horseshoe bats roosting within the structure during either survey period, and targeted static monitoring of surrounding linear habitats failed to record lesser horseshoe bat activity. These results reinforce the original assessment that lesser horseshoe bat use of Building 1 is limited and intermittent.

504. The additional survey information refines the understanding of how Building 1 is used by bats but does not materially alter the ecological baseline, or impact assessment, and does not change the conclusions of the EIAR. The surveys confirm low-level use by a small number of bat species and do not identify a maternity roost, significant soprano pipistrelle roost, or significant lesser horseshoe bat roost that would require a revision of the assessment or mitigation strategy.

505. The additional information does not necessitate any change to the proposed mitigation. The mitigation measures were developed on a precautionary basis and already include a replacement bat house, bat boxes, habitat enhancement, connectivity planting, bat-sensitive lighting, noise mitigation, post-construction monitoring and derogation licensing where required.

506. With regard to potential bat roost trees, the EIAR already commits to pre-construction surveys of trees with bat roost potential and, where necessary, to updating derogation licences prior to works commencing. NPWS's comments relate primarily to the timing of these surveys rather than any deficiency in the mitigation approach. The one-month survey window was selected to provide sufficient time for assessment of survey findings and, where required, prepare and determine amendments to derogation licensing before tree felling or other works commence.

507. As outlined in Section 8.8.2.2.4 of EIAR Chapter 8 – Biodiversity, trees identified within the study area were assigned Potential Bat Roost (PBR) categories 1, 2, and 3. The proposed procedures for pre-construction surveys of PBRs are as follows:

- Category 1: Trees with roosting features (e.g. dead wood, tree holes) will be checked prior to felling. All roosting features will be physically checked (using an endoscope and high-power torch) or where required dusk surveys will be completed to determine if bats are roosting within. A tree felling plan will be required in consultation with tree surgeons. At least one bat box will be erected prior to the felling of each tree. The bat box will be installed in consultation with a bat specialist and will be located in areas where bats are known to forage or adjacent to suitable foraging areas. The bat boxes will also be located away from prevailing winds and away from

lighting. Any trees showing crevices, hollows, etc., will be removed while a bat specialist is present to deal with any bats found. Such animals will be retained in a box until dusk and released on-site. Large, mature trees will be felled carefully, essentially by gradual dismantling by tree surgeons, under supervision of a bat specialist. Care will be taken when removing branches as removal of loads may cause cracks or crevices to close, crushing any animals within; and

- Category 2 and 3: Any ivy-covered trees which require felling will be left to lie for 24 hours after cutting to allow any bats beneath the cover to escape.

508. Pre-construction surveys of PBRs will be undertaken one-month in advance of clearance to confirm whether bats are present and to ensure that any necessary mitigation measures or licensing requirements are implemented before works proceed. In addition, all trees identified as having bat roost potential will be checked again for the presence of bats immediately prior to felling. Consequently, whether surveys are undertaken one month before or immediately prior to felling does not alter the fundamental mitigation approach. Any roost identified during pre-felling inspections or surveys will be protected, assessed and incorporated into the mitigation strategy and, where necessary, the derogation licence before works proceed. This is considered an implementation matter that can be addressed through licence or planning conditions rather than indicating a substantive gap in the EIAR or the proposed mitigation measures.

509. In the event that a previously unidentified bat roost is recorded during pre-construction surveys, inspections, or immediately prior to tree clearance, works affecting that tree will cease and the roost will be protected pending further assessment by a suitably qualified bat specialist. The nature and significance of the roost (e.g. day roost, transitional roost, night roost or maternity roost) will be determined through additional survey and monitoring, as appropriate. The findings will be reviewed in consultation with NPWS and, where required, the existing derogation licence will be amended or an additional licence obtained prior to any works proceeding. Any tree confirmed as containing a bat roost will be subject to a site-specific method statement prepared by the bat specialist.

510. Where felling of a roost tree is authorised under licence, a precautionary soft-felling approach will be implemented under the direct supervision of an experienced bat ecologist. Soft felling will involve the gradual dismantling of the tree in sections, with branches containing roost features lowered carefully to the ground and retained undisturbed for a period specified by the supervising bat ecologist to allow any bats present to emerge naturally. Sections containing cavities, splits, loose bark or other roost features will be inspected following dismantling and, where necessary, left in a safe location overnight before further processing. Where bats are encountered during the works, they will be handled only by appropriately licensed personnel and relocated in accordance with licence requirements. The timing of works will also be reviewed to avoid sensitive periods, particularly the maternity season, unless otherwise permitted under licence. Additional mitigation measures would be implemented where required by the derogation licence and depending on the ecological significance of the roost.

511. The post-Additional Submission surveys have directly addressed the uncertainty raised by NPWS, have not substantiated concerns regarding a maternity roost, and have increased confidence in the conclusions of the EIAR. The results support the position that the proposed mitigation remains appropriate, proportionate and sufficient for the level and type of bat activity recorded at Building 1.

10.3.2.9 Effects on Marsh Fritillary

512. The Additional Submission from NPWS seeks further clarification on the effect on marsh fritillary and proposed mitigation measures. This was addressed in Section 10.4.12 (Potential Impact of the Proposed Project on Marsh Fritillary) of the RTS, however further clarification is provided below.

513. The statement in Paragraph 1227 of the RTS (Section 10.4.12) that no areas subject to permanent habitat loss were identified as suitable for the species refers specifically to confirmed breeding habitat.

Habitat suitability was assessed with reference to both the presence of devil's-bit scabious and the wider habitat characteristics required by marsh fritillary. While the Proposed Project will result in the loss of some areas of marsh fritillary 'typical' habitat, detailed field surveys determined that habitat suitability within these areas was generally constrained by factors such as sward structure and habitat condition. Consequently, no areas subject to permanent habitat loss were identified as supporting confirmed breeding habitat for the species.

514. The Applicant considers that the EIAR has appropriately assessed the potential effects on marsh fritillary, including the quantification of both temporary and permanent habitat loss, assessment of mortality risks and the identification of species-specific mitigation measures. Known marsh fritillary locations and areas of suitable habitat were avoided where practicable during the route selection and design process.

515. With regard to temporary habitat loss and fragmentation, the Proposed Project has incorporated a range of measures to minimise impacts. Areas supporting devil's-bit scabious will be retained and protected from construction activities, where feasible. Construction activities will be phased and habitat reinstatement undertaken progressively following completion of works, thereby reducing both the duration and extent of temporary fragmentation at any individual location. Habitat reinstatement will be undertaken on a like-for-like basis, where feasible, with the objective of restoring habitat continuity and connectivity following construction.

516. The Applicant also notes the comments regarding larval translocation. A specific marsh fritillary mitigation strategy is already included within Section 8.8.2.6 of EIAR Chapter 8 – Biodiversity. All locations where marsh fritillary was recorded, together with areas identified as suitable habitat, will be subject to pre-construction larval web surveys undertaken during the appropriate survey window immediately preceding site clearance works. Should larval webs be identified within areas affected by the Proposed Project, they will be translocated under ECoW supervision to suitable receptor habitat within the Proposed Project that can be protected from construction activities. Potential translocation areas are shown in the Environmental Masterplan (EIAR Figure 4.106 to Figure 4.184).

517. The Applicant notes NPWS's comments regarding habitat connectivity. Suitable marsh fritillary habitat has been retained, where practicable, throughout the Proposed Project and the distribution of retained habitat patches and identified receptor areas, as shown on the Environmental Masterplan, will assist in maintaining ecological connectivity and facilitating movement of the species through the landscape during the Construction Phase. Final receptor site selection will be informed by the findings of the pre-construction surveys and confirmed by the ECoW having regard to habitat quality, habitat continuity and long-term suitability.

518. Accordingly, the Applicant considers that the EIAR has identified the receptor, established the baseline, assessed the likely impacts and set out an appropriate mitigation strategy. The matters raised by NPWS relate principally to the implementation and verification of mitigation measures rather than any omission in the ecological assessment. Nevertheless, the Applicant is committed to ensuring that the final mitigation measures are informed by the most up-to-date pre-construction survey information and implemented under ECoW supervision to ensure the continued protection of marsh fritillary during construction.

10.3.2.10 Effects on Hen Harrier

519. The Additional Submission from NPWS seeks further clarification in relation to disturbance to roosting Hen Harrier. This was addressed in Section 10.4.13 (Potential Impact of the Proposed Project on Hen Harrier) of the RTS, however further clarification is provided below.

520. The area around Esker Bog was not identified during the Proposed Project surveys as supporting significant roosting habitat and, therefore, specific Hen Harrier roost surveys were not undertaken, and

no species-specific mitigation was proposed for this location. While suitable habitat occurs within the wider landscape, no evidence of a regularly used communal roost was identified within or adjacent to the Proposed Project footprint during the survey period.

521. The Applicant notes that NPWS has highlighted the potential presence of a Hen Harrier roost in the wider area (post Additional Submission of the SID Application). The information referenced by NPWS is derived from survey work undertaken for a separate application, and the status and regularity of roost use at this location is not fully known.

522. To address this matter, targeted Hen Harrier roost surveys will be undertaken as part of the 2026/2027 winter bird survey programme in the vicinity of Esker Bog. The findings of these surveys will be reviewed to determine whether a roost is present, or whether the area supports habitat with the potential to function as a Hen Harrier roost. Should a roost, or evidence of regular roosting activity, be identified through these surveys, a simple and effective mitigation measure would be to avoid potentially disturbing construction activities within an appropriate buffer distance of the roost during the winter roosting period. As this measure can be readily implemented and enforced through a planning condition, it does not present a constraint to the delivery of the Proposed Project. With the implementation of this measure, the potential for disturbance of wintering hen harrier would be avoided and there would be no likely significant effect.

10.3.2.11 Effects on Molluscs

523. The Additional Submission from NPWS comments on the need for additional detail on proposed mitigation in the event that Vertigo species are recorded within suitable habitat areas. This was addressed in Section 10.4.14 (Potential Impact of the Proposed Project on Molluscs) of the RTS, however further clarification is provided below.

524. Updated surveys for Vertigo species were undertaken in May 2026 (and will be repeated in September 2026) within the identified areas of suitable habitat. No Vertigo species were recorded during the May 2026 surveys. Furthermore, the previously identified habitat at Raheenduff has been substantially altered through land clearance and drainage works undertaken by the current landowner, while conditions at Coolfin Glebe remain unchanged. Based on the survey findings to date, no confirmed Vertigo populations have been identified within areas that may be affected by the Proposed Project and, accordingly, no species-specific mitigation measures or pre-construction surveys are currently proposed.

525. Notwithstanding the above, should future surveys identify the presence of Vertigo species within areas that may be affected by the Proposed Project, mitigation measures would be developed and implemented as necessary. The primary mitigation approach would be avoidance through the establishment of exclusion zones and the retention of suitable habitat, where practicable. The extent of any exclusion zone would be determined by the ECoW, in consultation with a Vertigo specialist, having regard to the distribution of the species, habitat requirements and the nature of the proposed works. Construction activities would be excluded from these areas and protective fencing installed, where necessary, to prevent inadvertent disturbance.

526. Where avoidance is not feasible, a site-specific translocation methodology would be developed by the ECoW in consultation with a Vertigo specialist and the NPWS. This would include the identification of suitable receptor habitat with comparable ecological conditions, including hydrological regime, vegetation structure and management characteristics, within the wider area of the Proposed Project. The suitability of any receptor site would be confirmed through targeted surveys and agreed prior to the commencement of any translocation works. The implementation and monitoring of any translocation programme would be overseen by the ECoW. Consistent with the wider mitigation approach outlined in the EIAR, suitable receptor habitats would be retained and protected from construction activities, with post-translocation monitoring undertaken.

527. In summary, the most recent surveys have not identified any Vertigo species within the Proposed Project and, therefore, no direct/indirect effects are predicted. Consequently, no species-specific mitigation measures or pre-construction surveys are presently required. The measures outlined above are contingency measures only and would be implemented solely if Vertigo species are recorded during future surveys within areas that may be affected by the Proposed Project.

10.3.2.12 Determining Ecological Significant Effects

528. The Additional Submission from NPWS questions the overall assessment of significance of ecological effects, in view of its reliance on their apparent temporary and localised nature and reliance on enhancement measures. This was addressed in Section 10.4.15 (Determining Ecological Significant Effects) of the RTS. In addition, Chapter 8 – Biodiversity of the EIAR presents a clear assessment of impacts prior to mitigation and enhancement in Section 8.5.1 to Section 8.5.5, ensuring that the significance of effects was established independently of post-construction enhancement measures, however further clarification is provided below.

529. The assessment of ecological effects presented in the EIAR does not rely on enhancement measures to determine significance. Prior to mitigation and enhancement, significant effects were identified and quantified for habitat loss, fragmentation, disturbance, hydrological change, pollution risk, INNS, mortality, and barrier effects, and where appropriate were assessed as significant effects at local, county, national and international geographic scales. These pre-mitigation effects are clearly set out for habitats including hedgerows, treelines, woodland, heath, bog and grassland habitats.

530. The mitigation strategy follows the established mitigation hierarchy, with emphasis placed on avoidance and minimisation through route selection, design refinement and construction methodologies. This includes avoidance of Annex I habitats and identified groundwater-dependent terrestrial ecosystems, minimisation of habitat loss through route and infrastructure refinements, use of trenchless techniques at sensitive locations, and measures to maintain hydrological connectivity and prevent habitat degradation. These measures were embedded into the Proposed Project before consideration of enhancement measures.

531. The EIAR also recognises that certain habitats cannot be reinstated on a like-for-like basis due to ecological complexity, underlying hydrological requirements or the time required for recovery. Accordingly, permanent residual losses are identified for a number of habitat types, including woodland, treeline, bog and fen habitats, and these residual losses have been taken into account within the significance assessment (EIAR Section 8.11.2.1.1).

532. In relation to mature habitats, the assessment acknowledges that replacement planting cannot immediately replicate the structural complexity, ecological function or habitat value of established woodland, treelines and hedgerows. While post-construction enhancement has been maximised through habitat reinstatement and restoration measures, the assessment considers the temporal nature of habitat recovery and does not assume immediate replacement of ecological function following mitigation.

533. While saproxylic invertebrates are given as an example of a species which is dependent on mature habitats, the NPWS Additional Submission does not identify a particular species, assemblage or population for which the significance assessment is demonstrably incorrect. The concern is raised at a general level in relation to mature habitat-dependent invertebrates rather than a specific ecological receptor. Furthermore, the assessment considered the availability of habitat within the wider landscape, the temporary nature of many construction-related habitat impacts, and the reinstatement of temporarily disturbed areas. Management and reinstatement of topsoil and subsoil will also help retain native soil characteristics and support habitat recovery and recolonisation by soil-associated invertebrates following temporary disturbance. The Additional Submission does not demonstrate that the habitats

affected support a unique or irreplaceable invertebrate resource, or that the residual significance conclusions are materially understated for a specific receptor.

534. The EIAR does not treat habitat reinstatement as enhancement-only measures. Habitat reinstatement, restoration of linear features, hydrological protection measures, INNS controls and species-specific mitigation are mitigation measures intended to reduce effects and restore ecological function where practicable. These measures will be implemented under ECoW supervision and applied on a site-specific basis to minimise habitat fragmentation and maintain connectivity during construction.

535. Accordingly, while it is acknowledged that habitat recovery may take time, particularly for mature habitats, the assessment has considered both the immediate effects of habitat loss and the temporal nature of habitat recovery. The conclusions on significance are based on the scale, extent, duration and context of habitat loss, together with the mitigation and reinstatement measures incorporated into the Proposed Project, consistent with best practice EPA and Chartered Institute of Ecology and Environmental Management (CIEEM) ecological impact assessment methodology.

10.3.2.13 Environmental and Ecological Damage

536. The Additional Submissions from Robert Frayne and the from John Quinn and Sandra Frayne are similar and make the same point about negative effects on the local ecology on their land. The Applicant notes the Additional Submission(s) and the accompanying Preliminary Ecological Appraisal (PEA) prepared by Flynn Furney Environmental Consultants, which raises concerns regarding the potential loss of hedgerow and treeline habitats, habitat connectivity, ecological survey coverage and associated ecological effects.

537. The Applicant considers that these matters have been comprehensively assessed within Chapter 8 – Biodiversity of the EIAR and the accompanying technical appendices. Extensive desktop studies and field surveys have been undertaken between 2016 and 2025, including habitat surveys, protected species surveys and specialist ecological assessments along the Proposed Project. The EIAR confirms that the surveys undertaken are sufficiently robust and current to inform the assessment and that pre-construction surveys will be undertaken in advance of construction to confirm baseline conditions and refine mitigation measures.

538. The Applicant notes that the PEA identifies hedgerows and treelines on the subject lands as important local ecological corridors and acknowledges that no significant evidence of protected species was recorded during the site surveys. The PEA further concludes that interactions between the Proposed Project and water quality in the Lyreen River are not expected to be significant relative to the existing pressures affecting the watercourse.

539. The EIAR specifically recognises the ecological importance of hedgerows, treelines and linear landscape features for commuting and foraging fauna, including bats and terrestrial mammals, and assesses potential effects associated with habitat loss, fragmentation and disturbance. The Proposed Project has been developed in accordance with the mitigation hierarchy, with avoidance of sensitive habitats incorporated into the design process wherever practicable. The assessment includes consideration of habitat loss, habitat fragmentation and impacts on commuting and foraging corridors, together with detailed mitigation measures to avoid, minimise and restore effects on ecological receptors.

540. As set out in Section 8.8.2.1.1 of EIAR Chapter 8 – Biodiversity and the CEMP (EIAR Appendix A5.1), habitat loss within the Construction Working Width will be minimised where practicable through retention of existing vegetation and landscape features, particularly habitats of higher ecological value. Any trees, scrub or hedgerows intended to be retained will be protected in accordance with the National Roads Authority (NRA) ‘Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, During and Post Construction of National Road Schemes’ (NRA 2006). Reinstatement of

temporarily disturbed habitats will be undertaken following construction, including reuse of stored topsoil where feasible to facilitate natural regeneration. These commitments are secured through the Register of Environmental Actions and Commitments contained within the CEMP (Annex G of EIAR Appendix A5.1).

541. In relation to habitat connectivity, the EIAR acknowledges the importance of maintaining ecological linkages and includes a range of measures to minimise disruption. These include phased construction, retention of key habitat features where practicable, prompt reinstatement of disturbed areas, ecological supervision by an ECoW, and the implementation of site-specific measures identified through pre-construction surveys. Accordingly, any temporary severance of ecological corridors during construction will be managed and reduced insofar as practicable and habitat connectivity will be restored following reinstatement.

542. With regard to the suggestion in the PEA that alternative routing options be considered, the Applicant notes that the route selection process formed part of an extensive alternatives assessment as described in Chapter 3 – Consideration of Reasonable Alternatives of the EIAR. Ecological constraints, including designated sites, sensitive habitats and protected species records, were key considerations in route selection, and the final alignment reflects a balance of engineering, environmental, land use and operational requirements.

543. The Applicant further notes that the PEA itself characterises the affected habitats as being of local value, with certain features potentially of regional value due to their maturity and connectivity, and recommends mitigation through avoidance, minimisation and reinstatement. These recommendations are consistent with the mitigation hierarchy already embedded within the Proposed Project and the mitigation measures set out in the EIAR and CEMP.

544. For the reasons outlined above, and having regard to the response provided in Section 10.4.3 (Mitigation Measures/Survey Conditions) of the RTS, the Applicant is satisfied that the potential ecological effects arising from vegetation clearance, habitat disturbance and temporary fragmentation have been fully assessed and appropriately mitigated. Subject to the implementation of the committed mitigation measures, ecological supervision, pre-construction verification surveys and habitat reinstatement proposals, the Applicant considers that the concerns raised in relation to alleged environmental and ecological damage have been adequately addressed within the Planning Application documentation.

545. Therefore, having considered the PEA together with Chapter 8 – Biodiveristy of the EIAR and the committed mitigation measures, the Applicant's position is that the PEA does not establish that a category of likely significant biodiversity effect was omitted from the environmental assessment. Uisce Éireann nevertheless acknowledges the site-specific significance assessment and recommendations contained in the PEA and considers that they should inform the detailed implementation of avoidance and mitigation measures at this location, consistently with the commitments and limits of the consented project.

10.3.2.14 Hedgerow Retention

546. The Additional Submissions from Robert Frayne and the from John Quinn and Sandra Frayne are similar and make the same point about removal of sections of hedgerow on their land. The Additional Submission(s) relies on the PEA prepared by Flynn Furney Environmental Consultants, which states that removal of sections of hedgerow along the R408, the Lyreen River and at Raheen Corner would result in a long-term loss of habitat and habitat connectivity and recommends alternative routing, minimisation of vegetation clearance and enhanced hedgerow reinstatement measures.

547. The Applicant has carefully considered these concerns. However, as set out in Section 10.3.2 (Potential Biodiversity Impact of Hedgerow Removal on Specific Landowner Lands) of the RTS, the biodiversity

effects associated with hedgerow and treeline removal on specific landholdings have already been assessed within Chapter 8 – Biodiversity of the EIAR and are addressed through the application of the mitigation hierarchy of avoidance, minimisation, reinstatement and monitoring.

548. While the PEA characterises the affected hedgerows as important local ecological corridors and identifies a risk of habitat fragmentation, the Applicant notes that the proposed works do not result in the wholesale removal of these features. The design process has sought to retain existing hedgerows and treelines wherever practicable, and opportunities to further reduce hedgerow loss will continue to be considered during the Construction Phase. This approach is consistent with the commitments detailed in the EIAR and noted in the RTS.

549. The PEA places particular emphasis on habitat connectivity. The importance of maintaining ecological corridors is acknowledged and the EIAR notes that severed linear habitats, including hedgerows and treelines, will be reinstated to restore landscape connectivity where feasible. Reinstatement planting will comprise locally sourced native species and will be undertaken on a like-for-like basis insofar as practicable. In addition, reinstated hedgerows will be monitored for a minimum period of five years, with remedial planting undertaken where establishment targets are not achieved.

550. In relation to the PEA recommendation that vegetation clearance along the R408 be minimised and that alternative access arrangements be considered, the Applicant notes that access requirements have been developed having regard to construction, operational and road safety considerations.

551. The PEA further states that replanting cannot immediately replicate the ecological value of mature hedgerows. The Applicant accepts that newly established planting will not initially possess the same ecological characteristics as mature hedgerows. For this reason, the mitigation strategy includes not only replacement planting but also the retention and protection of existing vegetation wherever possible in accordance with the NRA 'Guidelines for the Protection and Preservation of Trees, Hedgerows and Scrub Prior to, During and Post Construction' (NRA 2006), together with measures secured through the CEMP and the Register of Environmental Actions and Commitments (EIAR Appendix A5.1, including Annex G of that appendix).

552. Accordingly, while temporary and localised effects associated with hedgerow removal are acknowledged, the Applicant does not agree that the PEA identifies impacts that have not already been assessed or mitigated within the EIAR. The EIAR demonstrates that a comprehensive package of avoidance, protection, reinstatement and monitoring measures will be implemented to minimise biodiversity effects and restore habitat connectivity following construction.

553. Consequently, Uisce Éireann acknowledges the PEA's characterisation of the habitat and connectivity loss as significant at the local/site level and does not suggest that replacement planting immediately replicates the ecological value of mature hedgerow. Uisce Éireann's position is that these effects fall within the categories assessed in the EIAR and are addressed through the mitigation hierarchy of avoidance, minimisation, protection, reinstatement and monitoring.

10.3.2.15 Green Infrastructure

554. The Additional Submission from South Dublin County Council specified their requirements in relation to green infrastructure. These requirements are:

- Soil removed from the base of hedgerows to be retained and re-used as the planting material for replacement hedgerows;
- A request to alter the species mix of new hedgerows, replacing alder with hawthorn and blackthorn as the core hedgerow species;
- Hedgerows removed to be replaced with hedgerows of the same width and fenced off until established; and

- Watercourses crossings to be at right angles to riparian corridors, watercourses not polluted during works and riparian planting replaced when removed.

555. While the Applicant responded to issues related to hedgerows in Section 2.2.6.3 (Potential Impact of Hedgerow Removal) of the SRTS, the above is further information submitted by SDCC which the Applicant has responded to herein.

556. The Applicant acknowledges the recommended conditions and requirements within the Additional Submission from SDCC. The Applicant is committed to ongoing consultation with the Council throughout the development of the Proposed Project, and accepts the principle, spirit, and intent of the suggested conditions and requirements. The Applicant will comply with the conditions attached to any grant of planning approval, in addition to those already included as mitigation or monitoring measures in the EIAR and the CEMP which are all included in the planning application documentation.

Soil from Base of Hedgerow

557. Subsoil and topsoil will be removed, stored, and reused as per the measures in the Soil Management Plan (Annex B of EIAR Appendix A5.1 – Construction Environmental Management Plan) and mitigation measures in Section 8.8.2 of EIAR Chapter 8 – Biodiversity. In particular:

- The Contractor(s) shall endeavour to reuse soils as soon as is reasonably practicable and return topsoil stripped during the construction as close to its source of origin as reasonably practicable, and appropriate to the design, during restoration;
- The replacement of the excavated soils will be in the correct order in which they were excavated; and
- Natural regeneration of vegetation will be used, where feasible, by reusing the stored topsoil seedbank from its original location for reinstatement.

558. The Applicant confirms that soil removed from the base of hedgerows will be retained and re-used as the planting material for replacement hedgerows, where feasible, in line with the general commitments set out above.

Hedgerow Species Mix

559. The comment from SDCC is in relation to the planting species mix for hedgerows shown on EIAR Figure 4.99 – Landscape Specification). This species mix shown on Figure 4.99 is intended to be indicative for the whole length of the Proposed Project. As stated in Section 8.8.2 of EIAR Chapter 8 – Biodiversity, the 'like-for-like' replanting of habitats will be in accordance with recommendations by an ECoW, taking into consideration the All-Ireland Pollinator Plan 2021-2025 (NBDC 2021) and the Pollinator Friendly Planting Code (NBDC 2022), to ensure locally sourced appropriate native species which are in line with the existing genetic strain are used.

560. Detailed planting specifications will be developed during the detailed design. The Applicant will consult with Local authorities, including SDCC, on planting specifications as part of the proposed Compliance Framework process, as set out in Section 2.9 of the RTS.

Hedgerow Width and Fencing

561. As stated in Section 8.8.2 of EIAR Chapter 8 – Biodiversity, following completion of the construction works the general principle is that the land would be reinstated/restored on a 'like for like' basis, based on the habitat/features that were on site before the works commenced. This would include the reinstatement of the soils, drainage, fencing and vegetation on a 'like for like' basis. The Applicant confirms that this will include reinstating hedgerows with the same width.

562. The level of protection needed for newly planted hedgerows depends on whether the adjoining lands will be used for grazing during the periods of planting establishment. As stated on the Landscape Specification (EIAR Figure 4.99), rabbit-proof guards and/or rabbit proof fencing shall be provided to all newly planted woodland and hedgerow species where applicable.

563. As per measure B25 in the Register of Environmental Actions and Commitments (Annex G of EIAR Appendix A5.1 – Construction Environmental Management Plan), habitats reinstated post-construction will be monitored to determine the overall success of the reinstatement process. The monitoring programme will require annual monitoring, for a minimum period of five years to confirm viable growth is occurring, to undertake remedial works if deemed necessary, and to determine any need to extend the monitoring.

Watercourse Crossings and Riparian Vegetation

564. A full suite of mitigation measures has been proposed to avoid or reduce the effects on the water environment and are set out in the Surface Water Management Plan (SWMP), which is Annex A of EIAR Appendix A5.1 – Construction Environmental Management Plan. This includes a commitment that '*crossings will be constructed as close to perpendicular to the axis of the waterbody channel as engineering and routing conditions permit*', as set out in Section 6.3 of the SWMP.

565. The SWMP also specifies that buffer strips of natural uncleared vegetation will be preserved between construction activity and all rivers, streams and water bodies being crossed by trenchless excavation, and that the launch and reception shafts for pipe jacking will be situated outside of the riparian zone. Buffers will also be applied for water bodies paralleled by the proposed pipeline.

566. For open trench crossings, where riparian vegetation is removed to facilitate works, this will be replaced like for like in line with the Proposed Project general commitment to reinstate temporary loss of vegetation. The SWMP also includes mitigation measures specific to the reinstatement of water bodies, and this includes the planting of riparian vegetation (Section 4.3.1 of the SWMP).

10.4 Response to New Matters Raised in Additional Submissions

10.4.1 Additional Submissions

567. Two additional Submissions raised matters that had not been previously responded to regarding:

- Sensitive habitat (Alkaline Fen).

568. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional Sub – Michael and Mary Kinsella Previous: WSP_SUB_108	Michael and Mary Kinsella	Sensitive habitat (Alkaline Fen)
Additional Sub – Mark Kinsella Previous: WSP_SUB_107	Mark Kinsella	

10.4.2 Applicant's Response to New Matters Raised

10.4.2.1 Sensitive Habitat (Alkaline Fen)

569. The Additional Submissions from Michael and Mary Kinsella and Mark Kinsella state that no ecologist's report has been presented to support the identification of a sensitive alkaline fen habitat. The Applicant would highlight that the relevant ecological assessment has been provided within the Planning

Application documentation. Specifically, details of the site surveys, habitat assessment and description of Coagh Upper Fen, County Offaly, are contained in EIAR Appendix A8.3 – Site Description of Coagh Upper Fen, County Offaly and EIAR Appendix A8.4 – Target Habitat Surveys Report.

570. These appendices document the ecological characteristics of the fen and informed the route selection process, including the identification of sensitive alkaline fen habitat. Accordingly, the information referred to in the Additional Submission is already available within the EIAR documentation.

11. Water (Hydrological Modelling and Water Levels)

11.1 Overview

571. Fifty-seven of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters relating to the potential effect of the Proposed Project on the Parteen Basin and the adequacy of the hydrological modelling undertaken. The matters raised include the need for the assessment of low flow or drought conditions and for this assessment to take account of future climate change, which have been assessed in the EIAR, the need for an assessment of a revised baseline which allows for the environmental recovery of the River Shannon which was considered within the modelling undertaken, and proposed conditions/controls on the abstraction including monitoring. These were responded to in the RTS Report submitted to the ACP in May 2026.

572. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as relevant to hydrological modelling and water levels. This was responded to in the SRTS Report submitted to the ACP in June 2026.

573. There were 15 of the 43 Additional Submissions received by ACP which raised matters relevant to Water (Hydrological Modelling and Water Levels) and are responded to in this Report.

574. As with Chapter 11 Water (Hydrological Modelling and Water Levels) in the RTS this chapter sets out an explanation of the matters raised related to the hydrological modelling that has been undertaken and the effect on the water levels at Parteen basin. A separate Chapter (Chapter 12 (Water) (General) of this report covers any water related matters that were not about the modelling or impact at Parteen Basin.

575. Any matters related to the conclusions of the EIAR on the likely environmental effects based on this modelling, such as for the water quality, the biodiversity assessment, NIS or Water Framework Directive are addressed in the chapters specific to those matters: Chapter 12 (Water (General)), Chapter 10 (Biodiversity), Chapter 25 (Natura Impact Statement) and Chapter 26 (Water Status Impact Assessment Report (Water Framework Directive)). In particular, many of the Additional Submissions referred to in this Chapter raised the effect on water quality as a result of lowering water levels. Submissions on the impact on water quality and the risk of algal bloom are considered in Chapter 12 (Water (General)) and Chapter 10 (Biodiversity) of this Report.

576. Given the number of responses that relate to the general themes in this chapter, specific examples have been provided on the type of comments raised under the general theme. This is different to other chapters in this report and has been done in order to aid the clarity of the response provided by the Applicant. By identifying a particular matter raised by a particular respondent does not mean that other Additional Submissions are not being addressed rather the detail is provided to illustrate the general theme of the Additional Submissions.

577. An assessment of the environmental effects of the Proposed Project on the Parteen Basin was carried out and reported in the EIAR submitted as part of the SID Planning Application including Chapter 9 – Water and Chapter 8 – Biodiversity. The assessment complied with the relevant legislation, standards and guidance as set out in those chapters and was prepared by a team of competent experts as set out in Chapter 2 – The Environmental Impact Assessment Process in the EIAR.

578. Specifically with regard to the assessment of the environmental effects at the Parteen Basin, Chapter 9 – Water of the EIAR was supported by:

- Appendix A9.1 (Abstraction Assessment); and
- Annex A to Appendix A9.1 (Hydrological Modelling Report).

579. This Report and its supporting appendices, comprise the response of the Applicant to the issues raised regarding hydrological modelling and water level change due to the abstraction of raw water at Parteen Basin.

580. This Chapter responds specifically to Water (Hydrological Modelling and Water levels) matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 10 (Biodiversity)
- Chapter 12 (Water (General))
- Cumulative 24 (Cumulative Effects and Interactions)
- Chapter 25 (Natura Impact Statement)
- Chapter 26 (Water Status Impact Assessment Report (Water Framework Directive))

581. Cross references to these other relevant Chapters have been included to assist the reader however, the Applicant's response to the Additional Submissions made to ACP is the entire Report.

582. This Chapter is structured around the following sections:

- Matters raised regarding Hydrological Modelling and Water Levels and previously responded to;
- Matters raised previously and further clarification is being provided; and
- New matters raised regarding Hydrological Modelling and Water Levels in the Additional Submissions.

11.2 Response to Matters Raised Previously

11.2.1 Additional Submissions

583. Four Additional Submissions responses raised matters that had been considered previously including:

- Protecting the Statutory Minimum Compensation Flow
- Prolonged droughts;
- Operation of Ardnacrusha; and
- Assessment of impacts.

584. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association	Protecting the Statutory Minimum Compensation Flow	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3
Additional Sub – Christopher Campion PreviousWSP_SUB_10	Christopher Campion	Prolonged drought	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS – Future Climate Change – Section 11.2.4 RTS – Operation of the model / Management of Water Levels – Section 11.2.9
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Integration of operational variables into the hydrological modelling	RTS – Overview (Chapter 11) – Section 11.1
Additional Sub - James Crowley Previous: WSP_SUB_50	James Crowley	Assessment of impacts	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1
		Future of Ardnacrusha	RTS - Compatibility of the Proposed Project with Ardnacrusha Dam – Section 11.3.8

11.2.2 Applicant's Summary Response on Matters Raised Previously

11.2.2.1 Protecting the absolute minimum flow rate of 10 cumecs

585. The Additional Submission from CasteConnell River Association comments that a variable eflow regime is required and that the 10 cumecs (10m^3/s) is the absolute statutory minimum and anything less than 10 cumecs, even temporarily "is an ecological disaster".

586. The Applicant would repeat its previous position that the modelling that has been undertaken to confirm that the minimum statutory compensation flow (10m^3/s) can be maintained during a drought, which is the scenario when the Proposed Project would affect water levels in the Parteen Basin.

11.2.2.2 Prolonged Drought - Assessment of Low Flow and Drought Conditions

587. A number of Additional Submissions have raised matters which the Applicant considers were responded to in the RTS report.

588. In particular, Christopher Campion has raised the extent of the draw down during a drought and the potential for water levels to be drawn down below the lower water level used by ESB to manage water levels on Parteen Basin. The Applicant has committed that water levels would be maintained above minimum water levels and has explained how this has been considered within the modelling. This included specifically Sections 11.2.1 (Assessment of Low Flow and Drought Conditions) and 11.2.9 (Operation of the Model / Management of Water Levels) of the RTS report. Requests for a legally binding mechanism on water levels is considered in Section 11.4.2.4 (Legally Binding Mechanism on Water Levels) of this Report.

11.2.2.3 Integration of operational variables into the hydrological modelling

589. In his Additional Submission Joe Mayo has identified that the ACP should require the Applicant to identify exactly how each of the operational variables is integrated into the hydrological and ecological assessment. The Applicant considers that it has been very clear on how the operational factors are codified into the model and these were repeated at the start of Chapter 11 – Water (Hydrological Modelling and Water Levels) in the RTS. The Applicant would refer back to the previous response and the EIAR – Chapter 9 – Water in respect of this matter.

11.2.2.4 Assessment of impacts

590. In his Additional Submission James Crowley has suggested that the focus on the 1995 and 2018 droughts does not provide a sufficiently robust response to reassure the public. The Applicant can confirm it has assessed all 52 years' worth of historic data as set out in the EIAR Chapter 9 - Water including specifically Annex A of Appendix A9.1. The Applicant would refer back to the response previously provided in the RTS on the modelling undertaken and specifically the 'flood', 'drought' and 'normal' conditions described in Section 11.2.1 (Assessment of Low Flow and Drought Conditions) of the RTS.

11.2.2.5 Future of Ardnacrusha

591. James Crowley raised the future of Ardnacrusha and the fact that the Proposed Project would require Ardnacrusha to continue to operate. The Applicant responded to this in Section 11.3.8 of the RTS and would refer to this previous response.

11.3 Response to Matters Raised Previously – Further Clarification

11.3.1 Additional Submissions

592. Fifteen Additional Submissions raised matters that had been considered previously and the Applicant is providing further clarification in regard to. The matters raised include for example:

- The reduction in flow;
- The availability of water;
- Climate Change;
- Eflows, the Fish Pass Study and Environmental Recovery of the River Shannon; and
- Multi-year droughts.

593. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Castleconnell River Association	Castleconnell River Association	Whether Environmental Recovery may be Constrained – Fish Passage Project	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Delivery of measures for Environmental Recovery – Fish Passage Project	

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Previous: WSP_SUB_35		Availability of Water - Calculation of Storage	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3
		Cumulative modelling and assessment	RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
Additional Sub Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Availability of water - Revisiting the 2018 drought	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3 RTS - Future Climate Change – Section 11.2.4 RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5 RTS- Operation of the Model / Management of Water Levels – Section 11.2.9 RTS - Sensitivity Test on Starting water Level – Section 11 .3.6 RTS – Water Abstraction Adaptive Management – Section 11.4.3
		Climate Change	RTS - Future Climate Change – Section 11.2.4
		Maintaining the minimum compensation flow – 50% reduction in the residual flow on the Shannon	RTS –Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow– Section 11.2.3
		Clareville WTP supplies Limerick: water is from the Shannon too!	RTS – Human Health – 18.3.5
Additional Sub – Councillor Hartigan Previous WSP_SUB_11	Councillor Seán Hartigan	Delivery of measures for Environmental Recovery – Fish Passage Project	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Downstream effects on the River Shannon – Fish Pass	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Cumulative modelling – Fish Pass	RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Climate Change	RTS - Future Climate Change – Section 11.2.4
		Low flow duration	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3 RTS - Future Climate Change – Section 11.2.4 RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5
		Multi-year droughts	RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5
Additional Sub – Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Availability of water	RTS - Availability of Water in a drought - Section 11.3.3
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	The 2% figure is legally impermissible - 50% reduction in the residual flow on the Shannon	RTS –Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow– Section 11.2.3
		1929 Baseline & Compensation flow - Whether Environmental Recovery may be Constrained	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Availability of water - Ardnacrusha Already Idles 20 Days Per Year — Drawdown Is an Annual Routine	RTS - Availability of Water in a drought - Section 11.3.3
		Availability of water – system water budget	RTS - Availability of Water in a drought - Section 11.3.3
		Roadmap for the Lower River Shannon (2021)	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
Additional Sub – Stefan and Olvia Hahne Previous: WSP_SUB_28	Stefan and Olivia Hahne	30% reduction in low flows (Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow)	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2
		Prioritisation of water supplies	RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2
		Statutory minimum compensation flow to the Old River Shannon (Whether Environmental Recovery may be Constrained – Fish Passage Project Delivery of measures for Environmental Recovery – Fish Passage Project)	RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Climate change	RTS - Future Climate Change – Section 11.2.4
Additional Sub –	Environmental Trust Ireland	Statutory Minimum Compensation Flow	SRTS - Water (Hydrological Modelling and Water Levels) – Section 3.2.2

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Environmental Trust Ireland Previous: WSP_SUB_43		(Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow)	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2
		Climate Change	RTS - Future Climate Change – Section 11.2.4
		Cumulative modelling	RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Climate Change	RTS - Future Climate Change – Section 11.2.4
		Cumulative modelling	RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6
		Monitoring of flows	RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4
Additional Sub – Garrett Reil and Cliona Geary Previous WSP_SUB_48	Garrett Reil and Cliona Geary	Statutory Minimum Compensation Flow (Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow)	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2
		Fish Passage Project (Whether Environmental Recovery may be Constrained – Fish Passage Project Delivery of measures for Environmental Recovery – Fish Passage Project	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Continuous abstraction - water levels, trigger levels and response	RTS- Operation of the Model / Management of Water Levels – Section 11.2.9 RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4
Additional Sub – James Crowley Previous: WSP_SUB_50	James Crowley	Statutory Minimum Compensation Flow (Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow)	RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2
		Climate Change	RTS - Future Climate Change – Section 11.2.4
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Starting Water Level – Availability of Water	RTS- Operation of the Model / Management of Water Levels – Section 11.2.9
		Climate Change	RTS - Future Climate Change – Section 11.2.4
		Compensation flow - Whether Environmental Recovery may be Constrained – Fish Passage Project	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6

Add Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
		Multi-year droughts	RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Monitoring of flows – downstream monitoring	RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4
Additional Sub Waterways Ireland Previous: WSP_SUB_78	Waterways Ireland	Climate Change	RTS - Future Climate Change – Section 11.2.4
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City Council	Monitoring of flows - Conflict between adaptive approach and peak of 300Mld.	RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4
		Delivery of measures for Environmental Recovery – Fish Passage Project	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Downstream effects on the River Shannon – Fish Pass	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Cumulative modelling – Fish Pass	RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6
		Security of supply for Limerick	RTS – Security of Supply – Section 3.4.2

11.3.2 Applicant's Summary Response on Matters Raised Previously Requiring Further Clarification

11.3.2.1 Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow

594. The River Shannon Environmental Protection Alliance, Environmental Trust Ireland and others including Chrisopher Campion, Garret Reil and Cliona Geary, Stefan and Olivia Hahne have repeated previous assertions regarding the percentage of the flow used by the Proposed Project. The Applicant previously responded to this in Section 11.2.3 (Maintaining the Minimum Compensation Flow) of the RTS including specifically the assertion that the Proposed Project results in a 30% loss in the statutory compensation flow down the Old River Shannon, which it will not. Garret Reil and Cliona Geary have confirmed that they were not referring to a reduction in the minimum compensation flow and rather that the proposed project will abstract 30% of the Q95 flow. This is based on a Q95 flow of approximately 12.53m^3/s and a continuous abstraction of 3.82m^3/s representing 30.5% of actual river flow. Other Additional Submissions include similar statements with Environmental Trust Ireland stating the

reduction is 34.7% of the absolute baseline flow and Christopher Campion and River Shannon Environmental Protection Alliance identifying an impact of 50%.

595. The Applicant welcomes the clarification from Garret Reil and Cliona Geary and can confirm that the daily Q95 flow is 21.5m^3/s (based on the 52 year used in the hydrological modelling)[1] and that the proposed peak abstraction is 3.47m^3/s. Therefore, the 50% reduction in low flows quoted by Mr Campion and the River Shannon Environmental Protection Alliance must be based on inflows dropping below Q99 to approximately 7m^3/s (twice the peak abstraction of the Proposed Project, 3.47m^3/s).

596. However, the Applicant would repeat its previous position as set out in Section 11.2.3 (Maintaining the Minimum Compensation Flow) of the RTS that the abstraction during low flows is being met from lake storage. Therefore, in low flow scenarios the critical factor is the volume of lake storage available for use and the starting water level at the beginning of a drought, which for example, Mr Campion has also identified and is addressed in Section 11.3.2.3 (Availability of Water) of this Report.

597. Environmental Trust Ireland have stated that the Proposed Project results in the 'emergency minimum' flow to the Old River Shannon, which is the statutory minimum compensation flow of 10m^3/s becoming the permanent baseline. This is not correct. In drought conditions the minimum flow will apply however, outside of these conditions ESB will continue, as it does now, to determine the flow to the Old River Shannon and the Proposed Project will be one of the many factors it takes into account in determining water levels on Parteen Basin and forward flows to the Old River Shannon.

598. It is accepted that, specifically during a drought the combination of the statutory minimum compensation flow and the abstraction of water by the Proposed Project along with factors such as evaporation will exceed inflows to Lough Derg and therefore, there will be a draw down in lake storage as clearly set out in Section 11.2.1 (Assessment of Low Flow and Drought Conditions) and 11.2.2 (Reduction in the Flow Down the Old River Shannon) of the RTS.

599. Mr Campion and others such as, James Crowley suggest that the Applicant is mis-leading the public regarding the extent of the impact on flows and references to a 2% reduction in flows and he asserts:

"[The Proposed Project] *would do this by only abstracting 2% of the flow of the Shannon. This UE statement is still being perpetuated and deliberately misleads readers into believing the abstraction is a negligible percentage, by using a percentage of average annual flow. This claim is emphasised by UE in order to distract attention from the true damage, and lack of resilience, abstraction will demonstrate in times of drought.*

As our earlier submissions and indeed UE's and ESB's own figures show that at the times of greatest demand (hot summer hydrological drought periods) the abstraction would be up to 50% of the residual flow of the Shannon.

600. Regarding the 2% figure the Applicant has always been clear that, as Mr Campion states, it is based on an average annual flow and not low flows.

11.3.2.2 Duration of the Drought

601. With regard to the duration of the drought in 2018, which was raised by multiple Additional Submissions including Christopher Campion, Joe Mayo and the River Shannon Environmental Protection Alliance the Applicant would take the opportunity to clarify that the RTS set out the definition of a drought in Section 11.2.5 (Increase in Periods of Drought Under Future Climate Change Scenarios) which is 20m^3/s which is consistent with the Q95 flow. Further, the same section of the RTS confirmed that the

[1] The Q95 over the three day average used by the model is 26m^3/s. The model uses 20m^3/s as the point that power generation would cease on the basis this is broadly consistent with the Q95 level.

consideration of climate change within the modelling included the potential for a drought duration to be extended due to for instance reduction in rainfall and increased evaporation from the lake surface. The flow was below the Q95 level for 67 days in 2018 however, the modelling approach broadly considers the whole of July and August in 2018 to be the drought period, see further Section 11.3.2.6 (Climate Change) regarding inflows during a for drought equivalent to that in 2018 but with future climate change allowances.

11.3.2.3 Availability of Water

602. A number of the Additional Submissions raise the availability of water during a drought period and offer calculations of the water available for use and how long that would last. This section covers responses on the volume of water available and starting water level which is the main factor which affect the available storage.

603. Castleconnell River Association repeats its own water balance calculation from its original submission and provides explanation of it, in its Additional Submission. However, the Applicant disagrees with the assumptions and conclusions that

- There would be 104 to 82 storage supply days being available for future drought events; and
- This not being a suitable level of drought resilience.

604. The calculation provided in the Additional Submission has assumed that throughout extreme long duration drought events all lake inflows would be needed to maintain the $10m^3/s$ statutory minimum compensation flows only, with no inflows above $10m^3/s$ throughout the drought event available that could potentially be contributing to water stored in Lough Derg / Parteen Basin. However, this does not align with the findings of the WSP EIAR hydrological modelling (as set out Appendix A9.1 Abstraction Assessment of EIAR Chapter 9 - Water).

605. A key matter is that the derived lake inflows were found to be very large due to the size of the Shannon catchment, with significant flows still available at the lower percentiles of the derived flow duration curve. The hydrological modelling undertaken, derived the following net lake inflow metrics: Q95 “low flow” = 26 m^3/s; and Q99 “extreme low flow” = 12 m^3/s.

606. The modelled 2018 summer drought was shown to be the worst drought event in the derived 52-year (1972-2023) record based on the duration, frequency and severity of extreme low inflows to the Lough Derg/ Parteen Basin system. However, during this 2018 worst drought event the daily net inflow was below $15m^3/s$ for 54 days and below $10m^3/s$ for 33 days. It was below the Q95 low flow drought level for 67 days.

607. The hydrological modelling used by the Applicant and reported within the EIAR goes on to simulate future projected extreme drought events which includes applying a 2080s “reasonable worst case” climate change projections scenario. Further information on this is provided in Section 11.3.2.5 (Prioritisation of Water Supplies).

608. Mr Campion states that there was no water for 74 days in 2018 and highlights that either the flow down the Old River Shannon would have to be reduced or the level of the lake would be drawn down. The Applicant confirms that there would be draw down in levels and has stated categorically in Section 11.2.3 (Maintaining the Minimum Compensation Flow) of the RTS that in a drought that water would be supplied from within lake storage drawing down lake levels lower than they would otherwise have been and the Applicant has set out what that draw down would be, as set out in the RTS and the EIAR in Chapter 9 – Water.

609. As described in the WSP EIAR (Appendix A9.1 Abstraction Assessment), the WSP hydrological model has developed a 52-year record (1972-2023) of net daily inflows to the Lough Derg/ Parteen Basin

system. The modelled 2018 drought is shown to be the worst year in the 52-year record based on the duration, frequency and severity of low flow (Q95 and below) and extreme low flow (Q99 and below) days when ESB would turn off Ardnacrusha power generation and the WSP abstraction would be provided by a reduction in the lake storage.

610. Mr Campion notes the importance of the starting water level with which the Applicant agrees and it has set out the Operating Principles used within the modelling which are based on ESB's management of water levels, as evidenced by trends in the historic water level monitoring data. In the RTS the Applicant responded to matters raised regarding starting water levels as follows:

- 11.2.9 - Operation of the Model / Management of Water Levels;
- 11 .3.6 – Sensitivity Test on Starting water Level; and
- 11.4.3 – Water Abstraction Adaptive Management.

611. Within the responses listed above the Applicant has been clear that the availability of water during a drought will be dependent on the starting water level and the way that ESB manages water levels in advance of a drought occurring. ESB and the Applicant will be using long range forecasting to identify drought periods in advance.

612. Mr Reidy had previously undertaken a similar exercise to other respondents in attempting to calculate the number of days that water was available for in drought. In his Additional Submissions Mr Reidy responds to the Applicants previous response. In this respect the Applicant needs to point out that Mr Reidy is attributing the following statement to the Applicant when it was from Castleconnell River Association:

"*Lough Derg and Lr LoughDerg/Parteen basin Normal Operating Bands combined contain a maximum of 19 weeks supply (130 days), assuming that the Operating Band was at full height at the beginning of the drought*".

613. The Applicant previously commented on this statement from Castleconnell River Association in the RTS.

614. Mr Reidy identified that:

1) A possible drawdown of 135mm as modelled would be at the extreme limit of capacity and depending on the level at the start of the drought would not even be possible. It is not simply that 135mm is available in the lake in a worst case scenario

2) Were Uisce Eireann's abstraction to be 3.47m^3/sec on an ongoing basis then the ESB should shut on its turbines when the inflow to the lake reaches 23.75m^3/sec and begin tapering on the allowable abstraction until the inflow reaches 20m^3/sec at which point the Uisce Eireann abstraction should be shut down for the exact same reasons the turbines are shut down in the first place.

615. The Applicant agrees with the broad principles that:

- The available water will be determined by the starting water level at the beginning of the drought (Section 11.1, 11.2.1, 11.2.2 and 11.2.9 of the RTS); and
- If the water level is not towards the top of the operating there would need to be management of the volume of water abstracted. The Applicant does not agree that this would need to be determined by an inflow of 23.75m^3/s but agrees with the principles and acknowledged this clearly in the RTS:

"*if the water level was not towards the top of the operating band and the demand for water for the Proposed Project was predicted to be high and / or prolonged then the Applicant would need to manage*

the abstraction appropriately such that it would not impact on minimum required water levels in Parteen Basin. At all times ESB will continue to operate within its normal operating band and comply with its statutory requirements to provide a minimum statutory compensation flow of 10m³/s to the Old River Shannon. This is specifically provided for in the Draft Water Abstraction Document provided within the SID Planning Application documents". (Section 11.2.9 of the RTS)

616. Laura Kavanagh has suggested that the modelling is inadequate because it does not demonstrate how the abstraction would perform if drought conditions commenced when lake levels were already at mid-band or lower or different storage conditions. The Applicant would re-iterate that it has based the modelling on ESB's current management practices as evidenced by the trends in the historic water level monitoring data. In the event of the water level not being towards the top of the operating band and the drought being equivalent to 2018 and climate changes factors occurring in the way predicted under the RCP8.5 Upper 75th Percentile then the Applicant would not be able to abstract 300Mld per day throughout the drought period without the water level going below the bottom of the normal operating band on Lough Derg / the lower water level used to manage wate level on Parteen Basin. The bottom of the operating band must be maintained for dam safety and therefore, if a drought scenario would result in the bottom of the normal operating band being approach or the statutory minimum compensation flow on the Old River Shannon not being met then the abstraction would have to be reduced. This is a fixed commitment and each scenario would be different depending on the factors applicable at that time including, but not limited to, the demand for water, the duration of the drought and electricity demand.

11.3.2.4 Non-operation of the Proposed Project

617. Within the broad comments on the availability of water both Mr Reidy and River Shannon Environmental Protection Alliance have argued, respectively that

> "*Once the ESB turbines are shut or when the flow into the lake reaches 20m3/sec, the abstraction equally should be shut off to conserve water in the lake system and preserve the ecology of the lake*." (Mr Reidy)

> "*data demonstrates 74 consecutive days in 2018 when the pipeline could not have operated without breaching the statutory compensation flow*" (River Shannon Environmental Protection Alliance - based on the number of days the inflow is below 20m³/s).

618. For reasons set out throughout Chapter 11 – Water (Hydrological Modelling and Water levels) these statements are not correct. The Applicant does not agree that the abstraction for the Proposed Project must be shut off when inflows reach 20m3/s provided that the statutory minimum compensation flow can be maintained and the water level is within the upper and lower levels used by ESB to manage water levels on Parteen Basin which is what the modelling, as set out in Annex A (Hydrological Modelling Report) in Appendix A9.1 (Abstraction Assessment) in Chapter 9 – Water of the EIAR demonstrates. The Applicant is in agreement that the water levels and flows supporting the current ecological conditions should be maintained. Mr Reidy has pointed out that the starting water level at the beginning of a drought period could be anywhere within the normal levels and the Applicant acknowledges that this is possible however, it has modelled Operating Principles which are based on the trends within the measured water level monitoring data demonstrating how ESB has managed water levels over the last 50 years, including in advance of the drought in 2018. The modelling reported in Appendix A (Hydrological modelling Report) of Appendix A9.1 (Abstraction Assessment) of Chapter 9 – Water of the EIAR has demonstrated that even when applying a precautionary approach to consider the reasonable worst case 2080s climate change projections to the most impactful drought event (2018) in the 52-year model simulation period, the additional simulated lake level drawdown caused by the inclusion of Proposed Project is still fitting within the range of ESB normal observed lake level fluctuations, resulting in levels still within Lough Derg NOB, and within the upper and lower water levels

that ESB applies on Parteen Basin with no change to the statutory minimum compensation and fish pass flows, which would always be met.

11.3.2.5 Prioritisation of Water Supplies

619. A number of the Additional Submissions including Christopher Campion and Stefan and Olivia Hahne have raised the prioritisation of water supplies with Stefan and Olivia Hahne asking:

> "*That is why one question must be put very plainly: if the pipeline were to be pushed through, who gets the water first when the flow is at a bare minimum? if the pipeline is built and Dublin is also short of water during drought conditions, who has legal and practical priority? Does the water go first to maintain ecological flow in the Old River Shannon? Does it go first to Limerick City's public supply? Does it go to support Ardnacrusha operations? Or does it go into the pipeline to Dublin because, once built, the political pressure to keep it flowing will be overwhelming*?"

620. The Applicant would reaffirm that during low flows (below 20m^3/s) Ardnacrusha will have ceased power generation. Further, the priority use of water would be determined by ESB in its management of water levels on Lough Derg and Parteen Basin and based on the Draft Abstraction Document included within the SID planning application the prioritisation during a drought, would be:

1. Maintaining water levels above the Dam Safety Critical Water levels;
2. Meeting the statutory minimum compensation flow to the Old River Shannon (including 0.5m^3/s for the fish pass); and
3. The Proposed Project abstraction of water for drinking supply.

11.3.2.6 Climate Change

621. As with the original submissions in response to the Statutory Consultation the allowance for climate changes within the modelling has featured prominently in the Additional Submissions. This has included the Additional Submissions from, for example, Waterways Ireland, Environmental Trust Ireland, Futureproof Clare Environmental CLG, Christopher Campion, Joe Mayo, James Crowley and Laura Kavanagh. The Applicant has responded previously to confirm that future climate change has been taken account of in the modelling as set out in Section 11.2.4 (Future Climate Change) in the RTS.

622. The Additional Submission from Mr Mayo asks that

- The Applicant should explain why 2018 plus climate allowance remains conservative for 2050 and beyond.
- The Applicant should disclose scenario selection, assumptions, confidence ranges and sensitivity outputs.

623. In response to the Additional Submissions, including that from Joe Mayo querying whether the model is sufficiently conservative, the Applicant can confirm that the Climate Change scenario used for low flows is based on the ICARUS (2020) report and the factors applied are defined in Attachment E and F to the Hydrological Modelling Report in Annex A of Appendix A9.1 (Abstraction Assessment). These Attachments disclose the factors used, assumptions made and sensitivity considerations, where applicable.

624. Similarly Futureproof Clare Environmental CLG has submitted that the climate change modelling is based on 2018 and not current conditions and therefore, is flawed. The Applicant can confirm that it is has used up to date climate change factors and they are not based on 2018 rather they consider a future time horizon to the 2080's.

625. The Applicant can confirm that with regards to inflows into Lough Derg (which is affected by projected changes in rainfall) the precautionary allowance based on the 75th or 'Upper' risk level for a 2080's scenario, that was referred to Section 11.2.4 (Future Climate Change) of the RTS, includes a 27% reduction in inflows to the lake, once the inflow drops below the Q95 level, (which is a drought scenario). This is shown in Table 11.1 which replicates Table E.6 from Attachment E of Annex A in Appendix A9.1 of the EIAR which includes other scenarios for comparison. The level of 'conservativeness' is also increased by the fact that the reduction in the flows is applied throughout the drought months of July and August in the 2018 scenario (with climate change) even thought there were some days when the inflow was above Q95.

Table 11.1: Repeated from Annex E of Annex A of Appendix A9.1 of the EIAR - Table E.6: ICARUS 2020 Climate Change Allowances for Q95 Flows in Type E Catchments

Risk level	Type E: Q95 Allowance (Percent Change) Assuming a 2°C Rise in Annual Mean Temperature		
	RCP8.5 (2080s)	RCP4.5 (2080s)	RCP4.5, 6.0, 8.5 (2040 – 2099)
Upper +	-45	-43	-43
Upper	-40	-38	-38
Upper 75th	-28	-20	-27
Central 50th	-17	-13	**-15**
Lower 25th	-7	-4	**-7**

626. In addition to flows the climate change scenarios also considered change in other factors including direct rainfall and evaporation as follows (repeated from Section 11.2.4 (Future Climate Change) of the RTS):

- Climate change was incorporated into the projection of evaporation using the +2oC increase in mean temperature approach used in the ICARUS (2020) study, which uses the Oudin formula to estimate the change in evaporation. Sensitivity analysis to a +/-0.5oC uncertainty to the +2oC increase in mean temperature suggested only marginal differences in the simulated levels and was not therefore included in the analysis.
- Seasonal rainfall allowances were obtained from an interpretation of various sources of Ireland specific climate change analyses (Maynooth 200818; Maynooth 201819; Nolan et al. 201720; Nolan & Flanagan 202021) which suggests for the 2080s that summer rainfall depth may be reduced by 21% (+/- 7) and winter rainfall increased by +16% (+/- 7) (see Attachment E [to Annex A of Appendix A9.1]).

627. The rate of evaporation is considered further in Section 11.4.2.2 (Rate of Evaporation) of this Report as new matter raised by the River Shannon Environmental Protection Alliance.

628. The modelling concludes that even when simulating these future projected extreme drought events with extended extreme low flow durations, the statutory minimum compensation flow to the Old River Shannon can still be maintained and Lough Derg/ Parteen Basin system water levels can still be maintained within the Normal Operating Band on Lough Derg and the upper and lower water levels used by ESB to manage water levels on Parteen Basin.

629. During the modelled 2018 drought event, with the inclusion of the 2080s Lower (reasonable worst case) climate change scenario, the difference in simulated lake level between the Proposed Project 300Mld abstraction scenario and baseline at the lowest point of the drawdown is 168mm. Therefore, even when applying a precautionary approach to consider the reasonable worst case 2080s climate change projections to the most impactful drought event (2018) in the 52-year model simulation period, the additional simulated lake level drawdown caused by the inclusion of Proposed Project is still fitting within the range of ESB normal observed lake level fluctuations, resulting in levels still within Lough Derg Normal Operating Band , and within the upper and lower water levels that ESB applies on Parteen

Basin with no change to the statutory minimum compensation flow to the Old River Shannon and fish pass flows, which would always be met.

630. Laura Kavanagh has asked for further evidence on what makes the climate change scenario used adequately capture the range of reasonably foreseeable future drought conditions over the lifetime of the Proposed Project. The Applicant considers that the selected scenario uses the worst drought on record and a conservative climate change scenario in order to provide a reasonable worst-case basis for the assessment within the EIAR. For example, it could have adopted the Central 50th scenario (shown in Table 11.1 for inflows) as the 'reasonably foreseeable' scenario however, instead the modelling adopts a precautionary assessment of adopting the Upper 75th as the 'reasonable worst case'. Further as alluded to above the 27% reduction in flows has been applied throughout the drought modelled as equivalent to 2018, (throughout July and August) even when on certain days the inflow would be above Q95.

11.3.2.7 Downstream effects on the River Shannon – Fish Pass

631. Limerick City and County Council and Councillor Hartigan also questioned in their Additional Submissions the understanding of the fish passage regime and the reference to the fish pass flow at Ardnacrusha (equivalent to 0.5m3/s) for example, in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS.

632. The Applicant can confirm that, as described in the EIAR (Appendix A9.1 Abstraction Assessment in Chapter 9 – Water), the hydrological model accounts for the minimum flow requirements of two separate fish passes: 0.7 m3/s for the Parteen Weir fish pass (which combined with the 9.3 m^3/s releases at Parteen Weir gates gives the sum total 10 m3/s ORS statutory minimum compensation flow required); and 0.5 m^3/s required for Ardnacrusha fish pass. This is shown in Image 2.1 in Annex A of Appendix A9.1 and is replicated below in Image 11.1.

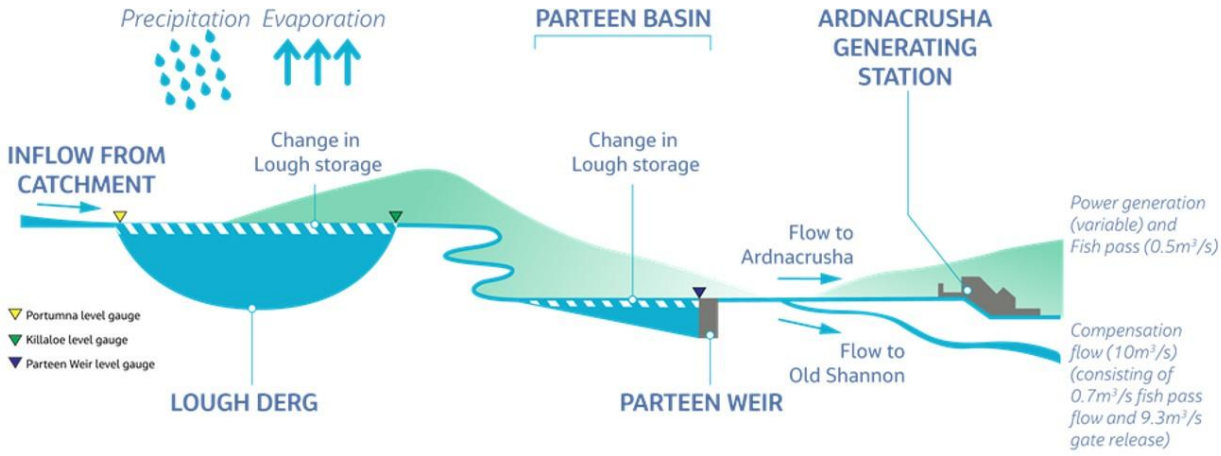


Image 11.1: Replicating Image 2.1 from Annex A of Appendix 9.1 in the EIAR: Water Balance Schematic of the Lough Derg and Parteen Basin System

11.3.2.8 Multi-year droughts

633. In their Additional Submissions Joe Mayo and Laura Kavanagh have questioned the approach to multi-year droughts. The Applicant did respond on the frequency of droughts in the context of climate change in Section 11.2.5 of the RTS (Increase in periods of droughts under future climate change scenarios) - however, it is appreciated that further clarification is being sought.

634. The Applicant can confirm that the focus has been on the worst drought within the 52 year dataset used in the modelling. Having confirmed that the modelling demonstrates that the water level would remain within the Normal Operating Band on Lough Derg and the upper and lower levels used by ESB to

manage water levels on Parteen Basin, (whilst maintaining the statutory minimum compensation flow to the Old River Shannon), the Applicant has demonstrated that the water is within the normal range of water levels which ESB currently use.

635. Therefore, multi-year low flow events in sequential years would still remain within the normal range of water levels provided that during the winter the water level recovered, which it would, and consequently, there would be no additional effect on water levels as a result of a drought two or more years in a row. Mr Mayo has requested that multi-year droughts be modelled. From a hydrological modelling this will not change the impact as the water level will have returned to a higher level over the winter period.

636. That said, the Applicant recognises that typically ESB will keep the water level above lower levels within the overall range of water levels and therefore, as set out in Chapter 18 – Population , the Applicant can confirm that, based on current ESB management practices, the modelling only identifies two occasions within the 52 year dataset when a drought of an equivalent magnitude but with the addition of future climate change would result in the water level going below 30.6m OD. This would be a drought equivalent to that in 1995 and 2018 (but with the additional effect of climate change). Only one of these two, a drought equivalent to 2018 with the allowance for future climate change would result in the lake level going below 30.5m OD. This confirms that, whilst several years of dry weather / low flows is possible the modelling demonstrates that through the management of water levels by ESB in line with its current practices, very low water levels in Parteen Basin can be avoided whilst still maintaining the statutory minimum compensation flow to the Old River Shannon.

637. As has been pointed out in the previous Statutory Consultation responses and the Additional Submissions, and the Applicant fully accepts, as reported in Section 11.3.2.4 (Non-operation of the Proposed Project), this is based on the current operating practices of ESB and in particular, the water level being towards the top of the operating band prior to a drought event. The Applicant has responded in the RTS on the scenario if this does not occur, specifically in Section 11.2.9 (Operation of the Model / Management of Water Levels), 11.3.6 (Sensitivity Test on Starting Water Level) and 11.4.3 (Water Abstraction – Adaptive Management) of the RTS. This is also repeated in Section 11.3.2.3 (Availability of Water) of this report.

11.3.2.9 Whether Environmental Recovery may be Constrained – Fish Passage Project

638. Many of the Additional Submissions raise the matter of the adequacy of the existing statutory minimum compensation flow including for example, Castleconnell River Association, River Shannon Environmental Protection Alliance, Stefan and Olivia Hahne, Garrett Reil and Cliona Geary, Laura Kavanagh, Councillor Hartigan and Limerick City and County Council.

639. The Castleconnell River Association Additional Submission raises several matters regarding the status of the 'Fish Passage Project' and suggests that the Applicant's confirmation that the modelling shows that the statutory minimum compensation flow of 10m^3/s down the Old River Shannon is capable of being maintained, as set out in Section 11.2.3 (Maintaining the Minimum Compensation Flow) of the RTS is not sufficient. Similarly, a number of the responses refer to the fact that the statutory minimum compensation flow was set in the 1920's and is no longer appropriate and consequently, they have submitted that the Proposed Project should be assessed against a different baseline.

640. For example, Councillor Hartigan has raised observations that the proposed abstraction cannot be met from water that would otherwise would have been used on power generation in periods when no power generation is taking place i.e. in a drought. This is correct and is as set out in Section 11.2.1 (Assessment of Low Flow and Drought Conditions) of the RTS. Further Councillor Hartigan has raised concerns that the Proposed Project has been assessed against current conditions and not the conditions required to aid ecological recovery of the Lower River Shannon.

641. The Applicant agrees that the potential change in the eflow regime is relevant to the assessments supporting the SID planning application and so this has been included in the modelling undertaken and the EIAR supporting the SID planning application and this was set out at length in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS. Specifically, and to reiterate, the potential for revised eflows and the use of freshets to aid environmental recovery has been modelled and was reported in the EIAR (in Appendix A9.1 Abstraction Assessment and Annex A (Hydrological Modelling Report) to it). This has then been used for the purpose of both the assessment of WFD compliance and of Habitats Directive compliance.

642. As set out in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS the Applicant reiterates that it does not (and will not) manage water levels on the Parteen Basin and the Proposed Project cannot change the flow conditions to aid ecological recovery, precisely because it does not control water levels. Therefore, the Proposed Project has done what it is legally required to do which is, to demonstrate, based on assumptions about how a future ecological regime would be implemented, that it does not prevent or impede the implementation of that regime. There is a further response provided in Section 11.4.2.3 on the application of eflows and freshets during a drought.

643. The assertion by the River Shannon Environmental Protection Alliance that the Applicant deliberately omitted the CDM Smith data from the planning file is inaccurate and at best unfortunate. On the contrary, the Abstraction Assessment contained in Appendix A9.1 of EIAR Chapter 9 - Water sets out how the modelling has taken into account the CDM Smith report (CDM Smith, 2021) and quotes the increased eflow of 17m^3/s. It also sets out the defined freshets considered. The modelling assessment was then carried through into the other assessments reported in the documents supporting the SID Planning Application including the Biodiversity and Water assessment in the EIAR, the Nature Impact Statement and the Water Status Impact Assessment Report. Further, this was repeated at paragraph 1481 of the RTS in an extensive response in Section 11.2.6 of the RTS entitled 'Whether Environmental Recovery may be Constrained'.

644. With regards to increased eflows, the Applicant would re-emphasis, as previously set out in the RTS and the EIAR (Appendix A9.1 – Abstraction Assessment), a more naturalised flow regime on the River Shannon does not mean higher eflows or the use of freshets in a drought period. Therefore, although for example, Limerick City and County Council and River Shannon Environmental Protection Alliance state that the CDM Smith Report proves that environmental flows of 17–50 m^3/s are needed (and not 10 m^3/s) this is to overlook the purpose of the eflows and freshets is to create a more naturalised flow regime. The CDM Smith proposals do not mean raising minimum flows in a drought period. As set out in Section 11.4.2.3 (Eflows and Freshets in a Drought) of this report and Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS, the CDM Smith eflows rules in its 2021 report state the baseflow would remain at 10m^3/s during a drought. In fact, the CDM Smith report identifies that the 10m^3/s flow to the Old River Shannon would be retained during inflows below 65m^3/s as set out in Appendix A9.1 Hydrological Modelling Report, Section 11.26 (Whether Environmental Recovery may be Constrained) of the RTS and repeated below, (from the CDM Smith Report):

"*The proposed Eflows regime comprises of a variable baseflow compensation flow and a seasonal series of freshets. The study proposed the following rules to govern the Eflow releases:*

a) Minimum baseflow of 10m^3/s if net inflow to the combined Lough Derg/Parteen Basin is ≤ 65m^3/s (irrespective of season)

b) Raised baseflow of 17m^3/s if net inflow to the combined Lough Derg/Parteen Basin is > 65m^3/s (irrespective of season)

645. Further, it was confirmed by the Applicant through engagement with CDM Smith that freshets would not be required to be released during a drought because eflows are an attempt to mimic the natural

flow regime and in a natural drought there would not be 'flushes' of elevated water flow that the freshets aim to replicate.

646. Therefore, it remains the Applicants position that it is appropriate for the modelling to demonstrate that, during a drought the statutory minimum compensation flow ($10m^3/s$) can be met with the Proposed Project in operation based on the current operating principles used by ESB to manage water levels within the Parteen Basin. Section 11.2.9 (Operation of the Model / Management of Water Levels) of the RTS addresses the relevance and effect of the operational principles within the modelling and this is repeated in Section 11.3.2.3 (Availability of Water) of this Report.

647. Outside of a drought scenario the delivery of higher eflows and / the use of freshets will be met from the water currently flowing through the hydropower station.

648. Therefore, as stated previously in the RTS:

"*on the basis that during 'normal' flows Eflows or other changes in flow to facilitate fish passage would be facilitated from the water used within power generation and that Eflows / freshets are not 'natural' in a drought scenario, it has been demonstrated that the Eflow regime including freshets as defined in the CDM Smith report would not be impeded by the Proposed Project*." (RTS Section 11.2.6 – Whether Environmental Recovery may be Constrained)

11.3.2.10 Delivery of measures for Environmental Recovery – Fish Passage Project

649. The Castleconnell Additional Submission request that the following aspects of the Shannon Connectivity project be delivered according to the Roadmap for action 2021 to 2025 before the Proposed Project can go ahead:

- Environmental Flow Study period and project communication;
- New fish pass at Parteen Weir;
- Tailrace Barrier Feasibility Study;
- Downstream Fish Passage Feasibility Study;
- Lower Shannon Management Plan; and
- Ardnacrusha New Fish Pass Feasibility Study.

650. Similarly, Councillor Hartigan has stated that

"*it is necessary that the FPP* [Fish Passage Project] *be designed, accepted, and constructed before the Proposed Project may apply for planning*".

651. In the same vein the River Shannon Environmental Protection Alliance state:

"*The $10m^3/s$ 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*."

652. Similar comments are made by Limerick City and County Council, Stefan and Olivia Hahne and Garrett Reil and Cliona Geary for example, on the obligation of the Applicant to implement the Fish Passage Project.

653. The Applicant understands why this is being asked for however, it would reiterate that it does not and will not control water levels on the Parteen Basin or forward flows to the Old River Shannon and therefore, whilst we understand that Limerick City and County Council, River Shannon Environmental Protection Alliance, Castleconnell River Association and other respondents to the Statutory Consultation, do not agree, the delivery of the requested items, as listed above from the River Association and the implementation of an alternative eflow regime cannot be delivered by the Proposed Project and the Applicant. Further, the fact that the Applicant has stated that these issues must be addressed at a programmatic level does not undermine the assessment undertaken it is simply reaffirming that implementing the Fish Passage Project is not the obligation of this Proposed Project.

11.3.2.11 Cumulative Modelling

654. The Castleconnell River Association Additional Submission raises several matters regarding the status of the 'Fish Passage Project' in the context of the cumulative assessment and refers to a number of sections of the RTS including Paragraph 2350. The Applicant would highlight that there is a difference between the Fish Passage Project being sufficiently certain for the purpose of the cumulative assessment which uses a specific methodology and the requirement to take account of future measures for the purposes of the WFD assessment and Appropriate Assessment for the purpose of the Habitats Directive. As set out in Section 11.3.2.9 (Whether Environmental Recovery may be Constrained – Fish Passage Project) the modelling has considered the recommendations of the Fish Passage Project as per the recommendations of the CDM Smith report. Therefore, although multiple responses state that the fish pass project must be incorporated into the modelling including for example, Limerick City and County Council and Councillor Hartigan, the Applicant would reiterate that this has been done and this has been set out in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS and reiterated in Section 11.3.2.9 (Whether Environmental Recovery may be Constrained – Fish Passage Project) of this Report.

655. A further response on cumulative matters is provided in Chapter 25 – Cumulative Effects and Interactions of this Report.

656. The Environmental Trust Ireland also raised cumulative abstraction modelling and so for example, did, Futureproof Clare Environment CLG which stated that the Proposed Project must take account other existing issues faced by the River Shannon if it is to properly assess the impact of abstracting water from it, this includes the cumulative impacts of Ardnacrusha along with other industrial and recreational uses.

657. The current Ardnacrusha operations are part of the baseline modelling within the Operating Principles as set out in Section 11.2.2.3 (Integration of Operational Variables into the Hydrological Modelling) and related comments on the cumulative assessment methodology and the Fish Passage Project are responded to in Section 11.3.2.9 (Whether Environmental Recovery may be Constrained – Fish Passage Project) of this report.

658. The specific comments related to the need for cumulative modelling to be undertaken were responded to in the RTS in Section 11.3.12 (Potential Cumulative Hydrology Impacts and Modelling) and 11.4.6 (Cumulative Effects in the Hydrological Model) and the Applicant would refer to its previous response.

11.3.2.12 Monitoring of Flows, Trigger Levels and Response

659. Futureproof Clare CLG has raised observations on the Applicants response on water level monitoring in its Additional Submission. It states:

> "*The Applicant will not control water levels or the management of water levels and therefore is not committing to providing water level monitoring or monitoring the flow to the Old River Shannon"* [Quoting form the Applicant's RTS Report]. *So the water is set to be abstracted by UE,*

and is admittedly expected to affect the flow, but UE do not take responsibility for monitoring the flow, because they say that ESB already does so. However, there is no response about the communication between ESB and UE regarding this monitoring and it is unacceptable that UE would not monitor the flow."

660. Additionally, the NPWS has recommended that before predicted, and during, severe, extreme or exceptional droughts, water levels in the River Shannon downstream of Parteen Weir are measured and this data made publicly available, in the same manner as the combined flow-rates for Parteen Weir and Ardnacrusha are made available by the ESB

661. The Applicant acknowledges that the respondents are not satisfied by the response provided previously including in Sections 11.2.11 (Additional Water-Related Mitigation and Monitoring Measures) and 11.4.4 (Recommended Planning Conditions) of the RTS however, it maintains that even in a drought it is the ESB and not the Applicant who will manage water levels and flows in the River Shannon.

662. The Applicant will not commit to monitoring something which it does not control as in the event that monitoring identifies action is required the Applicant is not in control of the delivery of whatever that action may be. The Draft Water Abstraction Document sets out that the Applicant must stop abstracting at the instruction of ESB in the event that certain thresholds are being approached.

663. Linked to the above Garret Reil and Cliona Geary have raised questions, in response to the Applicants previous response over the absence of trigger levels and responses stating:

"The Applicant confirms (paragraph 568, in response to Limerick County Council) that the abstraction will be 'continuous 24 hours a day' including during drought and low-flow periods. This confirms that the Proposed Project offers no mechanism for reducing or ceasing abstraction during periods of environmental stress. There is no flow-dependent trigger, no drought protocol, and no mandatory cessation threshold written into the project design. Our original observation raised this as a concern under the heading of non-binding mitigation measures, and the Applicant's response confirms rather than addresses it".

664. The Applicant has acknowledged that there could be exceptional circumstances in which the abstraction that would have to be reduced or potentially even stopped as set out in Section 11.2.9 (Operation of the Model / Management of Water Levels) of the RTS and Section 11.3.2.4 (Non-operation of the Proposed Project) of this Report. However, it would reiterate that based on ESB's current operating practices the demand for water could be met without requiring these measures to come into effect. This is based on the modelling set out in Annex A (Hydrological Modelling Report) of Appendix A9.1 (Abstraction Assessment) of Chapter 9 – Water of the EIAR.

665. The Applicant would highlight that this overlaps with matters it has categorised under 'Legally Binding Mechanisms on Water Levels' in Section 11.4.2.4 (Legally Binding Mechanisms on Water Levels) and so these two sections should be considered together.

11.3.2.13 Clareville WTP supplies Limerick: water is from the Shannon too

666. The Additional Submission from Christopher Campion questions the response provided to his previous comments on Clareville WTP. Mr Campion has stated that the Applicants response is misleading because it implies that Ardnacrusha Headrace and the Old River Shannon are somehow a different and separate body of water supplying Clareville. The Applicant can confirm that the Clareville abstraction is taken account of within the modelling through the level data that is used. The model, representing the combined Lough Derg and Parteen Basin system, has been built using a standard water balance modelling approach to simulate average lake water levels and flows at daily time step. A daily lake net inflow timeseries was derived based on a back calculation approach using available long-term recorded ESB lake level and outflow records. The recorded ESB outflows at Parteen to both Ardnacrusha and

the Old River Shannon account for the need to provide water for the two Clareville WTP abstractions downstream. Therefore, the derived lake net inflows used in the model account for the Clareville WTP abstractions. The Applicant can further confirm that growth in future demand in Limerick is accounted for in the Eastern and Midland Plan. Limerick City capacity was also raised in Limerick City and County Council's submission.

11.4 Response to New Matters Raised in Additional Submissions

11.4.1 Additional Submissions

667. Eight of the Additional Submissions raised matters that had not been raised previously. These included:

- The 2018 drought not being the worst drought on record;
- Eflows applying during a drought;
- Legally binding mechanism on water level; and
- NPWS.

668. The following Additional Submissions raised matters which related to these.

Add Submission Ref	Name of Individual or Organisation	Matter raised
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association	Severity of modelled drought - 2018 not in the top 10 worst droughts on record
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	The Commission should require objective curtailment **triggers**, ecological triggers, decision-making authority, timing, enforceability and **public reporting** before relying on this approach (adaptive mgt)
Additional Sub Councillor Hartigan Previous WSP_SUB_11	Councillor Seán Hartigan	11 .2.6 Whether Environmental Recovery may be Constrained - A higher eflow and / freshets should apply during a drought
Additional sub River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Rate of evaporation
		Legally Binding Mechanism on Water Levels
Additional Sub Stefan and Olvia Hahne Previous: WSP_SUB_28	Stefan and Olivia Hahne	Legally Binding Mechanism on Water Levels
Additional sub - Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Severity of drought modelled – 1 in 50 drought scenario
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU)	NPWS	Monitoring of abstraction
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City Council	11 .2.6 Whether Environmental Recovery may be Constrained - A higher eflow and / freshets should apply during a drought

11.4.2 Applicant's Summary Response on New Matters Raised

11.4.2.1 Severity of modelled droughts

669. The Additional Submission Castleconnell River Association has suggested that the 2018 drought does not qualify within the top ten droughts of the last century. The Applicant has not responded on this point previously and so has identified it as a new matter.

670. The Applicant acknowledges that the Additional Submissions suggest there were worse droughts than 2018 earlier in history. However, the Applicant considers that reliable data for predicting future climate change is only available for the last 50 years and that is a sufficient long duration of data on which to base the modelling.

671. As described in the WSP EIAR (Appendix A9.1 Abstraction Assessment), the model has developed a 52-year record (1972-2023) of net daily inflows to the Lough Derg/ Parteen Basin system based on a back calculation approach using available recorded lake level and outflow records. This back calculation approach was adopted due to the poor coverage of river flow gauging stations monitoring directly into the lake system which prevents a long-term direct measurement of total daily inflow from the Shannon catchment.

672. The 2018 drought is shown to be the worst year in the 52-year record based on the duration, frequency and severity of low flow (Q95) and extreme low flow (Q99 and below). The 1995 was shown to be the second worst drought based on this analysis. Other candidate droughts within the model simulation period include 1975/76, 1984, 1989/90, 2006, 2010, 2020 and 2022 but these were shown to be much less impactful than 2018.

673. It must be noted that due to the River Shannon being such a highly controlled catchment, this ranking of 2018 as the most impactful drought in the model simulation period is based on the particular sensitivity of the Lough Derg/ Parteen Basin system. In terms of other definitions of "drought" such as rainfall droughts, soil moisture deficit droughts, river flow droughts, and other storage system droughts, the ranking may well be different. The Lough Derg/ Parteen Basin system is particularly tuned to be sensitive to certain types of droughts, whilst other meteorological/ hydrological systems will be tuned to their own particular drought characteristics. Therefore, borrowing a return period from a drought analysis on one of these other systems may well not be appropriate for characterising what was experienced on the ESB managed Lough Derg/ Parteen Basin system. The Applicant is satisfied that the 2018 drought represents the worst drought within the records for the last 52 years for the Parteen Basin and Lough Derg. Further it maintains that this is the appropriate basis for the 'reasonable worst case' as described in Section 11.3.2.6 (Climate Change) of this Report and in Annex A (Hydrological modelling Report) of Appendix A9.1 (Abstraction Assessment in the EIAR).

674. Environmental Trust Ireland has stated that a 1 in 50 year low flow scenario has not been modelled and the Applicant would repeat previous responses that it has modelled the worst drought on record using the last 52 years data with predicted climate change allowances incorporated into that scenario.

11.4.2.2 Rate of Evaporation

675. The Additional Submission from River Shannon Environmental Protection Alliance suggests that evaporation 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 m^3/s —more than twice the proposed pipeline abstraction and more than 80% of the entire statutory compensation flow.

676. The Additional Submission suggests that further investigation of the evaporation rates applied is needed.

677. In response the Applicant can confirm that Annex A (Hydrological Modelling Report) of Appendix A9.1 (Abstraction Assessment) of Chapter 9 – Water of the EIAR sets out in detail the approach to evaporation that has been adopted. Specifically, the climate change allowances for changes in rates of evaporation in the future are set out in Attachment E and F of Annex A (Hydrological modelling Report).

678. For the modelling future climate change impacts, the fluvial, rainfall and evaporation components are separated out as it is recognised that climate change will affect each differently. A long-term evaporation record for the lake surface was derived by scaling a long-term potential evaporation series to that of the recorded record at the local Gurteen weather station to provide a 52-year record (1972-2023) and converted to an open water estimate. A precautionary climate change approach was incorporated into the projection of evaporation using a +2.5°C increase in mean temperature approach used by ICARUS (2020) for a 2080s "reasonable worst case" climate change projections scenario. Therefore,

evaporation, including increased evaporation allowing or future climate change has been incorporated into the modelling undertaken and reported in the EIAR.

11.4.2.3 Eflows and Freshets in a Drought

679. Limerick City and County Council and Councillor Hartigan has responded to the matters set out by the Applicant in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS which addressed how the potential future use of eflows and freshets to aid environmental recovery of the Lower River Shannon had been considered within the modelling.

680. In summary, in the modelling undertaken by the Applicant neither an increased eflow nor a release of freshets have been considered to represent a natural river regime during a drought and so have not been applied in a drought scenario. The modelling considers the 10m3/s statutory minimum compensation flow to represent a drought regime.

681. This is correct, and is based on the CDM Smith report (regarding eflows) and subsequent engagement with CDM Smith on freshets.

682. The Councillor has suggested that the natural drought flow would be higher than the 10m^3/s minimum statutory compensation flow and that freshets should apply during a drought period. The Applicant has not previously responded on these matters.

683. The WSP hydrological model defines drought conditions as when lake daily inflow drops below 20m3/s. This threshold is based on observed ESB management of turning off Ardnacrusha. This 20m3/s low flow threshold is broadly equivalent to around the derived Q95 low flow estimate.

684. The Applicant can confirm that it engaged with CDM Smith regarding the assumptions that

a) A high eflow (above 10 m^3/s) would not apply in a drought

b) Freshets would not be released during a drought

685. The CDM Smith eflows rules in its report state the baseflow would remain at 10m^3/s in a drought (specifically for flows below 65m^3/s as set out in Section 11.3.2.9 (Whether Environmental Recovery may be Constrained – Fish Passage Project) of this Report) and it was confirmed through subsequent engagement with CDM Smith that freshets would not be required to be released during a drought.

686. Therefore, the Applicant is satisfied that an appropriate approach has been taken to the application of eflows and freshets in the drought scenario.

11.4.2.4 Legally Binding Mechanism on Water Levels

687. The River Shannon Environmental Protection Alliance and others including Stefan and Olivia Hahne have requested in its Additional Submissions a legally binding mechanism planning condition, licence condition, or statutory agreement that would prevent emergency derogation from the Normal Operating Band during a prolonged drought. This was raised in responses to the Statutory Consultation however, the Applicant is now addressing it directly as a standard alone new matter.

688. The Applicant can confirm that due to dam safety it cannot continue to draw down water below the bottom of the operating band (and this has been discussed in the context of water levels and available water in Section 11.3.2.3 (Availability of Water) of this Report), however, it also recognises that respondents are not satisfied by this and are looking for a legal provision to enforce this.

689. The Applicant can only repeat that it does not and will not control water levels on Parteen Basin or Lough Derg and even in a drought when the Proposed Project abstraction is drawing down water levels

ESB will be able to direct the Applicant on actions to control water levels, in accordance with the Draft Water Abstraction document submitted as part of the supporting documents with the SID planning application. Consequently, the Applicant would not be able to comply with a legally binding mechanism on water levels and therefore, the Applicant does not consider that it can be applied to it.

690. The Applicant would highlight that this section overlaps with matters raised regarding trigger levels and responses in Section 11.3.2.12 (Monitoring of Flows, Trigger Levels and Response) and so these two sections should be considered together.

11.4.2.5 Monitoring of abstraction

691. The NPWS has asked for a means of verifying the abstraction rates and experienced independent engineer to inspect the abstraction monitoring systems and report on compliance to the maximum abstraction rate, and that any fees for such an engineer are paid by Uisce Eireann, in the case of reasonable requests by the regulatory body for such an inspection.

692. The Applicant considers that this is a matter that will be addressed through the Abstraction Licence process (which authorises the operation of the Proposed Project) and managed by the Environmental Protection Agency and is not a matter for a condition on the SID planning application.

693. Limerick City and County Council has suggested that monitoring is needed because the Applicant has stated it has

"'no intention' to abstract more than 300Mld and "no planned expansion," and separately states it will adopt an "adaptive approach" to abstraction rather than a fixed rate (Sections 6.2.2, 6.4.2 and 11.4.3). At the same time, in Section 11.2.11, the Applicant states plainly that it will not commit to water-level monitoring or to monitoring the flow to the Old River Shannon. These two positions sit uneasily together. An adaptive approach to abstraction that is not backed by an enforceable, independently monitored commitment is not a safeguard – it is a statement of intent that could be revised at any point once permission is granted. I am recommending binding conditions requiring independent water-level and flow monitoring, published on a regular basis, as a minimum precondition of any grant of permission."

694. The Applicant would suggest a few different matters are being mixed together and welcomes the opportunity to clarify this. Firstly, the references to 'adaptive management' were in the context of a drought scenario and managing water level within the upper and lower levels on Parteen Basin. The reference to adaptive management refers to abstraction rates between 154Mld (approximately the average abstraction rate) and 300Mld (the peak abstraction rate). The peak abstraction will be 300Mld and this will be controlled by the Abstraction Licence (which was discussed in Chapter 2 – Overarching Matters in the RTS).

695. Secondly, the Applicant will be monitoring the abstraction and will comply with any conditions imposed on the Abstraction Licence (which authorises the operation of the Proposed Project) regarding the monitoring of abstraction.

696. The Applicant will not commit to monitoring of water levels on Parteen basin or the River Shannon for the reasons set out in Section 11.3.2.12 (Monitoring of Flows, Trigger Levels and Response) of this Report.

11.4.2.6 Framework for Adaptive Management

697. In response to the Applicants RTS Joe Mayo has set out that the Commission should require objective curtailment triggers, ecological triggers, decision-making authority, timing, enforceability and public reporting before relying on the adaptive management approach that was set out in 11.2.9 of the RTS.

698. The Applicant recognises the interest in these factors however, it considers this to be operationally sensitive information and how this is achieved will involve some flexibility and discretion in the decisions to be made by both the Applicant and ESB. The Applicant notes that any controls or limits on the operation of the abstraction will be addressed though the abstraction licencing process and will be under the responsibility of the of the EPA. It considers that a commitment that it will assist the ESB in their role of maintaining water levels within the normal operating range on Parteen Basin, including in exceptional circumstances the curtailment of abstraction, is sufficient at this stage.

12. Water (General)

12.1 Overview

699. Fifty-five of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Water. These were responded to in the RTS Report submitted to the ACP in May 2026.

700. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Water. This was responded to in the SRTS Report submitted to the ACP in June 2026.

701. Three of the 43 Additional Submissions received by ACP raised matters relevant to Water and are addressed in this Report.

702. An assessment of Water was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 9 – Water. The assessment complied with the relevant legislation, standards and guidance as set out in that chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

703. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Water and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

704. This Chapter responds specifically to Water (General) matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 10 – Biodiversity;
- Chapter 11 – Water (Hydrological Modelling and Water Levels);
- Chapter 25 – Natura Impact Statement; and
- Chapter 26 – Water Status Impact Assessment Report (Water Framework Directive).

705. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

706. Chapter 11 – Water (Hydrological Modelling and Water Levels) and Chapter 26 – Water Status Impact Assessment Report (Water Framework Directive) of this Report have been provided separately to this Water (General) Chapter. This is to allow the matters raised within the Additional Submissions that are specific to the modelling, the assessment of water levels due to the proposed abstraction and any Water Framework Directive related responses to be addressed altogether.

707. No new water matters were raised in the Additional Submissions and consequently, this Chapter is structured around the following sections:

- Matters raised regarding Water and previously responded to; and
- Matters raised previously and further clarification is being provided.

12.2 Response to Matters Raised Previously

12.2.1 Additional Submissions

708. One Additional Submission raised matters that had been considered previously including:

- Reduced water levels in Lough Derg leading to growth of algae.

709. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Derg Open Water Swim School and the swim group "Lively Wimmin Swimmin" Previous: WSP_SUB_39	Derg Open Water Swim School and the swim group "Lively Wimmin Swimmin"	Reduced water levels in Lough Derg leading to growth of algae	RTS – Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth – Section 12.2.3

12.2.2 Applicant's Summary Response on Matters Raised Previously

12.2.2.1 Reduced Water Levels in Lough Derg Leading to Growth of Algae

710. The Additional Submission from Derg Open Water Swim School and the swim group 'Lively Wimmin Swimmin' contends that Lough Derg currently receives agricultural runoff contributing to lake pollution, through the flow of nitrates and phosphates into public waterways that feed into Lough Derg. The response outlines that this pollutant loading has led to toxic algal growth on Lough Derg. The response contends that the reduction in water levels in Lough Derg will increase concentrations of cyanobacteria promoting nutrients thus exacerbating this issue leading to damaging effects on the water quality of Lough Derg. The Applicant has previously responded to this matter in Section 12.2.3 (Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth) of the RTS. The Applicant has nothing further to add to the response previously provided, but reiterates the following points.

711. In summary, the Applicant confirms that a full assessment of the effect of the Proposed Project abstraction has been undertaken including an assessment of the impact on water quality and is reported in the EIAR.

712. To assess the potential impact of the Proposed Project, the Applicant commissioned a specialist water quality modelling study by MarCon Computations International. The water quality modelling focused on drought conditions because it is these conditions when the risk to water quality is highest. The model tested a range of scenarios, including peak abstraction and future climate change and examined key risks such as algal blooms and pollutant concentration.

713. Findings from the water quality modelling show that across all modelled scenarios, predicted changes in water quality were negligible and within the natural variability of the system. The modelling indicates that the change in water quality introduced by the operation of the Proposed Project would have a neutral effect on water quality in Lough Derg and Parteen Basin compared with the baseline water quality conditions in a drought. Given the neutral effect on water quality, which includes nitrate and orthophosphate levels (which are key nutrients in the formation of algal bloom), the Proposed Project would not cause occurrence or worsen the occurrence of harmful algal blooms.

12.3 Response to Matters Raised Previously – Further Clarification

12.3.1 Additional Submissions

714. There were three Additional Submissions received that required further clarification in relation to Water. These were:

- Agricultural land management and impacts of phosphates and nitrates entering Lough Derg;
- Flow regime alteration in the Lower River Shannon;
- Water quality risks – mining and contamination; and
- Flooding and climate change.

715. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub - Derg Open Water Swim School and the swim group "Lively Wimmin Swimmin" Previous: WSP_SUB_39	Derg Open Water Swim School and the swim group "Lively Wimmin Swimmin"	Agricultural land management and impacts on phosphates and nitrates entering Lough Derg	RTS – Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth – Section 12.2.3
Additional Sub - Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Flow regime alteration in the Lower River Shannon	RTS - Potential Biodiversity Impacts to the River Shannon - Section 10.2.2 RTS - Potential Impact of the Proposed Abstraction on Habitats and Species - Section 10.2.3 RTS - Potential Impact of the Proposed Project on Fish Migration and Passage - Section 10.3.5 RTS - Reduction in the Flow Down the Old River Shannon - Section 11.2.2 RTS - Downstream Effects on the River Shannon - Section 11.2.7 RTS - Adequacy of Mitigation Measures - Section 25.3.4 RTS - Impingement Mortality and Entrainment Characterisation Study - Section 25.3.7 RTS - Determination of the Risk of Impact on Lower Shannon Special Conservation Area - Section 25.4.19 RTS - Assessment of Direct Effects of Abstraction on European Sites - Section 25.4.20 RTS - Reliance on Heavily Modified Water Body Designation - Section 26.3.4 RTS - Adequacy of the Water Framework Directive Assessment for Potential Impacts on Fish - Section 26.4.2
Additional Sub - Shane Matthews Previous: WSP_SUB_77	Shane Matthews	Water quality risks – mining and industrial contamination	RTS - Potential for Contamination of Water Sources from Mines - Section 13.2.2
Additional Sub - Shane Matthews Previous: WSP_SUB_77	Shane Matthews	Flooding and climate change	RTS - Potential Health Impacts Associated with Flood Events in the Shannon Basin – Section 18.3.3

12.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

12.3.2.1 Agricultural Land Management and Impacts on Phosphates and Nitrates Entering Lough Derg

716. The Additional Submission from the Derg Open Water Swim School and the swim group "Lively Wimmin Swimmin" relates to the lack of robust or satisfactory means of reducing or managing agricultural pollutants (namely as phosphates and nitrates) entering Lough Derg. The response contends that, due to the reduction in water levels, this would lead to increases in concentrations of nutrients and risk algae blooms in Lough Derg. The response states that this element has been overlooked as part of the planning process for the Proposed Project with no relevant risk assessments carried out or appropriate mitigation measures factored in. The Applicant responded on water quality and algal blooms in Section 12.2.3 (Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth) of the RTS (see also response in Section 12.2.2.1 of this Report), but offer further clarification on the points raised in relation to agricultural run-off.

717. Agricultural nutrient inputs to surface waters are existing catchment-wide pressures managed through separate statutory and regulatory frameworks and do not arise from the Proposed Project. Responsibility for the regulation and management of agricultural activities and associated nutrient losses rests with the relevant competent authorities and is not a matter that can be addressed through the design or operation of the Proposed Project.

718. The relevant question for the WSIAR is whether the Proposed Project would result in changes to water levels, flows or water quality that could give rise to deterioration in WFD status or prevent the achievement of environmental objectives. These issues have been assessed through the WSIAR, the EIAR (in terms of likely significant effects), and supporting hydrological and water quality studies.

719. The assessments concluded that the Proposed Project would not result in significant effects on water quality and would not cause deterioration in any WFD quality element or water body status. In particular, the modelling does not predict changes in water levels or volumes of a magnitude that would result in increased nutrient concentrations, elevated risk of cyanobacterial blooms, or other water quality effects of the nature suggested in the Additional Submission.

720. Accordingly, the Applicant does not accept that additional risk assessments or mitigation measures are required to be included within the Proposed Project in relation to agricultural nutrient inputs. The Proposed Project has been assessed against the relevant environmental legislation and the assessment concludes that it would not result in likely significant adverse effects on water quality nor compromise WFD objectives or cause a deterioration in the status of any surface water or groundwater WFD designated water body.

12.3.2.2 Flow Regime Alteration in the Lower River Shannon

721. The Additional Submission from Environmental Trust Ireland states that the River Shannon is currently regulated for hydropower at Ardnacrusha and additional abstractions during low flow periods may reduce ecological flow thresholds, lower spawning habitat availability, increase water temperature, reduce dissolved oxygen and concentrate nutrients. The response also states that flow regime alterations may affect migratory fish, freshwater pearl mussel, estuarine mudflat productivity and floodplain wet grassland habitats. The response contends that no conclusive evidence has been presented that shows an absence of adverse effects. Environmental Trust Ireland argues that migratory fish species would be affected by an abstraction "*right above Parteen Weir*" by altering flow velocities and that "A *massive new intake pipeline at Parteen Basin introduces an additional, artificial suction hazard, physically pulling vulnerable smolts and eels out of the main river system entirely."*

722. The response further contends that, due to the current Poor status of the Parteen Basin (WFD Name: Derg HMWB), the addition of the abstraction is incompatible with the objective of the Derg HMWB achieving Good status and that there is a risk of habitat fragmentation downstream, which is not permitted under EU law.

723. The Applicant has responded to these issues in various sections of the RTS, including:

- Section 10.2.2 (Potential Biodiversity Impacts to the River Shannon);
- Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species);
- Section 10.3.5 (Potential Impact of the Proposed Project on Fish Migration and Passage);
- Section 11.2.2 (Reduction in the Flow Down the Old River Shannon);
- Section 11.2.7 (Downstream Effects on the River Shannon);
- Section 25.3.4 (Adequacy of Mitigation Measures);
- Section 25.3.7 (Impingement Mortality and Entrainment Characterisation Study);
- Section 25.4.19 (Determination of the Risk of Impact on Lower Shannon Special Conservation Area);
- Section 25.4.20 (Assessment of Direct Effects of Abstraction on European Sites);
- Section 26.3.4 (Reliance on Heavily Modified Water Body Designation); and
- Section 26.4.2 (Adequacy of the Water Framework Directive Assessment for Potential Impacts on Fish).

724. The abstraction point is not located "right above Parteen Weir" as suggested. As described in EIAR Chapter 4 – Proposed Project Description, the Raw Water Intake and Pumping Station (RWI&PS) would be located on the eastern shore of Parteen Basin approximately 3.3km north-east of Parteen Weir. The abstraction has been assessed through hydrological, hydraulic, ecological and WFD studies, all of which informed the conclusions of the EIAR, NIS and WSIAR.

725. The Applicant does not accept the contention that the intake would create a significant entrainment risk for migratory fish. The intake design incorporates a bubble curtain to discourage fish from approaching the intake and passive wedge-wire screens with intake velocities limited to 0.15m/s, allowing juvenile fish to avoid entrainment. These measures were specifically incorporated to protect fish and eel populations.

726. The Additional Submission's concerns regarding reduced ecological flows, sediment accumulation, increased water temperature, reduced dissolved oxygen, nutrient concentration and habitat fragmentation are based on the premise that the Proposed Project would significantly alter the hydrological regime of the Old River Shannon. This is not supported by the assessment findings. The modelling demonstrates that the Proposed Project would not prevent the statutory compensation flows to the Old River Shannon from being maintained and that the abstraction would not result in changes to flow, water levels or hydrological conditions of a magnitude capable of causing deterioration in WFD status or likely significant effects on biodiversity. There would also be no adverse effect on the integrity of European sites, having regard to their conservation objectives.

727. The WSIAR specifically assessed the potential effects of the Proposed Project on relevant WFD water bodies, including those currently below Good Status, and concluded that the Proposed Project would not cause deterioration in any quality element, would not impede the achievement of WFD objectives and would not prevent recovery towards Good Ecological Status or Good Ecological Potential.

728. Similarly, the Natura Impact Statement assessed potential effects on migratory fish species (as qualifying interests) and associated habitats, including those within the Lower River Shannon SAC and

connected European sites, and concluded that the Proposed Project would not adversely affect the integrity of any European site, either alone or in combination with other plans or projects.

729. Accordingly, the scientific evidence contained within the application demonstrates that the Proposed Project would not result in ecological flow deficiencies, habitat fragmentation, deterioration of water quality, impairment of fish migration, or non-compliance with the Habitats Directive or the Water Framework Directive.

730. The Applicant does not accept that assertion that no conclusive evidence has been presented demonstrating absence of adverse effects. The assessments undertaken for the Proposed Project, reported in the EIAR, NIS and WSIAR, present the robust analysis and scientific evidence that support the conclusions reached. No credible scientific evidence has been provided to rebut the findings of the assessments.

12.3.2.3 Water Quality Risks – Mining and Industrial Contamination

731. The Additional Submission from Shane Matthews outlines concerns relating to long-term water quality and the cumulative impact of historic industrial activities within the wider Shannon catchment. The Additional Submission also outlines that monitoring and remediation measures have been implemented at former mining locations, demonstrating contamination risk is present. The Additional Submission makes clear that ACP should ensure that future water quality risks have been fully assessed under a range of climatic and environmental scenarios.

732. The Applicant acknowledges the submitter's concerns regarding historic mining activities and the long-term management of water quality within the wider Shannon catchment. However, the existence of historic contamination sources does not, in itself, indicate a risk to the Proposed Project or demonstrate that additional assessment is required. The Applicant responded in relation to the potential for contamination of water sources from mines in Section 13.2.2 (Potential for Contamination of Water Sources from Mines) of the RTS, which set out that contamination risks associated with former mining activities, including the Silvermines area, were assessed within the EIAR and this concluded that there is no hydrological connectivity between the historic mining areas and Parteen Basin and that no likely significant effects are anticipated in relation to the operation of the Proposed Project. The Applicant offers further clarification that the raw water being abstracted will be monitored, the Water Treatment Plant will produce water that meets the requirements of the Drinking Water Regulations at the point of use and the treated water will be tested and monitored before it is entered into supply.

733. In addition to the matters related to the risk of contamination affecting the drinking water supplied by the Proposed Project the assessment of the Proposed Project has considered water quality risks during construction. This included the EIAR, WSIAR and supporting technical studies and considered baseline conditions, potential contaminant pathways and appropriate mitigation measures. The hydrological and water quality assessments have also considered a range of environmental conditions, including drought and flood scenarios, to evaluate the resilience of the Proposed Project under future climatic conditions.

734. In addition, a comprehensive monitoring programme will be implemented. As set out in EIAR Chapter 9 - Water, water quality monitoring will be undertaken prior to construction to establish baseline conditions and will continue during and following construction. Monitoring results will be compared against baseline conditions, with investigations and remedial measures implemented where necessary.

735. The Applicant therefore remains satisfied that water quality risks have been appropriately assessed, that suitable monitoring and mitigation measures are incorporated into the Proposed Project, and that no evidence has been presented to demonstrate a significant residual risk arising from historic industrial activities within the Shannon catchment.

12.3.2.4 Flooding and Climate Change

736. The Additional Submission from Shane Mattews outlines the increasing challenges of extreme weather and climate change, especially due to flooding in the Shannon Basin, and how this can impact on water quality and environmental conditions. The response outlines specific concerns regarding increasing flood frequency, sewage contamination during flood events, resilience of infrastructure during extreme weather conditions and future climate-related uncertainty. The response contends that future climate uncertainties are not fully reflected in present modelling exercises.

737. The Applicant acknowledges the submitter's concerns regarding climate change, flooding, infrastructure resilience and future uncertainty. These matters have been considered within the project assessments, including the Flood Risk Assessment (Appendix A9.4), Hydrological Modelling Report and the wider EIAR. The Applicant responded to this matter in Section 18.3.3 (Potential Health Impacts Associated with Flood Events in the Shannon Basin) of the RTS, but offers further clarification on matters of flooding and climate change.

738. Climate change and extreme weather scenarios were incorporated into the assessment process, including consideration of drought conditions, flood events and future operational resilience. Specifically for climate change, the design and assessment have accounted for the upper end of impact projections, in line with Irish guidelines. The Flood Risk Assessment concluded that the Proposed Project infrastructure would be at low risk from flooding and would not give rise to significant flood risk impacts elsewhere. Where potential flood risk interactions were identified, such as at the proposed access road crossings, detailed assessment confirmed that appropriate design measures would ensure flood conveyance is maintained and residual risks remain acceptable.

739. Concerns regarding sewage contamination, wastewater treatment performance and the management of wastewater discharges during flood events relate to infrastructure and regulatory regimes separate from the Proposed Project. Such matters are subject to independent assessment, operation and regulation by the relevant authorities.

740. The Applicant therefore remains satisfied that climate change, extreme weather events and infrastructure resilience have been appropriately considered within the application documentation and that no evidence has been presented demonstrating that these issues would give rise to significant adverse effects beyond those already assessed.

12.4 Response to New Matters Raised in Additional Submissions

741. No new matters relating to Water were identified in the Additional Submissions.

13. Soils, Geology and Hydrogeology

13.1 Overview

742. 14 of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as relevant to soils, geology and hydrogeology. These were responded to in the RTS Report submitted to the ACP in May 2026.

743. Neither of the further two submission received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as relevant to soils, geology and hydrogeology.

744. None of the 43 Additional Submissions received by ACP raised matters relevant to soils, geology and hydrogeology. It is noted that matters in relation to soil productivity are considered in Chapter 14 – Agriculture.

745. GSI provided an Additional Submission but had no further comments.

746. Further, the matters raised by Shame Matthews in relation to ground contamination and water quality are considered in Chapter 12 – Water (General).

747. Therefore, no further response is provided by the Applicant in relation to Soils, Geology and Hydrogeology.

14. Agriculture

14.1 Overview

748. Forty one of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Agriculture, such as, for example, impacts of farm enterprise operations. These were responded to in the RTS Report submitted to the ACP in May 2026.

749. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised matters related to Agriculture.

750. Ten of the 43 Additional Submissions received by ACP raised matters relevant to Agriculture and are responded to in this Report.

751. An assessment of the impacts of the Proposed Project on agriculture was carried out and reported in the EIAR submitted as part of the SID Planning Application Chapter 11 (Agriculture). The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

752. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Agriculture and should be read in conjunction with the original RTS. This Report should also be read alongside the following chapters of this Report, which address issues raised in Additional Submissions in greater technical detail. The Applicant's response to the Additional Submissions made to ACP comprises this entire Report:

- Chapter 7 Construction and Commissioning;
- Chapter 8 Noise & Vibration;
- Chapter 10 Biodiversity; and
- Chapter 12 Water (General).

753. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

754. Observations identified by the Applicant included in this chapter include topics such as potential impacts on agricultural land holdings and operations, including temporary and permanent loss of land, disruption to access, biosecurity risks, and the impact on drainage, all of which were assessed in the EIAR and appropriate mitigation measures proposed.

755. The Applicant would note that some of the landowners affected by temporary construction compounds and depots requested that these should be acquired after planning permission had been obtained. This has been addressed in Section 7.2.2.1 (Acquisition of Construction Compound Areas and Pipe Storage Depots on Specific Landowner Lands) of this report albeit that this refers back to the response provided previously in the RTS. The landowners also suggested that compounds and depots had not been designed to take account of current land use and this is also responded to in Section 7.2.2.2 (Proposed Construction Compound and Pipe Storage Depot Design) of this Report albeit that this refers back to the response provided previously in the RTS. The duration that land would be required for compounds and depots in also addressed in Section 7.3.2.1

756. The chapter is structured around the following sections:

- Matters raised regarding Agriculture and previously responded to.
- Matters raised previously and that further clarification is being provided; and
- New matters raised regarding Agriculture in Additional Submissions.

14.2 Response to Matters Raised Previously

14.2.1 Additional Submissions

757. Eight of the Additional Submissions raised matters that had been responded to previously including:

- Disease transmission;
- Damage to soil structure and productivity;
- Drainage;
- Access to land; and
- Future Development Potential.

758. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Shane Matthews Previous: WSP_SUB_77	Shane Mathews	Livestock disease transmission	RTS - Risk of Spread of Disease Across Agricultural Land - Section 14.2.4
		Interface with drainage systems	RTS – Potential Land Impacts - Section 14.2.6
		Damage to soil structure and productivity	RTS - Potential Land Impacts Section 14.2.6 RTS - Land Condition Post Construction - Section 14.3.7
Additional Sub – Eamonn Dooley Previous: WSP_SUB_84	Eamonn Dooley	Future Development Potential	RTS - Potential Impact of Acquisition on Future Development on Specific Landowner Lands - Section 14.3.2
Additional Sub – Fintan Dunne Previous: WSP_SUB_86	Fintan Dunne	Future Development Potential	RTS - Potential Impact of Acquisition on Future Development on Specific Landowner Lands - Section 14.3.2
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Drainage	RTS – Potential Land Impacts - Section 14.2.6 RTS - Potential Impacts on Land Drainage on Specific Landholdings - Section 3.3.14
		Access to land	RTS - Potential Loss of Agricultural Access – Section 14.2.2 RTS - Impact of Proposed New Stream Crossings During Construction Section 14.3.12
		Damage to soil structure and productivity	RTS – Potential Land Impacts - Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne	Drainage	RTS – Potential Land Impacts - Section 14.2.6 RTS - Potential Impacts on Land Drainage on Specific Landholdings - Section 3.3.14

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
		Access to land	RTS - Potential Loss of Agricultural Access – Section 14.2.2 RTS - Impact of Proposed New Stream Crossings During Construction Section 14.3.12
		Damage to soil structure and productivity	RTS – Potential Land Impacts - Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7
Additional Sub – Mark Kinsella Previous: WSP_SUB_107	Mark Kinsella	Impacts of construction on soil structure and crop production	RTS - Potential Land Impacts Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7
Additional Sub – Michael and Mary Kinsella Previous: WSP_SUB_108	Michael and Mary Kinsella	Impacts of construction on soil structure and crop production	RTS - Potential Land Impacts Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7
		Future Development Potential	RTS - Potential Impact of Acquisition on Future Development on Specific Landowner Lands - Section 14.3.2
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County council	Impacts on spread of disease.	RTS - Risk of Spread of Disease Across Agricultural Land - Section 14.2.4 RTS - Disruption to Agriculture and Farmlands - Section 14.2.1

14.2.2 Applicant's Summary Response on Matters Raised Previously

14.2.2.1 Risk of Spread of Disease Across Agricultural Land

759. A number of submissions previously raised concerns regarding biosecurity and the potential for the Proposed Project to spread disease. A few respondents, including Shane Matthews and Tipperary County Council, have repeated those matters in their Additional Submissions. The Applicant addressed this in a number of section of the RTS including Chapter 14 – Agriculture (Section 14.2.4), and Chapter – Risk of Major Accidents and Disasters (Section 23.2.1). The Applicant would refer to the previous response, specifically Section 14.2.4 of the RTS and has nothing further to add to that.

760. The Applicant would note that some of the landowners affected by temporary construction compounds and depots requested that these should be acquired after planning permission had been obtained. This has been addressed in Section 7.2.2.1 (Acquisition of Construction Compound Areas and Pipe Storage Depots on Specific Landowner Lands) of this report albeit that this refers back to the response provided previously in the RTS. The landowners also suggested that compounds and depots had not been designed to take account of current land use and this is also responded to in Section 7.2.2.2 (Proposed Construction Compound and Pipe Storage Depot Design) of this Report albeit that this refers back to the response provided previously in the RTS.

14.2.2.2 Drainage

761. Similar to some of the other matters in this section the impact on land drainage was raised previously, responded to by the Applicant in the RTS and repeated in the Additional Submissions. The Applicant would refer to the previous general response in Section 14.2.6 (Potential Land Impacts) and specific responses in Section 14.3.14 (Potential Impacts on Land Drainage on Specific Landholdings) of the RTS. Specifically, the Applicant has confirmed that impacts on drainage were considered in the assessment reported in the EIAR in Chapter 11 (Agriculture).

762. The Applicant has appointed LLOs who will remain in place throughout the construction, reinstatement and handover phases to address queries that landowners may have. Particular items to be discussed with the LLOs and agreed in advance of any works commencing will include:

- Presence of any existing drainage, to maintain connections, or temporary solutions are implemented during construction works and that appropriate permanent solutions are in place on completion of the works.

14.2.2.3 Damage to soil structure and productivity

763. Some of the landowners including for example, Shane Matthews, Mark Kinsella and Michael and Mary Kinsella have repeated their concerns over the impact on soils and loss of productivity in their Additional Submissions, and the residual effect this will have on their lands.

764. The Applicant has responded to these matters in the RTS for example, in Section 14.2.6 (Potential Land Impacts) and 14.3.7 (Land Condition Post-Construction) however, it would repeat that it acknowledges that disturbance to agricultural soils is an unavoidable consequence of pipeline construction. For this reason, extensive mitigation measures and reinstatement commitments have been incorporated into the Proposed Project, including controls relating to soil stripping, storage, segregation and reinstatement, drainage protection and reinstatement.

765. The reinstatement of land to productive use will be managed though a Soils Management Plan included within Annex B of Appendix A5.1 (CEMP) in Chapter 5 (Construction and Commissioning). The measures that will be applied to achieve reinstatement include strict segregation of topsoil and subsoil; reinstatement in original sequence; cand restoration of land levels and surface gradients to pre-construction condition.

766. Commitments that have been made with regards to soils include producing a Soils Management Plan covering matters including, but not limited to

- Limiting the seasonal timing of reinstatement of soils;
- Segregation of soils; and
- Measures regarding compaction of soils.

767. This is evident in the EIAR for example:

"*All reinstatement work will be undertaken in accordance with the requirements outlined in the Soil Management Plan devised for the Proposed Project (Annex B of Appendix A5.1). Reinstatement will start with the restoration of the subsoil by ripping it to a minimum uniform depth of 600mm. This depth of ripping will loosen any material compacted during construction. All surface stones and roots above 150mm in diameter will be removed. Regrading of subsoil will be carried out. The spreading of subsoil will be carried out in favourable weather conditions. The subsoil will be evenly spread across the Construction Working Width leaving it level. Topsoil will then be spread evenly across the Construction Working Width. Reseeding will be carried out on completion of topsoil spreading*" [EIAR Chapter 11 – Agriculture].

768. The Soils Management Plan is supported by commitments in the Construction Environment Management Plan (set out in the EIAR in Annex A of Appendix A5.1 (CEMP) in Chapter 5 (Construction and Commissioning) and Landowners Handbook regarding the identification, diversion and reinstatement of drainage which support productive soil as set out in Section 14.2.2.2 (Drainage) of this Report.

769. A suitably experienced and qualified Agronomist will oversee agricultural land reinstatement works to confirm compliance with the EIAR and CEMP requirements. Any drainage issues identified during or

following reinstatement will be promptly addressed through remedial measures agreed with the landowner. These have been set out in the Construction Environmental Management Plan.

770. The Applicant does not agree that soils cannot be put back into productive use and as referenced in the EIAR there are multiple case studies of major infrastructure projects where this has been achieved post completion of construction (for temporary working areas and construction compounds / depots). The Applicant has acknowledged in the EIAR Chapter 11 (Agriculture) that there is a period of time needed for this to happen post reinstatement due to the disturbance of the soils.

14.2.2.4 Access

771. Two of the Additional Submissions refer to impacts on access to land. This was responded to previously in Section 14.2.2 (Potential Loss of Agricultural Access) of the RTS. The access to Mr Cullen's land is considered in Section 6.2.3.8 and Section 5.3.2.5 and is not addressed further in this section.

772. With regards to the impact on access to John Quinn and Sandra Frayne and to Edward Frayne the Applicant notes the impact the pipeline route will have on access requirements across the Lyreen stream / river. Its position is that access to retained lands is not intended to be denied; temporary access arrangements are to be agreed and implemented in advance through the LLO process and the Contractor's detailed method statements under the CEMP framework, with reinstatement thereafter.

14.2.2.5 Future Development of Land

773. A number of landowners raised the impact on the potential future development of land. The Applicant responded to this matter previously in Section 14.3.2 (Potential Impact of Acquisition on Future Development on Specific Landowner Lands) of the RTS. The Applicant would reiterate that this is a compensation matter and would refer to its previous response.

14.3 Response to Matters Raised Previously – Further Clarification

14.3.1 Additional Submissions

774. There were six Additional Submissions received that the Applicant has responded to and the Applicant is providing further clarification. These were:

- Disease transmission;
- Contamination of agricultural lands;
- Disruption of farming operations;
- Interface with drainage systems;
- Damage to soil structure and productivity; and
- Disruption and Disturbance to the farming business including the temporary acquisition for the construction compound.

775. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Eamonn Dooley Previous: WSP_SUB_84	Eamonn Dooley	Disruption and Disturbance to the farming business including the temporary acquisition for the construction compound	RTS - Disruption to Agriculture and Farmlands - Section 14.2.1 RTS - Potential Impact of Temporary Acquisition on Farming Enterprise - Section 14.3.5

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Fintan Dunne Previous: WSP_SUB_86	Fintan Dunne	Disruption and Disturbance to the farming business including the temporary acquisition for the construction compound	RTS - Potential Impact of Temporary Acquisition on Farming Enterprise - Section 14.3.5
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Disruption to land - Impact of wash out valve location	RTS - Impact of Proposed New Stream Crossings During Construction - Section 14.3.12
		Potential Impact on Equine Stock / Enterprise	Section 14.3.4 (Potential Impact on Equine Stock / Enterprise)
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne	Disruption to land - Impact of wash out valve location	RTS - Impact of Proposed New Stream Crossings During Construction - Section 14.3.12
		Potential Impact on Equine Stock / Enterprise	Section 14.3.4 (Potential Impact on Equine Stock / Enterprise)
Additional Sub – Michael and Mary Kinsella Previous: WSP_SUB_108	Michael and Mary Kinsella	Disruption to land - Severance of land	Section 14.3.9 (Permanent Loss of Agricultural Land)
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Senior	Disruption and Disturbance to the farming business based on the effect on the Retained Farm Functionality	Section 14.2.1 – Disruption to Agriculture and Farmlands Section 14.3.5 – Potential Impact of Temporary Acquisition on Farming Enterprise

14.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

14.3.2.1 Disruption to farm operations

776. A number of specific landowners, in their Additional Submissions repeated concerns previously raised regarding the impact to their farm. These were responded to previously in Chapter 14 – Agriculture of the RTS and specifically in the following sections:

- Section 14.2.1 – Disruption to Agriculture and Farmlands;
- Section 14.2.2 – Potential Loss of Agricultural Access;
- Section 14.3.4 – Potential Impact on Equine Stock / Enterprise;
- Section 14.3.5 – Potential Impact of Temporary Acquisition on Farming Enterprise;
- Section 14.3.7 – Land Condition Post-Construction;
- Section 14.3.9 – Permanent Loss of Agricultural Land;
- Section 14.3.10 – Impact of Hedgerow / Tree Boundary Removal on Livestock;
- Section 14.3.11 – Disproportionate Interference of the Proposed Project on Farmland;
- Section 14.3.12 – Impact of Proposed New Stream Crossings During Construction; and
- Section 14.3.14 – Potential Impacts on Land Drainage on Specific Landholdings.

777. There will also, in some cases, have been direct correspondence as part of the compulsory purchase process.

778. The Applicant accepts that there are a range of different issues being raised but they all fall under a general topic of disruption to farm/agricultural operations. To address this the Applicant has provided some general points and then a specific response in Table 14.1.

779. The Applicant acknowledges the landowner's concerns regarding soil structure, crop productivity and the long-term effects of construction activities on agricultural land.

780. However, the Applicant rejects the suggestion, made by some of the Additional Submissions that the agricultural assessment demonstrates a lack of understanding of farming operations, crop production or soil management. The assessment of agricultural impacts was undertaken by appropriately qualified specialists and is documented in Chapter 11 (Agriculture) of the EIAR. As previously set out by the Applicant The assessment considered the characteristics of the affected holding, likely construction impacts, proposed mitigation measures and residual effects.

781. Specific comments raised in relation to drainage, reinstatement of soils and access to agricultural land are considered in Sections 14.2.2.2 (Drainage), 14.2.2.3 (Damage to Soil Structure and Productivity) and 14.2.2.4 (Access) of this Report.

782. The Applicant notes that several of the Additional Submissions refer to the extent of the loss of land either temporarily or permanently and the impact that this will have. The Applicant would refer to the response previously in the RTS and re-emphasis that the assessment reported in EIAR Chapter 11 (Agriculture) explicitly references compensation as part of the mitigation strategy for temporary and permanent impacts on agricultural holdings (loss of land, reduced access, interference with agricultural infrastructure), reinforcing that the Proposed Project documentation anticipates compensation as the mechanism for addressing residual impacts where they arise.

783. In the operational phase of the Proposed Project, the permanent wayleave does not involve the ongoing occupation of the lands by the Applicant. Rather, the wayleave is required to protect the pipeline asset and facilitate future inspection, access, maintenance, repair and replacement activities where necessary. The lands above the pipeline will be returned to the landowner and may continue to be used for agricultural purposes, subject only to the standard restrictions associated with protecting the integrity and accessibility of the buried pipeline infrastructure.

784. The Applicant further notes that the temporary working areas are required only for the construction phase in order to facilitate necessary construction activities. Following completion of construction, these temporary lands will be fully decommissioned and reinstated in accordance with the commitments contained within the application documentation and the Construction Environmental Management Plan. Reinstatement measures include the replacement and restoration of soils, reinstatement of field drainage systems, fencing, gates, hedgerows and other agricultural infrastructure, as appropriate, with the objective of returning the lands to their pre-construction agricultural use.

785. The Applicant has undertaken an assessment of the disturbance of farming activities and compensation will be provided to the landowner to address the permanent impacts on agricultural holdings resulting from the project. This measure accounts for both permanent land loss and disruption to farming operations.

Table 14.1 Specific Responses regarding disruption to land

Respondent	Matter	Applicant's Response
James Cullen Senior	Effect on Retained Farm Functionality	The Applicant acknowledges that the temporary occupation of the land for PSD 9, together with the pipeline working area, will reduce the area available for agricultural use and may affect the functionality of the retained holding during construction. Potential effects include temporary severance, interference with existing access arrangements, reduced field efficiency, disruption to livestock and machinery movements, and the creation of narrow, irregular or residual areas that

Respondent	Matter	Applicant's Response
		may be more difficult to farm during the occupation period. These concerns are expressly identified in Mr Cullen's additional submission. It is not suggested that reinstatement following construction, of itself, addresses the operational effects arising during the occupation period. Those temporary effects will require active management throughout the construction phase. The agricultural assessment for Parcel KE041 considered the combined effects associated with the pipeline and PSD9. The residual construction effect, taking account of the proposed mitigation, was assessed as Moderate and significant, with a Not Significant permanent effect during the operational phase. The effect on retained farm functionality is therefore recognised within the assessment and is not treated as arising only where a financial loss is subsequently established. Prior to entry, the Applicant will engage with Mr Cullen to record the relevant farming operations and identify, and where practicable agree, the detailed arrangements required to maintain the reasonable operation of the retained holding. Insofar as they apply to the holding, this process will consider: • access to retained fields and farm facilities; • livestock and agricultural machinery movements; • livestock gathering and handling routes; • temporary crossings; • fencing, gates and stockproof boundaries; • water troughs and associated supply lines; • field drainage and open drains; • agricultural tracks and entrances; • livestock-handling and loading facilities; • grazing and field-rotation requirements; • lambing and other sensitive periods in the farming calendar; and • holding-specific biosecurity requirements. The precise treatment of severed fields, corners and narrow or irregular residual areas will require consideration through this landowner liaison and pre-entry process. That process will allow the practical use of the retained parcels, the position of temporary fencing and crossings, drainage continuity and other reasonable holding-specific accommodation measures to be recorded before entry. A written and photographic Record of Condition will document the relevant features of the holding. Construction sequencing, access arrangements and the position of temporary fencing and crossings will be considered with a view to reducing avoidable interference with the use of the retained lands. Where practicable, areas no longer required for construction will be released and reinstated progressively. Following completion of the depot operations, PSD9 will be fully decommissioned and temporary infrastructure and construction surfacing will be removed. Topsoil and subsoil will be reinstated in accordance with the applicable soil-management requirements, and affected drainage, boundaries and vegetation will be restored to support the return of the land to agricultural use, subject to any variations agreed with the landowner. With regards to the sheep breeding enterprise,- the Applicant acknowledges that the temporary occupation of Plot PSD9.1972, together with the pipeline working area, will reduce the land available for agricultural use and may affect the operation of the retained holding during construction. These effects may include reduced land availability, temporary severance, interference with existing access arrangements and the creation of narrow or irregular residual areas that may be more difficult to farm. It is not suggested that the temporary occupation will have no effect on the holding. The EIAR agricultural assessment identifies the relevant holding as Parcel KE041 and assesses the combined effects associated with the pipeline and PSD9. The original rebuttal records a Moderate and significant residual effect during construction and a Not Significant permanent effect during the operational phase. Therefore, the effect on retained farm functionality is recognised. The proposed response is to manage the temporary effects through construction sequencing, maintenance of access and crossings, stockproof fencing, drainage measures, livestock controls, early release where practicable and progressive reinstatement. The precise treatment of severed fields, corners and narrow or irregular residual areas will require consideration through the landowner liaison and pre-entry process. That process will allow the access and practical use of retained parcels, the position of temporary fencing and crossings, drainage continuity and any reasonable holding-specific accommodation measures to be recorded before entry.Prior to entry, the Applicant will engage with the landowner to record the

Respondent	Matter	Applicant's Response
		relevant farming operations and agree, where practicable, the detailed arrangements necessary to maintain the reasonable operation of the retained holding. This process will consider access to retained parcels, livestock and machinery movements, temporary crossings, gates and stockproof fencing, water supplies, drainage continuity and any other reasonable accommodation measures arising from the construction works. The timing and sequencing of the works will also be considered with a view to limiting disruption, and land will be released and reinstated progressively where this is practicable. Following construction, PSD9 is to be fully decommissioned and the soils, drainage, fencing and vegetation reinstated to support the return of the land to agricultural use, subject to any variations agreed with the landowner.
Michael and Mary Kinsella	Disruption to land - Severance of land	The Applicant notes the Additional Submissions relating to the permanent loss of agricultural land which it has responded to previous and would refer back to Section 14.3.9 (Permanent Loss of Agricultural Land) of the RTS. With regard to the matter of land being acquired to avoid severance this refers to the land between the boundary of the construction compound and the boundary of the temporary acquisition. A discharge connection is required along the road frontage and therefore during construction the land would be severed. Following the completion of construction the land acquired temporarily, to which this point refers, would be returned to the landowners. The comments on the residual effects on land mainly related to loss of soils and are considered in Section 14.2.2.3 (Damage to Soil Structure and Productivity).
Eamonn Dooley	Disruption and Disturbance to the farming business including temporary acquisition for the construction compound	The Applicant would refer to its previous response in the RTS which addressed the impact of the Proposed Project on the farming operation, including the temporary occupation of lands for Construction Compound CC5., the assessment of agricultural impacts, proposed mitigation measures, reinstatement commitments and the conclusion of the agricultural assessment contained within Chapter 11 (Agriculture) of the EIAR. A fixed possession period for CC5 cannot presently be stated because the construction programme remains subject to contractor programming, weather conditions, sequencing requirements and other construction variables. That does not mean that the temporary acquisition is intended to be open-ended.
Fintan Dunn	Disruption and Disturbance to the farming business including temporary acquisition for the construction compound	
John Quinn and Sandra Frayne	Disruption to land - Impact of wash out valve location	Both the Additional Submissions raised the same matter and the Applicant would repeat its previous response that there is a project requirement to locate washout as ancillary apparatus to the pipeline provided so that sections of the pipeline may be drained down when required, and washout valves form part of the permanent pipeline feature set described in the CPO Engineers Report and Chapter 4 (Proposed Project Description) in the EIAR. Therefore, the siting of such pipeline features is driven by operational requirements. The location of valves and ancillary pipeline features could vary slightly based on changes in the pipeline's vertical or horizontal alignment, (within the constraints set out in the definition in Section 4.3.2 of Chapter 4 (Proposed Project Description) and Section 5.3.3 of Chapter 5 (Construction and Commissioning). This would allow some refinement of the wash out valve location during detailed design. The comments on the impact on equine enterprise, drainage , impact on soils and access are considered in Sections 14.3.2.2 (Potential Impact on Equine Stock / Enterprise), 14.2.2.2 (Drainage), 14.2.2.3 (Damage to Soil Structure and Productivity) and 14.2.2.4 (Access).
Robert Frayne		

14.3.2.2 Potential Impact on Equine Stock / Enterprise

786. The Applicant previously responded on matters relating to potential equine impacts in Section 14.3.4 (Potential Impact on Equine Stock / Enterprise) of the RTS. Some of the original respondents have raised this matter again in their Additional Submissions.

787. John Quinn and Sandra Frayne and Robert Frayne have all raised the duration of the effects on their enterprise. The Applicant can confirm that the characterisation of the disruption period for the principal pipeline/infrastructure works as typically approximately 18–24 months at an individual holding level, reflects the scale/duration of construction disruption in agricultural terms. The CEMP commits that

Landowner Liaison Officers ('LLOs') will inform affected stakeholders in advance of works, including the estimated duration, working hours and nature of the works, and that a Stakeholder Communications Plan will be prepared and implemented by the Contractor under the Applicants supervision

788. The Applicant welcomes the stated willingness from John Quinn and Sandra Frayne and Robert Frayne to continue engaging and consider the proposal to address this concern by mean of moving the horses during the main pipeline installation works.

14.4 Response to New Matters Raised in Additional Submissions

14.4.1 Additional Submissions

789. Seven of the Additional Submissions raised matters that had previously not been raised. The matters raised relate to:

- The Identification of the land for the pipeline;
- The conclusion of the Agricultural Assessment;
- Mislabelling of acquisition type;
- Access to agricultural land; and
- The pipeline alignment through agricultural land.

790. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional Sub – Shane Matthews Previous: WSP_SUB_77	Shane Matthews	Identification of the land for the pipeline
Additional Sub – Michael McKeogh Previous: WSP_SUB_93	Michael McKeogh	Conclusion of the assessment regarding significant effects
		Mislabelling of acquisition type
Additional Sub – James Cullen Senior Previous: WSP_SUB_89	James Cullen Senior	Reliance on Compensation Rather Than Demonstrating Impact Avoidance
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Access to Agricultural Land
Additional Sub – Robert Frayne Previous: WSP_SUB_105	Robert Frayne	Access to Agricultural Land
Additional Sub –Mark Kinsella Previous: WSP_SUB_107	Mark Kinsella	Pipeline alignment through agricultural land
Additional Sub – Michael and Mary Kinsella Previous: WSP_SUB_108	Michael and Mary Kinsella	Pipeline alignment through agricultural land

14.4.2 Applicant's Response on New Matter Raised

14.4.2.1 Identification of the land for the pipeline

791. Shane Matthews in his Additional Submission raised the basis for the identification of the land for the pipeline.

792. The Applicant can confirm that the Routing Report contained within EIAR Chapter 3 (Consideration of Reasonable Alternatives) describes in detail the rationale and methodology used to identify and refine the proposed pipeline alignment. The route was developed through a structured five-step route selection process, commencing with the identification of unconstrained "white space" at a regional scale and progressing through increasingly refined corridor options, culminating in the identification of an indicative 50m wide pipeline corridor capable of accommodating construction and long-term operation.

793. The proposed route was assessed against a comprehensive range of environmental, engineering and physical constraints, including, but not limited to, designated ecological sites, peatlands, watercourses, topography, ground conditions and existing infrastructure. The preferred route was further refined following extensive non-statutory consultation (on previous iterations of the project) and, critically, prolonged direct engagement with affected landowners following publication of the Final Options Appraisal Report (FOAR). This process has continued between 2018 and 2025 with on-going engagement with landowners and re-routes proposed by landowners throughout this period.

794. In arriving at the final pipeline route Uisce Éireann considered all existing constraints and proposed infrastructural developments within these lands and, having considered all possible alternatives, believe that the route shown is the one that causes the least amount of disruption, considering these constraints.

14.4.2.2 Conclusion of the Assessment

795. Mr McKeogh has raised in his Additional Submission that he does not agree with the conclusion regarding the significance of the effect on his land. The Applicant recognises that Mr McKeogh disputes that the permanent effect on his holding is 'not significant'. In reaching this conclusion the assessment takes account of the financial compensation that would be paid for the loss of this land. Therefore, the assessment is clear that the loss would be significant as a result of the construction of the Proposed Project however, with mitigation in the form of compensation payments the effect would not be significant in the long term. The Applicant fully accepts that Mr McKeogh will not agree but it can confirm that is methodology which forms the basis of the assessment reported in the EIAR.

14.4.2.3 Mislabelling of acquisition type

796. The Additional Submission from Michael McKeogh notes that references in the Applicants previous response regarding access arrangements, reinstatement and construction management measures are not relevant because the lands are subject to permanent acquisition.

797. The Applicant acknowledges that the RTS included general references to mitigation measures applicable to temporary construction impacts and to reinstatement of temporary lands across the wider Proposed Project Those references were not intended to suggest that the land for the Water Treatment Plant would be subject to temporary occupation, only or will be reinstated.

798. References to the CEMP measures (Appendix A5.1 of Chapter 5 (Construction & Commissioning), landowner liaison arrangements and construction controls may remain relevant to the manner in which construction interfaces with Mr McKeogh's retained lands and farming operations, but they are not relied upon as mitigation for the permanent loss of the acquired out-farm.

799. Further the Applicant notes the matters raised with regard to specific paragraphs in the RTS Report and would highlight that the section referred to includes landowners who are subject to both temporary and permanent land take. The comments were not intended to be insensitive, and we appreciate the extent of the overall effect on Mr McKeogh as a result of the permanent loss of land.

14.4.2.4 Reliance on Compensation Rather Than Demonstrating Impact Avoidance

800. The Additional Submission from James Cullen Senior suggests that the Applicant is relying on compensation rather than demonstrating it has avoided effects.

801. The Applicant does not agree. The submitted approach comprises the avoidance and reduction of impacts through the depot-selection process, the control of the temporary footprint, construction programming, holding-specific accommodation measures, reinstatement and, only in respect of demonstrable residual losses, the statutory compensation framework. The required depot footprint must accommodate safe pipe delivery and offloading, pipe storage, vehicle circulation, supporting plant and materials, soil storage, waste-management areas and wheel-wash facilities. The temporary plot boundary also serves to contain these activities and avoid construction operations extending onto adjoining lands. Compensation is therefore intended to address quantifiable residual losses remaining after reasonable avoidance, mitigation and accommodation measures have been applied, rather than operating as a substitute for those measures.

14.4.2.5 Access to Land

802. The Additional Submissions from John Quinn and Sandra Frayne and Robert Frayne have stated that they maintain their concerns over the interaction between the proposed route of the pipeline and their existing access. This was responded to previously in the RTS in respect of the impact on the Lyreen stream as it was raised in this context. The Applicant confirms the position remains that access to retained lands is not intended to be denied; temporary access arrangements are to be agreed and implemented in advance through the LLO process and the Contractor's detailed method statements under the CEMP framework, with reinstatement thereafter.

14.4.2.6 Pipeline alignment through agricultural land

803. The Additional Submissions from Michael and Mary Kinsella and Mark Kinsella raised the issue of the Coagh Upper Fen (Alkaline Fen) in relation to the pipeline alignment through their agricultural land. The Applicant has responded in Section 10.4.2.1 (Sensitive Habitat (Alkaline Fen)) of this Report on the information included within the SID planning application.

804. The routing history at this location is documented in the Preliminary Options Appraisal Report, published in 2015, and the Final Options Appraisal Report (FOAR), published in 2016. Drawing No. 32105801-FOAR-014, contained in Appendix I of the FOAR, shows the Preliminary 200m Pipeline Corridor between chainage 65km and 70km. Drawing No. 32105801-FOAR-049 shows the subsequently identified Preferred 200m Pipeline Corridor at the same location. The latter drawing is also replicated in Appendix C of the CPO Routing Report.

805. Following the identification of the Preliminary 200m Pipeline Corridor, further site surveys were undertaken. Those surveys identified Coagh Fen, an alkaline fen habitat, as an ecological constraint that would have been directly affected by the preliminary corridor. The Preferred 200m Pipeline Corridor was consequently moved eastwards, as shown by comparing Drawing Nos. 32105801-FOAR-014 and 32105801-FOAR-049. The FOAR and its associated drawings therefore record the development of the pipeline corridor at this location and the eastward revision made following the identification of the ecological constraint.

806. The ecological basis for that constraint is documented separately in Appendix A8.3 (Site Description of Coagh Upper Fen, County Offaly) and EIAR Appendix A8.4 (Target Habitat Surveys Report) in Chapter 8 (Biodiversity) of the EIAR. These appendices contain the relevant survey findings and habitat assessment. Figure 1 of EIAR Appendix A8.3 identifies the specific area corresponding with Annex I habitat.

807. Accordingly, Appendix A8.3 (Site Description of Coagh Upper Fen, County Offaly) and EIAR Appendix A8.4 (Target Habitat Surveys Report) in the EIAR provide the supporting ecological evidence identifying and characterising the alkaline fen, while the FOAR and its associated drawings record how that ecological information informed the development of the Preferred 200m Pipeline Corridor. These documents should therefore be read together.

808. In developing the proposed route at this location, the Applicant had regard to the identified ecological constraint, the proposed Booster Pumping Station infrastructure and the other relevant environmental, engineering, land-use and infrastructure constraints. Having considered those matters and the available routing alternatives, the Applicant considers that the proposed route represents the most appropriate available alignment at this location.

15. Air Quality

15.1 Overview

809. Twenty-six of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Air Quality, such as, for example, dust and odour emissions. These were responded to in the RTS Report submitted to the ACP in May 2026.

810. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Air Quality. This was responded to in the SRTS Report submitted to the ACP in June 2026.

811. Two of the 43 Additional Submissions received by ACP raised matters relevant to Air Quality and are responded to within this report.

812. An assessment of air quality was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 12 (Air Quality). The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

813. This report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Air Quality and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

814. Observations identified by the Applicant included in this chapter include the potential for odour related impacts from water treatment and transport of wastewater.

815. No new air quality matters were raised in the Additional Submissions and consequently, this Chapter is structured around the following sections:

- Matters raised regarding Air Quality and previously responded to; and
- Matters raised previously and further clarification is being provided.

15.2 Response to Matters Raised Previously

15.2.1 Additional Submissions

816. One response raised matters that had been considered previously including:

- Potential for odour impacts from water treatment; and
- Potential for odour impacts resulting from the transport of wastewater.

817. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Ballymore Eustace Trout and Anglers Association Previous: WSP_SUB_71	Ballymore Eustace Trout and Salmon Anglers Association	Potential for Odour Impacts. Potential of Odour Impacts resulting from the transport of wastewater.	RTS – Potential for Odour Impacts – Section 15.2.1. RTS – Potential of Odour Impacts resulting from the transport of wastewater – Section 15.3.3.

15.2.2 Applicant's Summary Response on Matters Raised Previously

15.2.2.1 Potential for Odour Impacts

818. With regard to the matters raised by Ballymore Eustace Trout and Salmon Anglers Association in relation to odour the Applicant does not have any further response to that provided previously in Section 15.2.1 (Potential for Odour Impacts) of the RTS and would reiterate that the water treatment process does not release any malodours, unlike wastewater treatment where odour management is a key consideration. The processes associated with water treatment are based on physical separation of material from the raw water and they are not biological processes that generate odours, which would be the case with wastewater treatment. In addition, the chemicals used as part of the water treatment process (sulphuric acid, chlorine, caustic soda) do not generate significant malodours.

819. In relation to odour emissions from the transport of wastewater, as set out in Section 15.3.3 (Potential Odour Impacts Resulting from the Transport of Wastewater) of the RTS, there would be no odour impact from the transporting of the wastewater, as the foul wastewater will be in an enclosed tanker and would not be exposed to open air.

15.3 Response to Matters Raised Previously – Further Clarification

15.3.1 Additional Submissions

820. There was one Additional Submission received regarding Air Quality that the Applicant previously responded to and is providing further clarification. This relates to:

- Dust and Aspergillus impacts at Peamount Hospital.

821. The following Additional Submissions raised matters which related to this.

Add Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	Dust and aspergillus impacts at Peamount Hospital	RTS – Potential Construction Dust Impacts on Peamount Hospital – Section 15.3.2

15.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

15.3.2.1 Dust and Aspergillus Impacts at Peamount Hospital

822. The Additional Submission from Peamount Healthcare raises concerns around the risk of aspergillus spores potentially present in the soil being mobilised through soil excavation and soil handling operations and the potential impact on patients at Peamount Hospital. The Additional Submission referred to the Applicant's previous response and requested clarity on the extent to which the National Guidelines for the Prevention of Nosocomial Aspergillosis (HSE 2018) will be complied with by the Proposed Project during construction works. Peamount Healthcare also asked for clarity on how the Applicant intends to address the risk of Aspergillus entering the hospital and the prevention measures that will be put in place to prevent aspergillus entering patient areas within the hospital.

823. As discussed previously in Section 15.3.2 (Potential Construction Dust Impacts on Peamount Hospital) of the RTS, according to the National Guidelines for the Prevention of Nosocomial Invasive Aspergillosis, the methods for preventing the spread of Aspergillosis for major external works near a hospital, such as the Proposed Project, is to implement measures to control dust. This is what the Proposed Project has done and therefore, the main aspect of the Aspergillous mitigation is prevention

at source with the primary aim of the Proposed Project's dust mitigation measures being to avoid dust becoming airborne in the first instance.

824. As set out in EIAR Chapter 12 and Section 15.3.2 (Potential Construction Dust Impacts on Peamount Hospital) of the RTS, real-time dust monitoring will be undertaken for the duration of the construction works at the TPR, which will allow works to be stopped and appropriate measures to be taken in the event that trigger levels are exceeded (as set out in Table 1.2 and 1.3 of the Dust Management Plan as submitted within Annex E of EIAR Appendix A5.1 (Construction Environment Management Plan). Therefore, the mitigation strategy is based on preventing dust becoming airborne at source and thus also supressing potential fungal spores contained within the dust. Consequently, the risk of dust emissions, and by association, Aspergillus spores significantly impacting the hospital and its patients is low. The appointed Contractor(s) will prepare a site specific Dust Management Plan based on the measures and requirements in Annex E of the CEMP, as a minimum. As set out in the RTS and in Section 2.2.2.3 (Environmental Mitigation) of this Report, in the event of a grant of permission the CEMP, including the Dust Management Plan, will form part of the conditions which the Applicant must comply with. The Applicant will be required to demonstrate to each local authority in which works are undertaken how it has complied with the planning conditions and proposes to do this via a Compliance Framework, as set out in Section 2.9 (Consent Condition) of the RTS.

825. In relation to the feasibility of implementing the specific Aspergillus prevention measures within the National Guidelines for the Prevention of Nosocomial Invasive Aspergillosis during Construction/ Renovation Activities (National Disease Surveillance Centre 2002) and National Guidelines for the Prevention of Nosocomial Aspergillosis (HSE 2018), it was noted previously in the RTS Section 15.3.2 (Potential Construction Dust Impacts on Peamount Hospital) that these guidance documents primarily relate to works within hospital buildings themselves rather than works external or adjacent to hospital settings, therefore, it is recognised that many of the mitigations discussed within these documents will not be applicable to the TPR construction works.

826. Through the careful planning and management of the construction works themselves and as set out above, the Applicant is focused on preventing the risk of Aspergillous spore mobilisation rather than remediation within the hospital. It remains the Applicant's position that these dust mitigation measures will avoid any likely significant effects from dust and possible Aspergillous spore mobilisation and it is these measures that the Applicant has committed to. These will be included in the Aspergillus Prevention Plan. The detailed configuration of those measures will be finalised through the Aspergillus Prevention Plan before works commence. That process will operationalise the mitigation framework already assessed and committed to in the EIAR.

827. The Applicant is committed to working with Peamount Healthcare to address their concerns, and therefore, in addition to the dust mitigation measures, where specific measures within the hospital site itself are applicable and feasible to implement, they will be discussed and agreed with Peamount Healthcare and defined in the Aspergillus Prevention Plan. These measures would be supplementary to the dust mitigation measures proposed for the Proposed Project outlined in EIAR Chapter 12 – Air Quality and the Dust Management Plan and would be discussed in consultation with a competent specialist in the area of Aspergillus, and Peamount Hospital. It is not possible at this stage to identify the exact measures that will be implemented as this will form part of the Aspergillus Prevention Plan.

828. As set out in Section 12.5 of EIAR Chapter 12 (Air Quality), it is a specific commitment by the Applicant that an Aspergillus Prevention Plan will be developed by a suitably qualified specialist prior to commencement of works on the site to prevent Aspergillus spores spreading. This will include a site-specific assessment and detail measures supplementary to the dust mitigation measures proposed for the Proposed Project and will be developed in consultation with Peamount Hospital.

15.4 Response to New Matters Raised in Additional Submissions

829. There were no new matters raised in the Additional Submissions in relation to Air Quality.

16. Climate

16.1 Overview

830. Nineteen of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Climate, such as, for example, carbon impacts from the Proposed Project. These were responded to in the RTS Report submitted to the ACP in May 2026.

831. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Climate.

832. Seven of the 43 Additional Submissions received by ACP raised matters relevant to Climate and these are responded to in this report.

833. An assessment of climate was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 13 (Climate). The assessment complied with the relevant legislation, standards and guidance as set out in that chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

834. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Climate and should be read alongside the original RTS. Cross references to the relevant chapters of the EIAR and RTS have been included, where appropriate, to assist the reader.

835. This Report and its supporting appendix comprise the response of the Applicant to the issues raised regarding Climate. A number of the Additional Submissions raise future climate change in the context of the modelling that has been undertaken to predict the effect of the Proposed Project on water levels within Parteen Basin. These are considered within Chapter 11 (Water (Hydrological Modelling and Water Levels)) of this report.

836. This Chapter responds specifically to Climate matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 11 – Water (Hydrological Modelling and Water Levels).

837. Cross references to this Chapter have been included, where relevant, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

838. Observations identified by the Applicant included in this chapter include climate change induced drought conditions and the impact on water abstraction; compliance with carbon budgets; greenhouse gas emissions from the Proposed Project; and the carbon costs associated with current leakage rates in the water distribution system.

839. This Chapter is structured around the following sections:

- Matters raised regarding Climate and previously responded to;
- Matters raised previously and further clarification is being provided; and
- New matters raised regarding Climate in the Additional Submissions.

16.2 Response to Matters Raised Previously

16.2.1 Additional Submissions

840. Seven responses raised matters that had been considered previously including:

- Climate change induced drought conditions and the impact on water abstraction;
- Compliance with carbon budgets;
- Carbon costs associated with current leakage rates in the water distribution system; and
- Loss of renewable energy generation.

841. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Climate change induced drought conditions and the impact on water abstraction	RTS – Climate Adaptation - Section 16.2.4
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance		
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland		
Additional Sub – James Crowley Previous: WSP_SUB_50	James Crowley		
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council		
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council		
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Compliance with carbon budgets	RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland		
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council		
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Carbon costs associated with current leakage rates in the water distribution system	RTS – Carbon Emissions Assessment - Section 16.4.2 RTS - Carbon from Water Leakage – Section 27.6
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council		
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Loss of renewable energy generation	RTS – Potential Impact of the Proposed Project on Renewable Energy Generation – 16.3.2

16.2.2 Applicant's Summary Response on Matters Raised Previously

16.2.2.1 Climate Change Induced Drought Conditions Impact on Water Abstraction

842. As referenced previously in Section 16.2.4 (Climate Adaptation) of the RTS, drought conditions were included in the assessment with no significant risks identified as outlined in Table 13.28 of EIAR Chapter 13 - Climate. The potential impact of increased dry periods due to climate change was considered in Section 13.4.5.9 of EIAR Chapter 13 (Climate) and has been assessed in EIAR Appendix A9.1 - Abstraction Assessment. EIAR Appendix A9.1 describes the potential impacts of the abstraction on surface water receptors, including Lough Derg, Parteen Basin, the River Shannon and the various tributaries. The summary of the assessment is provided in EIAR Chapter 9 (Water). Section 6 and Annex A - Hydrological Modelling Report of EIAR Appendix A9.1 detail the approach taken for considering how abstraction may be affected by a RCP8.5 Upper 75th allowance scenario for climate change by 2080. The results of the abstraction assessment show that the abstraction is not considered likely to result in a significant effect on any of the surface water receptors, including during a drought and/or as a result of the RCP8.5 Upper 75th allowance climate change scenario. Climate in relation to the abstraction and hydrological modelling is further addressed in Chapter 11 – Water (Hydrological Modelling and Water Levels) of the RTS. The Applicant has provided further response on this in Section 11.3.2.6 (Climate Change) of this Report.

16.2.2.2 Compliance with Carbon Budgets

843. In relation to compliance with carbon budgets, as set out in Section 16.2.3 (Lifecycle Carbon Assessment and Carbon Budgets) of the RTS, project-related GHG emissions are assessed at a national scale in terms of alignment with carbon budgets and sectoral emissions ceilings as explained in Section 13.2 of EIAR Chapter 13 - Climate. Ireland has a national carbon budget of 295 $MtCO_2eq$ for the period 2021 – 2025 and a budget of 200 $MtCO_2eq$ for the period 2026 – 2030. The 2023 Climate Action Plan provided that the economy-wide carbon budgets will be supplemented by sectoral emissions ceilings, setting the maximum amount of GHG emissions that are permitted in a given sector of the economy during each five-year carbon budget. The sectoral emission ceilings for each sector were first published in July 2022 and were reproduced in Table 13.4 of EIAR Chapter 13 (Climate). The Proposed Project is implementing mitigation measures where appropriate to align with the Climate Action Plan and to reduce the impact to climate. As per Table 13.31 and 13.32 of EIAR Chapter 13 (Climate), the total annualised construction phase emissions associated with the Proposed Project would be 6,053 tonnes CO_2eq. When post-mitigation operational phase emissions of 5,575 tonnes CO_2eq are also included, this equates to total project emissions of 11,628 tonnes CO_2eq, this is equivalent to 0.04% of Ireland's 2030 Non-ETS target of 22.72 $MtCO_2eq$. Total annualised industry, electricity, transport and waste emissions from the Proposed Project will be less than 1% of the relevant 2030 sectoral ceilings, and will not result in a significant effect on climate as per the conclusions of EIAR Chapter 13 (Climate). The Applicant has nothing further to add to the previous response provided.

16.2.2.3 Carbon Costs from Leakage Rates

844. Leakage in the current water distribution system and the carbon costs associated with this was responded to previously in Section 16.4.2 (Carbon Emissions Assessment) of the RTS. The carbon emissions from water leakages is captured in the assessment of operational GHG emissions from the Proposed Project set out in EIAR Chapter 13 (Climate), to the extent that the volume of water abstracted by the Proposed Project, and therefore the operational power required for this abstraction, is based on water demand projections which account for current leakage levels as well as future reductions in leakage levels (through the actions the Applicant is taking outside the scope of the Proposed Project). The GHG emissions from operational energy use were considered in the climate assessment and formed part of the assessment of likely significant effects on climate. As per the conclusions in EIAR Chapter 13 – Climate, there would be no likely significant effect on climate from the Proposed Project.

845. The embodied carbon within existing water supplies (i.e. without the implementation of the Proposed Project) lost through leakage is outside the scope of the Proposed Project and was addressed within the Additional Matters chapter in the RTS in Section 27.6 (Carbon from Water Leakage).

846. The Proposed Project includes embedded design measures for detecting leaks. This was addressed in the response in Section 23.3.1 (Risk of Infrastructure Failure) and 23.4.1 (Risk of Infrastructure Failures) of Chapter 23 (Risk of Major Accidents and/or Disasters) of the RTS. The option of leakage reduction as an alternative to the Proposed Project was addressed further in Chapter 5 – Consideration of Reasonable Alternatives of the RTS.

847. The Applicant has nothing further to add to the previous responses provided.

16.2.2.4 Loss of Renewable Energy Generation

848. The Additional Submissions have raised the loss of renewable energy generation as a result of diverting water from Ardnacrusha to the Proposed project for drinking water supply. The Applicant has responded to this previously in the RTS in Section 16.3.2 (Potential Impact of the Proposed Project on Renewable Energy Generation). This referred to Section 13.4.4.1 in EIAR Chapter 13 (Climate) which addresses the loss of renewable energy generation from Ardnacrusha and acknowledges that the Proposed Project may result in a minor reduction in renewable power generation from the Ardnacrusha Generating Station, as water that would usually be used for hydropower is instead abstracted for drinking water purposes. The Applicant has identified that this in turn could increase carbon emissions if power is instead generated from fossil fuels to make up for the reduction of power generated from Ardnacrusha. There are many factors that would affect whether there would be a reduction in power generation from Ardnacrusha, and if so, the amount it would be reduced by, including whether Ardnacrusha is generating at full capacity (the actual generating rate is typically substantially below this), whether the Proposed Project is abstracting at full capacity (during periods of peak demand), and other uses in Parteen Basin that affect water levels. The Applicant has nothing further to add to the previous response provided.

16.3 Response to Matters Raised Previously – Further Clarification

16.3.1 Additional Submissions

849. There were three Additional Submissions received that required further clarification in relation to Climate. These were:

- GHG emissions from the Proposed Project and alignment with the climate act; and
- GHG emissions and carbon budgets.

850. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	GHG emissions from the Proposed Project and alignment with the climate act	RTS – Lifecycle Carbon Assessment and Carbon Budgets – Section 16.2.3 RTS – Alignment of the Proposed Project with Climate Legislation – Section 16.2.5
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	GHG emissions and whether the State has headroom in its sectoral ceilings for this and all other major infrastructure projects competing for the same shrinking carbon budget	RTS – Lifecycle Carbon Assessment and Carbon Budgets – Section 16.2.3
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council		

16.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

16.3.2.1 GHG Emissions

851. The Additional Submission from Futureproof Clare Environmental CLG states: "*Point 3104 states "The Proposed Project is required to calculate its GHG emissions and assess the likely significant effects of these emissions on climate, and this has been done and reported in EIAR Chapter 13 - Climate" . However, the calculations were not conducted with full reference to operations and in accordance with the climate act. For example, the EIAR states that vehicles transporting the pipeline will run on palm oil, which is has a GHG and ecologically intensive life cycle assessment resulting in adverse climate change impacts not mentioned in the applicants response*".

852. As discussed in Section 16.2.3 (Lifecycle Carbon Assessment and Carbon Budgets) of the RTS, the GHG assessment undertaken and reported in EIAR Chapter 13 – Climate for the Proposed Project included construction and operational phase effects, including GHG emissions from:

- Embodied GHG emissions within construction materials;
- Fuel consumed for material, plant, and construction worker transportation;
- Site clearance, groundworks, excavation, on-site energy and water use, and waste management;
- Land use change (e.g. habitat loss and planting);
- Maintenance and repair activities; and
- Operational energy and water use, operational process, and operational transportation.

853. Therefore, the GHG emissions associated with all elements of the Proposed Project have been considered within the assessment, including fuel usage and transport emissions.

854. In relation to the reference in the Additional Submission to vehicles transporting the pipeline running on palm oil, this is an incorrect statement, palm oil will not be used as a transport fuel. EIAR Chapter 13 (Climate) assessed the GHG emissions associated with the use of hydrotreated vegetable oil (HVO) as an alternative to diesel fuel in construction phase transport vehicles. HVO is a renewable biofuel that is derived from vegetable oil, processed with hydrogen, to create a diesel substitute product. It is considered a sustainable fuel option and is a proposed mitigation measure for the Proposed Project.

16.3.2.2 Alignment with the Climate Act

855. Futureproof Clare Environmental CLG also stated in its Additional Submission that the calculations were not conducted with full reference to operations and in accordance with the Climate Act.

856. This is not correct.

857. The GHG assessment and the climate assessment in general was undertaken in line with the requirements of the Climate Action and Low Carbon Development Act 2015 (as amended). Specifically, Section 16.2.5 (Alignment of the Proposed Project with Climate Legislation) of the RTS sets out how EIAR Chapter 13 (Climate) has demonstrated how the Proposed Project is consistent with the objectives of section 15 of the Climate Action and Low Carbon Development Act 2015 (as amended). The EIAR has carried out a greenhouse gas emissions assessment and assessed the Proposed Project's resilience/adaptation to climate change.

858. The Greenhouse Gas Emissions assessment considered the Proposed Project's GHG emissions over its lifetime. The assessment analysed these emissions in the context of the relevant carbon budgets, targets and policies to ensure consistency with the most recent approved climate action plan and the most recent approved national long term climate action strategy, and with measures in furtherance of the national climate objective. This complies with subsections 15(1)(a), (b), (d) and (e) of the Climate Action and Low Carbon Development Act 2015 (as amended).

859. The Climate Change Vulnerability assessment identified the impact of a changing climate on the Proposed Project and receiving environment in the context of the most recently approved national adaptation framework and approved sectoral adaptation plans. The assessment considered the Proposed Project's vulnerability and adaption to climate change and identified adaptation measures to increase resilience, as discussed in Section 13.6.3 of EIAR Chapter 13 (Climate). This covers section 15(1)(c) and (e) of the Climate Action and Low Carbon Development Act 2015 (as amended).

860. In addition, the purpose of the Proposed Project is ensuring resilience in the water supply to the Eastern and Midlands Region. Climate change is one of the factors which increases the vulnerability of this supply and therefore the need for the Proposed Project is directly linked to future climate adaptation. The assessments undertaken in EIAR Chapter 13 (Climate) and outlined above along with the mitigation measures set out in EIAR Chapter 13 (Climate) pursue the furtherance of the national climate objective and the objective of mitigating greenhouse gas emissions and adapting to the effects of climate change in the State as far as practicable as required by section 15(1)(d) and(e) of the Acts.

16.3.2.3 Carbon Budgets

861. The Additional Submissions from River Shannon Environmental Protection Alliance and Tipperary County Council request clarification on whether the State has headroom in its sectoral ceilings for this and all other major infrastructure projects competing for the same shrinking carbon budget.

862. In relation to the requirement to consider the GHG emissions from the Proposed Project cumulatively with other major infrastructure projects, the Transport Infrastructure Ireland (TII) PE-ENV-0104 guidance on which the assessment was based states that in relation to cumulative assessments "*by presenting the GHG impact of a project in the context of its alignment to Ireland's trajectory of net zero and any sectoral carbon budgets, this assessment will demonstrate the potential for the project to affect Ireland's ability to meet its national carbon reduction target. This assessment approach is considered to be inherently cumulative*".

863. The national carbon budgets themselves are considered cumulative since they address carbon emissions from a wide variety of sources across the sectors of the economy and are based on broad development assumptions. The EPA in their most recent GHG emissions report 'Ireland's Provisional

Greenhouse Gas Emissions 1990 – 2025'[2] state that Ireland has complied with the first carbon budget for 2021 – 2025, with provisional estimates indicating that from 2021 to 2025 Ireland has used 99.6% or 293.9 $MtCO_2e$ of the 295 $MtCO_2e$ Carbon Budget for the five-year period 2021-2025. This leaves 1.1 Mt CO_2e of the budget available to be carried over into budget 2 for 2026-2030. This mechanism for transfer of carbon budget from one budget to the next allows for Ireland's 2050 net zero trajectory to be maintained.

864. As set out in EIAR Chapter 13 (Climate) and Section 16.2.3 (Lifecycle Carbon Assessment and Carbon Budgets) of the RTS, the Proposed Project will result in total annualised GHG emissions of 11,628 tonnes CO_2eq, this is equivalent to 0.04% of Ireland's 2030 Non-ETS target of 22.72 $MtCO_2eq$. Total annualised industry, electricity, transport and waste emissions from the Proposed Project will be less than 1% of the relevant 2030 sectoral ceilings, and will not result in a significant effect on climate as per the conclusions of EIAR Chapter 13 (Climate).

865. The GHG emissions from the Proposed Project have been compared with national and sectoral carbon budgets in EIAR Chapter 13 along with how the project is aligned with Ireland's net zero trajectory. As explained in Section 13.6 of EIAR Chapter 13 (Climate), the Proposed Project can be considered to align with Ireland's trajectory towards net zero by 2050 as it has reduced its emissions through embedded design and mitigation measures in alignment with the Climate Action Plan.

16.4 Response to New Matters Raised in Additional Submissions

16.4.1 Additional Submissions

866. One Additional Submission raised a new matter that had not been previously responded to regarding:

- Carbon storage in the River Shannon.

867. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	The degradation of the Lower Shannon's blue carbon storage capacity directly breaches Ireland's statutory climate frameworks.

16.4.2 Applicants Response to New Matters Raised

16.4.2.1 Carbon Storage in the River Shannon

868. The Additional Submission raises concerns on the degradation of the Lower River Shannon's 'blue carbon storage capacity'. The Additional Submission states that "*Benthic ecosystems–collectively known as "Blue Carbon" sinks–are highly disproportionate powerhouses for carbon capture… they are responsible for burying roughly 50% of all marine sediment carbon*". There is a concern that altered river flows would lead to a release of greenhouse gases.

869. The impact of the Proposed Project on benthic communities is addressed in Section 10.3.2.2 (Benthic Communities in the Shannon SAC) of this report. In summary, the Proposed Project would not result in significant adverse effects on aquatic, shoreline, littoral or estuarine habitats, will not adversely affect the integrity of the Lower River Shannon SAC, and will not adversely affect the ecological processes that support its conservation objectives. Additionally, the Proposed Project would not significantly alter water levels and would not affect downstream flows and therefore, there is unlikely to be any significant

[2] Environmental Protection Agency (2026) Ireland's Provisional Greenhouse Gas Emissions 1990 – 2025

disturbance to local river flows or benthic habitats. Thus, any carbon stored within these benthic habitats would be unaffected.

17. Population

17.1 Overview

870. Thirty-eight of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Population, such as, for example, potential impacts on local communities, tourism and amenity more generally; but also in relation to some specific issues including the economic impact on Mountshannon and the potential recreational and tourism impacts of the reduction in fish stock, amongst others. These were responded to in the RTS Report submitted to the ACP in May 2026.

871. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as relevant to Population.

872. Three of the 43 Additional Submissions received by ACP raised matters relevant to Population and are responded to in this report.

873. An assessment of population was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 14 (Population). The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process in the EIAR).

874. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Population and should be read in conjunction with the RTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

875. This Chapter responds specifically to Population matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 11 – Water (Hydrological modelling and Water levels).

876. Cross references to this Chapter have been included, where relevant, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

877. No new matters were raised in the Additional Submissions and therefore, this Chapter is structured around the following sections:

- Matters raised regarding population and previously responded to; and
- Matters raised previously and further clarification is being provided.

17.2 Response to Matters Raised Previously

17.2.1 Additional Submissions

878. Two Additional Submission raised Population matters that had been considered previously. The matters raised related to:

- Landscape and tourism impacts from abstraction of water from the Lower River Shannon; and
- Tourism impacts.

879. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter raised	Previous Response
Additional Sub: Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Environmental issues associated with Lough Derg are inadequately addressed. Populations, tourism industries and future potential usage are interwoven	RTS – Potential Impact on Local Tourism and Amenity Impacts of the Proposed Project on Lough Derg and the Lower River Shannon – Section 17.2.2 RTS – Potential Economic Impact on Mountshannon – Section 17.3.1 RTS – Potential Recreation and Tourism Impacts of Reduction in Fish Stock – Section 17.3.2 RTS – Considerations for Tourism Assessment – Section 17.4.2
Additional Sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Landscape and tourism impacts from abstraction of water from the Lower River Shannon (See Chapter 19 – Landscape and Visual of this Report regarding landscape matters)	

17.2.2 Applicant's Summary Response on Matters Raised Previously

17.2.2.1 Impact on Tourism from Abstraction of Water from the Lower River Shannon

880. The Additional Submission from Tipperary County Council mentioned the impact on tourism but included no additional observations other than reiterating the views included in its original submission. Michael Reidy also raised that the effects on the River Shannon extended to tourism impacts. The potential effect on tourism had been raised by a number of the respondents to the Statutory Consultation and these were responded to in the RTS including in Sections 17.2.2, 17.3.1, 17.3.2 and 17.4.2. The Applicant has nothing further to add to the previous responses provided.

17.3 Response to Matters Raised Previously – Further Clarification

17.3.1 Additional Submissions

881. There was one Additional Submission received that required further clarification in relation to Population relating to:

- Navigation assessment for Lough Derg.

882. This Additional Submission is as follows:

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Waterways Ireland Previous: WSP_SUB_78	Waterways Ireland	Navigation assessment for Lough Derg	RTS – Navigation Assessment for Lough Derg – Section 17.4.1

17.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

17.3.2.1 Navigation Assessment for Lough Derg

883. The Additional Submission from Waterways Ireland reaffirms the request for a navigation assessment and requests the frequency of an event taking the water level below 30.60m OD to be defined. This is based on Waterways Ireland's position that:

- Only two days were recorded below 30.52mOD in the 25-year period during the navigation season (April to October); and

- The lowest water level experienced in the last full ten years (2016-2025) during the navigation season (April to October) was 30.60mOD.

884. The Applicant maintains its previous response that the water level can currently be maintained anywhere within the normal operating band on Lough Derg and the upper and lower levels used by ESB to manage water levels on Parteen Basin. We recognise that ESB may have generally kept above 30.60mOD but do not believe that there is any recognition of 30.60mOD being an agreed navigation level. If access to moorings is affected should water levels drop below 30.6mOD (within the current normal upper and lower water levels) that is an existing issue and based on historic evidence the water level has gone below that level, this will potentially be affected by future climate change regardless of the implementation of the Proposed Project.

885. The modelling that has been undertaken shows that, taking account of how ESB typically manages water levels in a drought scenario (referred to as the operating principles) the water level would drop below 30.6mOD on two occasions (droughts in the future that were equivalent to the worst on record for the Lower River Shannon, in 1995 and 2018, but with allowance for future climate change). Only one of these, a drought equivalent to the worst on record for the Lower River Shannon, 2018, with future climate change would go below a water level of 30.52m OD. Therefore, the frequency of the water level going below 30.6m OD as a result of the Proposed Project rather than due to other factors (e.g. climate change and water level management) can be characterised as an event occurring every few decades.[3]

886. The nature of the approach to Climate Change means that a statistical probability of an event cannot be defined. The Additional Submission from Waterways Ireland raises questions over the approach to modelling future climate change and this is considered in Section 11.3.2.6 (Climate Change) of Chapter 11 (Water (Hydrological Modelling and Water Levels)) of this Report.

887. The modelled duration of the water level being below the 30.60m OD level that Waterways Ireland are interested in was six weeks in a drought equivalent to 2018, the worst on record but with the allowance for future climate change.

888. As previously set out in Section 11.3.6 (Sensitivity Test on Starting Water Level) and 11.2.9.1 (Operation of the Model / Management of Water Levels) of the RTS this is dependent on the management of the water levels by ESB and in particular, the starting water level prior to a drought. If the water level is not towards the top of the upper level on Parteen Basin then the water level would go below 30.60m OD in a smaller drought event, (based on precautionary climate change allowances). However, the modelling reflects ESB's current approach to management of water levels on Parteen Basin as evidenced by historical water level data.

889. We acknowledge that these two predicted occurrences would be a result of the Proposed Project's impact in an extreme drought scenario, however this is not a significant environmental effect as set out in Section 17.4.1 (Navigation Assessment for Lough Derg) of the RTS. The Applicant considers this to be a rare and extreme event within the 52 year dataset that has been used within the modelling.

890. On this basis the Applicant does not consider that a further navigation assessment is required for the reasons set out in Section 17.4.1 (Navigation Assessment for Lough Derg) of the RTS.

17.4 Response to New Matters Raised in the Additional Submissions

891. There were no new matters raised in the Additional Submissions in relation to Population.

[3] As set out in Chapter 11 (Water (Hydrological Modelling and Water Levels) specifically Section 11.3.2.3 this is based on how ESB manage water levels and for example, the starting water level at the beginning of a drought event.

18. Human Health

18.1 Overview

892. Twenty-two of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Human Health and these were responded to within the RTS Report submitted to the ACP in May 2026.

893. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Human Health and this was responded to within the SRTS Report submitted to the ACP in June 2026.

894. Two of the 43 Additional Submissions received by ACP raised matters relevant to Human Health and are responded to in this Report.

895. An assessment of human health was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 15 (Human Health). The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process in the EIAR).

896. This Report and its supporting Appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Human Health and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

897. This Chapter responds specifically to Human Health matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 8 – Noise and Vibration;
- Chapter 9 – Traffic and Transport;
- Chapter 15 – Air Quality; and
- Chapter 19 – Landscape and Visual.

898. Cross references to these other relevant Chapters have been included, where relevant, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

899. The Additional Submissions were in relation to potential health impacts as a result of the construction of the Proposed Project from matters such as dust and noise, which have been assessed in the EIAR and appropriate mitigation measures proposed; and health issues from drinking water, which have been considered as part of the Proposed Project design.

900. No new human health matters were raised in the Additional Submissions and consequently, this Chapter is structured around the following sections:

- Matters raised regarding human health and previously responded to; and
- Matters raised previously and further clarification is being provided.

18.2 Response to Matters Raised Previously

18.2.1 Additional Submissions

901. One Additional Submission raised matters that had been considered previously. The matters raised related to:

- Potential Health Impacts Associated with Transport of Drinking Water.

902. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Request for scientific assessment of water quality risks specifically associated with 172km pressurised water transfer	RTS – Potential Health Impacts Associated with Transport of Drinking Water – Section 18.2.2

18.2.2 Applicant's Summary Response on Matters Raised Previously

18.2.2.1 Potential Health Impacts Associated with Transport of Drinking Water

903. The River Shannon Environmental Protection Alliance has repeated its concerns regarding the quality of the water and the risk posed to human health as a result of, for example, build-up of THM in the water. It has raised WHO and European Food Safety Authority guidance that identifies long-distance transfer as requiring dedicated management protocols and requested:

- 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; and
- Monitoring at intermediate inspection points along the 172km route.

904. The Applicant would emphasise that its statutory duty is to provide clean, safe water and has no further response to provide beyond that set out in Section 18.2.2 (Potential Health Impacts Associated with Transport of Drinking Water) of the RTS report.

18.3 Response to Matters Raised Previously – Further Clarification

18.3.1 Additional Submissions

905. There was one Additional Submission that was raised previously regarding Humna Health and for which the Applicant is provided further clarification. This relates to:

- Potential health impacts on patients at Peamount Hospital.

906. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	The health impact assessment, the need for a literature review, a site specific assessment for Peamount Hospital and threshold based mitigation.	RTS – Mis-Classification of Sensitive Health Receptors – Section 18.3.1 RTS – Potential Health Impacts on Patients at Peamount Hospital – Section 18.3.2

18.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

18.3.2.1 Potential Health Impacts on Patients at Peamount Hospital

907. The Applicant acknowledges the matters raised by Peamount Healthcare in its Additional Submission and would reiterate that a health assessment in accordance with EIA guidance was undertaken. Undertaking a more detailed literature review of the specific health conditions present at St Brid's would not alter the assessment conclusions. This is because the guidance uses categorical thresholds to define sensitivity and significance and it has already been determined that the population was highly sensitive (the highest category) and the effect pre-mitigation was significant.

908. The Applicant has responded on matters related to noise and vibration, traffic, dust and aspergillus, and lighting impacts on Peamount Hospital, which are relevant to the assessment of human health, in the following sections of this Report:

- Section 8.3.2.2 (Potential Noise Impacts from the TPR on Peamount Hospital);
- Section 8.3.2.3 (Potential Vibration Impacts from the TPR on Peamount Hospital);
- Section 9.3.2.3 (Potential Traffic Impacts at Peamount Hospital);
- Section 15.2.3.1 (Dust and Aspergillus Impacts at Peamount Hospital); and
- Section 19.3.2.1 (Lighting Effects at the TPR on Patients of Peamount Hospital).

909. In summary, with reference to the individual responses noted above, the Applicant maintains that the effects on Peamount Hospital have been assessed in the EIAR (based on best practice guidelines and thresholds for undertaking these assessments for the purposes of EIA), that mitigation and monitoring measures have been identified to reduce the likely significant effects to levels that would not be significant, and that the effect on human health on patients of the hospital have been assessed based on the residual effects and mitigation measures for the individual topics assessed. Even though the assessments undertaken have demonstrated that there would be no likely significant effects on the hospital or its patients, the Applicant has committed to working with Peamount Healthcare to address their concerns, including, for example:

- Producing a site specific Noise and Vibration Management Plan and Dust Management Plan, based on the measures included in the EIAR and plans submitted with the planning application as a minimum;
- Producing an Aspergillus Prevention Plan and exploring additional measures that could be implemented within the hospital site, over and above the dust mitigation measures already proposed;
- Additional monitoring during both the pre-commencement period and during construction; and
- Continual engagement with Peamount Healthcare to inform the above.

910. With regard to the measures related to the potential mobilisation of Aspergillus spores the detailed configuration of those measures will be finalised through the Aspergillus Prevention Plan before works commence. That process will operationalise the mitigation framework already assessed and committed to in the EIAR.

911. Considering all of the above, the Applicant maintains its position that there will be no likely significant health effects on the patients at Peamount Hospital.

18.4 Response to New Matters Raised in the Additional Submissions

912. There were no new matters raised in the Additional Submissions in relation to Human Health.

19. Landscape and Visual

19.1 Overview

913. Twelve of the initial 114 submissions received by ACP in response to the Statutory Consultation raised landscape and visual impact matters in relation to the Proposed Project. These were responded to in the RTS Report submitted to the ACP in May 2026.

914. One of the further two submissions received by ACP in response to the Statutory Consultation raised landscape and visual impact matters in relation to the Proposed Project. This was considered in the SRTS Report submitted to the ACP in June 2026.

915. Two of the 43 Additional Submissions received by ACP raised matters relevant to landscape and visual impacts from the Proposed Project and these are responded to in this Report.

916. An assessment of landscape and visual effects was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 16 – Landscape and Visual. The assessment complied with the relevant legislation, standards and guidance as set out in that Chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process) in the EIAR.

917. This report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of landscape and visual and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

918. This Chapter responds specifically to landscape and visual matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 17 – Population.

919. Cross references to this Chapter have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

920. No new landscape and visual matters were raised in the Additional Submissions and consequently, this Chapter is structured around the following sections:

- Matters raised regarding landscape and visual effects and previously responded to; and
- Matters raised previously and further clarification is being provided.

19.2 Response to Matters Raised Previously

19.2.1 Additional Submissions

921. Two Additional Submissions raised landscape and visual matters that had been considered previously. The matters raised related to:

- Landscape and tourism impacts from abstraction of water from the Lower River Shannon; and
- Lighting effects at the TPR on patients of Peamount Hospital.

922. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub - Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council	Landscape and tourism impacts from abstraction of water from the Lower River Shannon (See Chapter 17 – Population of this Report regarding tourism)	RTS - Potential Visual Impacts from the RWI&PS – Section 19.4.4
Additional Sub – Peamount Healthcare Previous: WSP_SUB_104	Peamount Healthcare	Lighting effects at the TPR on patients of Peamount Hospital	RTS - Recommended Construction Phase Conditions – Section 7.4.2 RTS - Potential Visual Impacts on Specific Landowner Lands – Section 19.3.1 RTS - Potential Health Impacts on Patients at Peamount Hospital – Section 18.3.2

19.2.2 Applicant's Summary Response on Matters Raised Previously

19.2.2.1 Landscape Impacts from Abstraction of Water from the Lower River Shannon

923. The Additional Submission from Tipperary County Council stated that the comments raised previously stand. The Applicant responded on landscape and visual matters in Chapter 19 of the RTS and specifically to Tipperary County Council in Section 19.4.4 (Potential Visual Impacts from the RWI&PS) of the RTS. The Applicant has no further response to that previously provided.

19.2.2.2 Lighting Effects at the TPR on Patients of Peamount Hospital

924. The Additional Submission from Peamount Healthcare states that its previous comments on lighting were not responded to in the RTS. The Applicant considers that it did respond on matters raised regarding lighting in Section 19.3.1 (Potential Visual Impacts on Specific Landowner Lands) in the RTS and it was also included in the factors referred to regarding health impacts in Section 18.3.2 (Potential Health Impacts on Patients at Peamount Hospital) in the RTS.

19.3 Response to Matters Raised Previously – Further Clarification

925. There were no matters raised previously relating to Landscape and Visual that required further clarification due the Additional Submissions.

19.4 Response to New Matters Raised in the Additional Submissions

926. There were no new matters raised in the Additional Submissions in relation to landscape and visual effects.

20. Cultural Heritage

20.1 Overview

927. Ten of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Cultural Heritage. These were responded to in the RTS Report submitted to the ACP in May 2026.

928. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters related to Cultural Heritage. Theis was responded to in the SRTS Report submitted to the ACP in June 2026.

929. Two of the 43 Additional Submissions received by ACP raised matters relevant to Cultural Heritage and are responded to in this Report.

930. An assessment of Cultural Heritage was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 17 (Cultural Heritage). The assessment complied with the relevant legislation, standards and guidance as set out in that chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process in the EIAR).

931. This Report and its supporting Appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Cultural Heritage and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

932. Observations identified by the Applicant included in the Additional Submissions relate to the cultural significance of the River Shannon and archaeological heritage.

933. No new matters were raised regarding Cultural Heritage and consequently, this Chapter is structured around the following section:

- Matters raised regarding Cultural Heritage and previously responded to.

20.2 Response to Matters Raised Previously

20.2.1 Additional Submissions

934. Two Additional Submissions raised Cultural Heritage matters that had been considered previously. The matters raised related to:

- Cultural significance of the River Shannon; and
- Archaeological heritage.

935. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub - James Crowley Previous: WSP_SUB_50	James Crowley	Cultural significance of the River Shannon	RTS - Potential Impact on the Cultural Significance of the Shannon – Section 20.2.2
Additional Sub – John Quinn and Sandra Frayne Previous: WSP_SUB_103	John Quinn and Sandra Frayne	Archaeological heritage	RTS - Archaeological Surveys on Specific Landowner Lands – Section 20.3.1

20.2.2 Applicant's Summary Response on Matters Raised Previously

20.2.2.1 Cultural significance of the River Shannon

936. The Additional Submission from James Crowley maintains that the cultural significance of the River Shannon has not been considered. The Applicant considers that this has been addressed in Section 20.2.2 (Potential Impact on the Cultural Significance of the Shannon) of the RTS, and has nothing further to add to the previous response provided. In summary, the River Shannon is not recorded as an archaeological site in its own right; the proposed abstraction is from the man made and highly regulated Parteen Basin; and there would be no significant effect on downstream flows that would impact the Old River Shannon.

20.2.2.2 Archaeological heritage

937. The Additional Submission from John Quinn and Sandra Frayne maintains that their original objection on the potential impacts on archaeology in and around their lands has not been overcome by the Applicant's previous response in the RTS.

938. The Applicant disagrees, and considers that this has been addressed in Section 20.3.1 (Archaeological Surveys on Specific Landowner Lands) of the RTS. In this response, the Applicant explained how archaeological monuments outside the Planning Application Boundary would not be impacted by the Proposed Project, and sets out the mitigation and monitoring measures that are included in relation to potential unknown archaeological remains that could be encountered during construction works. The Applicant has nothing further to add to the previous response provided.

20.3 Response to Matters Raised Previously – Further Clarification

939. There were no matters raised within the Additional Submissions that had been raised previously relating to Cultural Heritage and which the Applicant is providing further clarification. .

20.4 Response to New Matters Raised in the Additional Submissions

940. There were no new matters raised in the Additional Submissions in relation to Cultural Heritage.

21. Material Assets

21.1 Overview

941. Eight of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Material Assets. These were responded to in the RTS Report submitted to the ACP in May 2026.

942. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised matters related to Material Assets.

943. One of the 43 Additional Submissions received by ACP raised matters relevant to Material Assets and is responded to in this Report.

944. An assessment of materials assets was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 18 (Material Assets). The assessment complied with the relevant legislation, standards and guidance as set out in that chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process in the EIAR).

945. This report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Material Assets and should be read in conjunction with the RTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

946. This Chapter responds specifically to Material Assets matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 9 – Traffic and Transport.

947. Cross references to this Chapter have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

948. The original submissions, including from the Local Authorities and TII, included proposed conditions related to roads / highways. The Additional Submission from TII included revised proposals for conditions. There is overlap in this regard between this Chapter on Materials Assets and Chapter 9 (Traffic and Transport). To address this, proposed conditions related to roads / highways are generally combined and considered in Chapter 9 (Traffic and Transport) of this report to avoid duplication or omissions.

949. EirGrid confirmed in its Additional Submissions that it was content with the response in the RTS and so has not been included in Section 21.2.1 (Additional Submissions).

950. No new matters were raised regarding Material Assets and consequently, this Chapter is structured around the following sections:

- Matters raised regarding Material Assets and previously responded to; and
- Matters raised previously and further clarification is being provided.

21.2 Response to Matters Raised Previously

21.2.1 Additional Submissions

951. One Additional Submissions raised Material Assets matters that had been considered previously. The matters raised related to:

- Interfaces with existing and planned transport infrastructure and recommended planning conditions.

952. The following Additional Submissions raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – National Transport Authority (NTA) Previous: WSP_SUB_95	NTA	Interfaces between the Proposed Project and existing and planned transport infrastructure and recommended planning conditions.	RTS – Recommended Conditions for Planning – Section 21.3.1.

21.2.2 Applicant's Summary Response on Matters Raised Previously

21.2.2.1 Interfaces with Transport Infrastructure and Recommended Planning Conditions

953. The Additional Submission from the NTA reiterates matters concerning interfaces between the Proposed Project and existing and planned transport infrastructure, including rail infrastructure and associated projects. The NTA acknowledges the Applicant's previous response on the recommended planning condition is Section 21.3.1 (Recommended Conditions for Planning) of the RTS and reiterated that the condition was required. The Applicant is in agreement and has no further comments or response to make in this regard.

21.3 Response to Matters Raised Previously – Further Clarification

21.3.1 Additional Submission

954. One Additional Submissions raised Material Assets matters that had been considered previously and required further clarification. The matters raised related to:

- Interfaces with the National Road Network.

955. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Transport Infrastructure Ireland (TII) Previous: WSP_SUB_99	TII	Matters relating to direct access to the national road network, Road Safety Audits, national-road crossings and the use of the national road network for construction haul routes and associated traffic management.	RTS – Traffic Management Plan (TMP) – Section 9.4.1 RTS – Road Safety Audits – Section 9.4.2 RTS - Impact on the Strategic Road Network – Section 21.4.1

21.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

956. The matters raised requiring further clarification are listed in full in Section 9.3.2 in the Chapter 9 (Traffic and Transport) in this Report.

21.4 Response to New Matters Raised in the Additional Submissions

957. There were no new matters raised in the Additional Submissions in relation to Material Assets.

22. Resource and Waste Management

22.1 Overview

958. Five of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to resource and waste management. These were responded to in the RTS Report submitted to the ACP in May 2026.

959. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to resource and waste management. This was responded to in the SRTS Report submitted to the ACP in June 2026.

960. Three of the 43 Additional Submissions received by ACP raised matters relevant to resource and waste management and are responded to in this report.

961. An assessment of resource and waste management was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 19 (Resource and Waste Management). The assessment complied with the relevant legislation, standards and guidance as set out in that chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process in the EIAR).

962. This Report and its supporting Appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of resource and waste management and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

963. This Chapter responds specifically to Resource and Waste Management matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 6 – Proposed Project Description.

964. Cross references to this chapter have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

965. In response to the statutory consultation there were only a small number of Additional Submissions specific to the resource and waste management. These related to the risk created by waste management at the WTP, which has been assessed in the EIAR and appropriate mitigation measures proposed; and the request for conditions to be imposed on the planning permission.

966. There were new matters raised in respect of resource and waste management and therefore, this Chapter is structured around the following sections:

- Matters raised regarding resource and waste management and previously responded to; and
- New matters raised regarding resource and waste management in the Additional Submissions.

22.2 Response to Matters Raised Previously

22.2.1 Additional Submissions

967. Four Additional Submissions raised matters that had been considered previously including:

- A risk of pollution from the storage and management of waste;
- Management of sludge at the proposed WTP; and

- Effects of any future emergency discharges from the WTP.

968. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association	Sludge management and the risk of pollution from the WTP, including from any emergency unplanned discharge from the WTP	RTS – Management of Waste at the Proposed Water Treatment Plant – Section 22.2.1 RTS – Wastewater Infrastructure – Section 6.4.11
Additional sub – Ballymore Eustace Trout and Salmon Anglers Association Previous: WSP_SUB_71	Ballymore Eustace Trout and Salmon Anglers Association		
Additional sub National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU)* Previous: WSP_SUB_83	NPWS		
Additional sub – Tipperary County Council Previous: WSP_SUB_114	Tipperary County Council		

22.2.2 Applicant's Summary Response on Matters Raised Previously

22.2.2.1 Sludge Management and Risk of Pollution

969. The Additional Submissions received raised concerns regarding the sludge production from the proposed water treatment plant and the risk of a pollution event from the storage and management of waste. These issues were addressed in Section 6.4.11 (Wastewater Infrastructure) and Section 22.2.1 (Management of Waste at the Proposed Water Treatment Plant) of the RTS. The Applicant recognises this concern, in particular the sensitivity of the Kilmastulla River, and as a result has taken account of this in the design of the Proposed Project. This included incorporating embedded design measures into the proposals, as set out in Chapter 9 (Water), and Chapter 19 (Resources and Waste Management) of the EIAR.

970. As described in Section 4.6 of EIAR Chapter 4 (Proposed Project Description), the water treatment process will create a residual waterworks sludge, as the coagulant chemical binds up the organic material into an insoluble form, which is then removed from the settlement tanks. The process would bring the dry solids content of the sludge cake to approximately 25%. The generated residual waterworks sludge is from water rather than wastewater treatment, so low in organic matter and will not generate biogas, a source of GHG emissions.

971. The residual water sludge would be stored, dried and then transported from site. There would be no discharge of sludge to the environment. As set out in Section 4.6.5 of EIAR Chapter 4 (Proposed Project Description), the sludge storage buildings would be covered to prevent contaminated rainwater runoff from the stored sludge being generated. Supernatant from the sludge thickeners and expressate from the sludge dewatering process would be pumped, via the washwater treatment side stream, to the head of the treatment process.

972. There will be no discharge of wastewater from the WTP to the environment. A response in relation to process water and drainage water from the WTP, and associated risk of pollution to the Kilmastulla River, is included in Section 6.3.2.7 (Effects of any future emergency discharges from the Water Treatment Plant) in Chapter 6 (Proposed Project Description) of this Report. Specifically, the NPWS in the Additional Submission from the DAU has raised comments on emergency discharges from the WTP and these are addressed in Chapter 6 – Proposed Project Description of this Report.

973. The Applicant has nothing further to add to its responses in Section 6.4.11 (Wastewater Infrastructure) and 22.2.1 (Management of Waste at the Proposed Water Treatment Plant) of the RTS Report.

22.3 Response to Matters Raised Previously – Further Clarification

974. There were no matters raised previously relating to Resource and Waste Management that required further clarification due the Additional Submissions.

22.4 Response to New Matters Raised in Additional Submissions

22.4.1 Additional Submissions

975. One Additional Submission raised a new matter that had not been previously responded to regarding:

- The volume of sludge to be produced; and
- A new request for a whole-life sludge management plan.

976. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional sub – River Shannon Environmental Protection Alliance Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance	Management of sludge production from the Proposed Water Treatment Plant

22.4.2 Applicant's Summary Response to New Matters

22.4.2.1 Management of Sludge Production and Sludge Management Plan

977. The Additional Submission received from the River Shannon Environmental Protection Alliance raised concerns regarding the volume of sludge to be produced and requested a sludge management plan be produced for the life of the Proposed Project. In particular, it provides a calculation identifying annual dewatered sludge from the Proposed Project to be 51,100 – 76,650m^3 per year and over a 60 year operational life 3-4.6million m^3. The Applicant does not recognise or accept the calculation of the volume of sludge in the Additional Submission. In particular, the Additional Submission assumes the Proposed Project would be operating continuously at 300Mld all year round which is not the case. As set out in the description of the Proposed Project, the more typical water supply volume would be approximately 154Mld. Therefore, the volume of sludge produced annually would be significantly lower than a peak daily output multiplied over the whole year. In addition the Applicant would highlight:

- It misleading to refer to the volumes of sludges produced in wastewater treatment (eg. Ringsend), which generates significantly greater sludge volumes
- The volumetric calculation of dry solids produced by the Applicant is based on achieving 25% Dry Solids from dewatering, not the 20% Dry Solids that the River Shannon Environmental Protection Alliance quote.

978. The Applicant maintains the volume of sludge to be generated is as described in the EIAR in Chapter 4 (Proposed Project Description).

979. The EIAR reports on the assessment of the operational waste arising from the Proposed Project including sludge volumes (also referred to as residual water sludge). Uisce Éireann views sludge cake as a valuable resource and potential product in a circular economy model (Irish Water 2021). As a result, Uisce Éireann is progressing several potential sustainable options. Recovery/reuse of the solids

is the preferred long-term sustainable option for Uisce Éireann aligned with the EU Waste Framework Directive waste hierarchy, after prevention and reduction measures. Uisce Éireann proposing to recover/re-use the residual waterworks sludge in accordance with circular economy requirements.

980. Examples of the potential sustainable outlets and beneficial uses are outlined in Section 19.2.3.7 of EIAR Chapter 19 (Resource and Waste Management), in line with Appendix K of the National Water Resource Plan, and include wetlands or reed bed systems as a beneficial product for nutrient removal; cement manufacture as an alternative to aluminium-containing raw materials such as bauxite; brick manufacturing as an alternative to raw materials; and landfill remediation, amongst others. These represent emerging treatment options, the uptake for which, and the driver for the introduction of treatment capacity, is the general industry shift towards Circular Economy approaches.

981. Currently, Uisce Éireann is sending 90% of water sludge from water treatment to sustainable outlets with the remaining 10% being used for non-hazardous landfill capping material (2023 figure, Commission for Regulation of Utilities (CRU) 2025). The worst-case scenario is that this performance remains the same and the current trend for 10% disposal of residual waterworks sludge as waste to landfill continues, resulting in a small tonnage requiring disposal to a licensed facility. On this basis there would not be a significant effect as a result of disposal of sludge material. This response aligns with Section 6.4.1 (Future Amendments to Abstraction) of the RTS Report and previous responses on sludge management as set out in Section 22.2 of this Report.

982. The Applicant does not consider that a condition should be imposed on any grant of the SID planning application regarding the production of a Sludge Management Plan to manage residual water sludge which is not the same as Wastewater Sludge . The Applicant has a strategy in place regarding the re-use of sludge in accordance with the National Water Resources Plan, Appendix K, for which a Strategic Environmental Assessment (SEA) and Appropriate Assessment (AA) processes were undertaken. In addition, the UÉ Sustainability Framework has a number of ambitions including a Circular Economy pillar. its overarching Sustainability Policy. The re-use of sludge from the Proposed Project would be managed in accordance with this wider Uisce Éireann approach and would not be project specific.

23. Risk of Major Accidents and Disasters

23.1 Overview

983. Seven of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as relevant to the risk of major accidents and/or disasters in relation to the Proposed Project. These were responded to in the RTS Report submitted to the ACP in May 2026.

984. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as relevant to the risk of major accidents and/or disasters.

985. None of the 43 Additional Submissions received by ACP raised matters relevant to the risk of major accidents and / or disasters. The NPWS in the Additional Submission from the DAU has raised comments on emergency discharges from the WTP and these are addressed in Chapter 6 (Proposed Project Description) of this Report.

986. Therefore, no further response is provided by the Applicant in relation to the risk of major accidents and/or disasters.

24. Cumulative Effects and Interactions

24.1 Overview

987. Twelve of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to Cumulative Effects and Interactions. These were responded to in the RTS Report submitted to the ACP in May 2026.

988. Neither of the further two submissions received by ACP in response to the Statutory Consultation raised matters related to Cumulative Effects and Interactions.

989. Five of the 43 Additional Submissions received by ACP raised matters relevant to Cumulative Effects and Interactions and are responded to in this Report.

990. An assessment of Cumulative Effects and Interactions was carried out and reported in the EIAR submitted as part of the SID Planning Application in Chapter 21 (Cumulative Effects and Interactions). The assessment complied with the relevant legislation, standards and guidance as set out in that chapter and was prepared by a team of competent experts as set out in Chapter 2 (The Environmental Impact Assessment Process in the EIAR).

991. This report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of Cumulative Effects and Interactions and should be read in conjunction with the RTS. Cross references to the relevant chapters of the RTS have been included, where appropriate, to assist the reader.

992. This Chapter responds specifically to matters raised in the Additional Submissions to ACP in relation to Cumulative Effects and Interactions. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 11 – Water (Hydrological Modelling and Water Levels); and
- Chapter 25 – Natura Impact Statement.

993. Cross references to these other relevant Chapters have been included, where relevant, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

994. Observations identified by the Applicant included in the Additional Submissions relate to the cumulative impact with the Shannon Fish Passage Project, which has been considered in the development and assessment of the Proposed Project.

995. No new matters were raised regarding Cumulative Effects and Interactions and consequently, this Chapter is structured around the following section:

- Matters raised regarding Cumulative Effects and Interactions and previously responded to; and
- Matters raised previously and further clarification being provided.

24.2 Response to Matters Raised Previously

24.2.1 Additional Submissions

996. Four Additional Submissions raised matters on Cumulative Effects and Interactions that had been considered previously. The matters raised related to:

- Cumulative impact with the Shannon Fish Pass Study.

997. The following Additional Submissions raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association	Cumulative impact with the Shannon Fish Pass Study	RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – Potential Cumulative Impact with the Shannon Fish Passage Study – Section 24.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2
Additional Sub – Cllr. Sean Hartigan Previous: WSP_SUB_11	Cllr. Sean Hartigan		
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary		
Additional Sub – Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council		

24.2.2 Applicant's Summary Response on Matters Raised Previously

24.2.2.1 Cumulative Impact with the Shannon Fish Pass Study

998. Four Additional Submissions raised concerns that the cumulative impact of the Proposed Project and the Shannon Fish Passage Study was not considered. In relation to the assessment of cumulative effects reported in EIAR Chapter 21 (Cumulative Effects and Interactions), this was addressed in Section 24.3.1 (Potential Cumulative Impact with the Shannon Fish Passage Study) of the RTS. As stated in that response, the Shannon Fish Passage Study was not considered in the assessment reported in EIAR Chapter 21 as there is no defined project, planning applications, designs, or environmental assessment information available for these future plans. On this basis, the Shannon Fish Passage Study does not meet the criteria for inclusion in the cumulative effects assessment. This approach is in line with established, best practice guidance on undertaking cumulative effects assessment.

999. However, just because the Shannon Fish Passage Study was not assessed within EIAR Chapter 21, it does not mean that its interaction with the Proposed Project has not been considered by the Applicant. This was primarily addressed in Section 11.2.6 (Whether Environmental Recovery may be Constrained) of the RTS, and further addressed in relation to in-combination effects in the NIS in Section 25.3.2 (In-Combination Assessment with the Fish Passage Project) of the RTS. As stated in those responses, the modelling undertaken and assessments reported in the EIAR and NIS rely on the best available information regarding potential changes in the flow regime to the lower River Shannon, in the form of the recommendations of CDM Smith Report published as part of the Shannon Connectivity Programme. This is considered further in Section 11.3.2.9 (Whether Environmental Recovery may be Constrained) and Section 11.3.2.10 (Delivery of measures for Environmental Recover – Fish Passage Project).

1000. Based on the available information regarding the potential implementation of the conservation objectives for the Lower Shannon SAC, or Hymo 7 under the WFD Programme of Measures, insofar as they relate to water levels / flows, the hydrological modelling has demonstrated that the Proposed Project would not impede the implementation, by others, of a more naturalised flow regime, consistent with the relevant conservation objectives / Programme of Measures.

1001. The Applicant has provided a response on this issue in relation to the in-combination assessment in the NIS in Section 25.2.2.1 (In-Combination Assessment with the Fish Passage Project) of this Report.

24.3 Response to Matters Raised Previously – Further Clarification

24.3.1 Additional Submissions

1002. One Additional Submissions raised matters on Cumulative Effects and Interactions that had been considered previously and that the Applicant is providing further clarification. The matters raised related to:

- The whole project and impermissible project-splitting.

1003. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	The whole project and impermissible project-splitting	RTS – Cumulative Impacts with ESB at Parteen Basin – Section 24.4.2

24.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

24.3.2.1 The Whole Project and Impermissible Project-Splitting

1004. The Additional Submission from Joe Mayo asserts that the EIA Directive requires the assessment of the 'whole project', and a project may not be split so as to avoid the assessment of its cumulative effects. The assertion is that the interaction between the Proposed Project and ESB operation of the Ardnacrusha hydroelectric scheme have not been adequately assessed. The Applicant responded to this issue in Section 24.4.2 (Cumulative Impacts with ESB at Parteen Basin) of the RTS, but offers further clarification on this matter herein.

1005. The EIA Directive requires assessment of the whole project. The whole project for which consent is being sought is the Proposed Project. It is not correct to suggest that the project has been split up to avoid an assessment of its cumulative effects of ESB's operations at Ardnacrusha. The Proposed Project for which planning permission is being sought is the abstraction of water from Parteen Basin, and all associated infrastructure for treating this water and transporting it to the termination point in Dublin. The ESB operated generating station and impoundment is existing infrastructure consented via statute, and is not part of the Proposed Project nor does it form part of this planning application. In assessing the effects of the Proposed Project, the cumulative effects of the Proposed Project and the operation of Ardnacrusha have been assessed in the EIAR, NIS and WSIAR.

1006. The EIAR, NIS and WSIAR assessed the Proposed Project as a whole, including the Proposed Project's abstraction and the physical infrastructure required in respect of it.

1007. The interaction between the Proposed Project and ESB operations has been a key consideration in the development and assessment of the Proposed Project. The relationship between the Proposed Project and ESB's operations in Parteen Basin is explained in Section 4.15 of EIAR Chapter 4 – Proposed Project Description. The existing station and impoundment have been included in the environmental baseline against which the effects of the Proposed Project have been assessed. In addition, the

assessments undertaken have also assessed the cumulative effects of the Proposed Project and the operation of Ardnacrusha. Further to this:

- The environmental baseline used in the EIAR, NIS and WSIAR explicitly incorporates the current operation of the Ardnacrusha Generating Station, including the long-established diversion of flows through the hydroelectric scheme and the existing statutory compensation and fish-pass flows. The assessments therefore evaluated the Proposed Project against the actual managed conditions that presently exist.
- The modelling results show that, when compared with baseline conditions (i.e. including ESB's operations), the effects of abstraction on lake levels and downstream flows are negligible for approximately 99% of the simulation period. Any discernible effects are confined to short duration extreme drought conditions (notably 1995 and 2018) and the immediate recovery period thereafter, during which lake level responses remain within the range of natural and historically observed variability.
- Importantly, throughout the full modelled period, lake levels remain within the ESB Normal Operating Band on Lough Derg and within the upper and lower water levels that ESB apply to Parteen Basin. Forward flows to the Old River Shannon, including statutory compensation and fish pass flows, are unchanged by the inclusion of the Proposed Project abstraction, and compliance with these ecological flow requirements is maintained at all times.
- Based on the modelling results summarised above, it has been demonstrated that the Proposed Project, in the context of the existing operation of the Ardnacrusha Generating Station, would in an EIA context have no likely significant effects on the water environment or biodiversity (or other relevant topics which are affected by the abstraction, such as tourism which was assessed in the Population EIAR chapter).
- Further, the Applicant specifically assessed the potential interaction between the Proposed Project and the measures identified through the Shannon Connectivity Project, including fish passage improvements at Ardnacrusha and Parteen, fish guidance systems, environmental flow (Eflow) measures, and broader connectivity enhancements. The assessment demonstrates that the Proposed Project would not impede the implementation of any of these measures and would not restrict future ecological improvement initiatives within the Lower River Shannon.

1008. Additionally, the EIAR sets out that the effects of the Proposed Project have been assessed in cumulation with the operation of Ardnacrusha.

1009. Similar assertions have been raised in Additional Submissions in relation to the in-combination assessment reported in the NIS and this has been addressed in Sections 25.2.2.1 (In-Combination Assessment with the Fish Passage Project) and 25.4.2.1 (In-Combination Assessment Three Gaps) of this Report. In an AA context, the NIS demonstrates that the effects of the Proposed Project have been assessed in combination with the operation of Ardnacrusha and that the Proposed Project would have no adverse effect on the integrity of any European Site. In a WFD context, the WSIAR demonstrates that it would not cause any deterioration or prejudice the achievement of WFD objectives.

1010. A response on the comments from Joe Mayo and others on the relationship between the SID Planning Application and the future application for the Abstraction Licence are addressed in Section 2.2.2.2 (Abstraction Licensing) of this Report.

24.4 Response to New Matters Raised in the Additional Submissions

1011. There were no new matters raised in the Additional Submissions in relation to Cumulative Effects and Interactions.

25. Natura Impact Statement

25.1 Overview

1012. Twenty-nine of the initial 114 submissions raised issues relating to the Natura Impact Statement (NIS) prepared for the Proposed Project. These were responded to in the RTS Report submitted to the ACP in May 2026.

1013. Both of the further two submission received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to NIS. These were responded to in the SRTS Report submitted to the ACP in June 2026

1014. Ten of the 43 Additional Submissions received by ACP raised matters relevant the NIS and are responded to in this Report.

1015. A NIS and AA Screening Report were submitted as part of the SID Planning Application. These assessments complied with the relevant legislation, standards and guidance as set out in those documents and were prepared by a team of competent experts as set out in the NIS.

1016. This report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of the NIS and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS and SRTS have been included, where appropriate, to assist the reader.

1017. This Chapter responds specifically to NIS matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 2 – Overarching Matters;
- Chapter 6 – Proposed Project Description;
- Chapter 7 – Construction and Commissioning;
- Chapter 10 – Biodiversity;
- Chapter 11 – Water (Hydrological Modelling and Water Levels);
- Chapter 12 – Water (General); and
- Chapter 26 – (Water Status Impact Assessment Report (Water Framework Directive)).

1018. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

1019. A large number of the Additional Submissions focused on the potential effects of the Proposed Project on the Lower River Shannon Special Area of Conservation (SAC) and other European sites with a hydrological connection to the proposed abstraction. These potential effects were robustly assessed in the NIS, which concluded that the Proposed Project would not, either individually or in-combination with other plans or projects, adversely affect the integrity of any European site in view of its conservation objectives, and that there is no reasonable scientific doubt as to that conclusion.

1020. This Chapter is structured around the following sections:

- Matters raised regarding the NIS and previously responded to;
- Matters raised previously and further clarification being provided; and

- New matters raised regarding the NIS in the Additional Submissions.

25.2 Response to Matters Raised Previously

25.2.1 Additional Submissions

1021. Five responses raised matters that had been considered previously including:

- In-combination assessment with the Fish Passage Project;
- Degradation of wild salmon habitat;
- European Union and Irish Habitats Directives are legally binding;
- Appropriate Assessment and Natura issues; and
- Ecological irreversibility - the 1% failure rate and the Waddenzee Standard;

1022. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	In-combination assessment with the Fish Passage Project	RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association		
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary		
Additional Sub – Castleconnell River Association Previous: WSP_SUB_35	Castleconnell River Association	Degradation of wild salmon habitat	RTS – Degradation of Wild Salmon Habitat – Section 25.3.8
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	European Union and Irish Habitats Directives are legally binding	RTS – Potential Breach of S.I. No. 331/2019 – Section 10.3.10 RTS – Compliance with the Habitats Directive – Section 25.2.1

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Appropriate Assessment and Natura issues	RTS – Compliance with the Habitats Directive – Section 25.2.1 RTS – Adequacy of the Findings of the Appropriate Assessment – Section 25.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2 RTS – Compliance of the Natura Impact Statement – Section 25.4.21 RTS – Adequacy of the Ecological Assessment for the Shannon – Section 10.3.8 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18 RTS – Restoring the Lower River Shannon SAC – Section 10.4.36 SRTS – Potential for Adverse Effects on a Special Conservation Interest or Qualifying Interest Bird Species, Golden Plover – Section 2.2.13.1
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Ecological irreversibility - the 1% failure rate and the Waddenzee Standard	RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Adequacy of the Ecological Assessment for the Shannon – Section 10.3.8 RTS – Compliance with the Habitats Directive – Section 25.2.1

25.2.2 Applicant's Summary Response on Matters Raised Previously

25.2.2.1 In-Combination Assessment with the Fish Passage Project

1023. The Additional Submissions from River Shannon Environmental Protection Alliance., Castleconnell River Association and Garrett Reil and Cliona Geary challenge the perceived failure to consider the future Shannon Fish Passage Project. The Applicant considers that this has been responded to in detail in Section 11.2.6 (Whether Environmental Recovery may be Constrained) and Section 25.3.2 (In-Combination Assessment with the Fish Passage Project) of the RTS. The Applicant has nothing further to add to the previous responses provided, but would reiterate the following key points.

1024. As detailed in Section 25.3.2 of the RTS, the NIS has been undertaken in accordance with Article 6(3) of the Habitats Directive and is based on the current ecological condition of the Lower River Shannon SAC and its existing conservation objectives. The assessment is not required to assess the Proposed Project against hypothetical future ecological conditions or undefined ecological recovery objectives. Where there are currently no formally adopted ecological recovery objectives for the Lower River Shannon SAC, the assessment therefore considered whether it could impede future measures intended to improve fish passage, ecological connectivity, or the achievement of favourable conservation status. It concluded that the Proposed Project would not do so.

1025. The Applicant specifically assessed the potential interaction between the Proposed Project and the measures identified through the Shannon Connectivity Project, including fish passage improvements at Ardnacrusha and Parteen, fish guidance systems, Eflow measures, and broader connectivity enhancements. The assessment demonstrates that the Proposed Project would not impede the implementation of any of these measures and would not restrict future ecological improvement initiatives within the Lower River Shannon SAC.

1026. As further detailed in Section 25.3.2 of the RTS, hydrological modelling and Eflow sensitivity analysis confirmed that the Proposed Project would not prevent the implementation of a future Eflow regime or a more naturalised flow regime. The maximum abstraction rate of 300Mld would not constrain the operation of Parteen Weir, flow-sharing arrangements, gate adjustments, or future restoration measures. Accordingly, the Proposed Project is not a barrier to the delivery of future connectivity or river restoration measures.

1027. Finally, as detailed in Section 25.3.2 of the RTS, the assessment demonstrated that the Proposed Project would not create any additional barriers to fish migration. The assessment also found that the Proposed Project would not conflict with future fish migration improvement measures and may provide a marginal benefit for downstream migrating smolts. Accordingly, the Applicant's assessment concludes that the Proposed Project would not impede present or future measures to improve fish passage, ecological connectivity, or flow management within the Lower River Shannon SAC and would not undermine the achievement of the SAC's conservation objectives.

25.2.2.2 Degradation of Wild Salmon Habitat

1028. The Additional Submission from Castleconnell River Association notes again that the major threat to salmon welfare occurs in drought conditions. The Applicant considers that this has been responded to in detail in Section 25.3.8 (Degradation of Wild Salmon Habitat) of the RTS. The Applicant has nothing further to add to the previous responses provided, but would reiterate the following key points.

1029. As detailed in Section 25.3.8 of the RTS, the hydrological modelling demonstrates that the Proposed Project would not affect statutory compensation flows or flows to the Old River Shannon, as the abstraction would be supplied from lake storage and changes to hydropower operations rather than from environmental flows.

1030. The modelling confirms that the Proposed Project would not change the hydrological regime of the Old River Shannon, with no change to the timing of spill events, compensation flows, or fish pass flows, including during the most severe drought conditions on record. The Proposed Project would also not constrain the operation of Ardnacrusha Generating Station or Parteen Weir during flood events.

1031. Accordingly, as detailed in Section 25.3.8 of the RTS, any abstraction-related changes to water levels would be negligible and limited to extreme drought conditions, with no measurable effect on flood magnitude, timing, duration or frequency. The Applicant therefore concludes that the Proposed Project would not affect the qualifying interest habitats or species of the Lower River Shannon SAC, including Atlantic salmon.

25.2.2.3 European Union and Irish Habitats Directives are Legally Binding

1032. The Additional Submission from Christopher Campion states that the requirements of the European Union (EU) Habitats Directive, the Birds Directive, and their transposition into Irish law are legally binding and form a fundamental part of the assessment and decision-making framework for the Proposed Project. The Applicant acknowledges and agrees with this statement. However, the conclusions drawn by the submitter regarding the implications of these obligations are not supported by the findings of the AA process undertaken for the Proposed Project and the scientific evidence presented therein. The NIS has been prepared on the basis of the best available scientific knowledge and contains detailed evidence-based assessments of potential impacts on European sites and their conservation objectives. The submitter has not identified any error, omission, or deficiency in the assessment supported by objective, verifiable, and scientifically credible evidence. Accordingly, the assertions made constitute unsupported opinion rather than substantiated scientific evidence and do not provide a basis for departing from the conclusions of the NIS or for questioning the robustness of the assessment undertaken.

1033. As detailed in Section 10.3.10 (Potential Breach of S.I. No. 331/2019) and Section 25.2.1 (Compliance with the Habitats Directive) of the RTS, the Proposed Project has been subject to a comprehensive AA process undertaken in accordance with Article 6(3) of the Habitats Directive, the Birds and Natural Habitats Regulations, and all relevant planning legislation. The purpose of this process is not to accept a level of ecological failure or degradation as 'acceptable', but rather to determine, based on the best available scientific evidence and applying the precautionary principle, whether the Proposed Project can proceed without adversely affecting the integrity of European sites in view of their conservation objectives.

1034. The Additional Submission suggests that even rare or short-duration ecological effects cannot be considered acceptable. However, the legal and scientific test under Article 6(3) is whether the competent authority can conclude, beyond reasonable scientific doubt, that the project will not adversely affect the integrity of a European site. The extensive hydrological, ecological and water quality assessments undertaken for the Proposed Project demonstrate that this test can be met.

1035. In particular, detailed hydrological and water quality modelling was undertaken using over 50 years of monitored data to assess the effects of abstraction from Lough Derg and the Parteen Basin. The modelling examined both the proposed abstraction rate and a higher stress-test abstraction scenario and found that:

- Impacts on lake levels and downstream flows are negligible for approximately 99% of the simulation period;
- Any measurable effects are confined to short-duration extreme drought conditions and subsequent recovery periods;
- Lake levels remain within the ESB Normal Operating Band for Lough Derg and within the operational limits applied by ESB to Parteen Basin at all times;
- Statutory compensation flows and fish-pass flows to the Old River Shannon are maintained throughout; and
- The hydrological conditions supporting the conservation objectives of the Lower River Shannon SAC, Lough Derg Special Protection Area (SPA) and other European sites within the Zone of Influence (ZoI) of the Proposed Project remain intact.

1036. The Additional Submission further suggests that the protection status of these waterbodies could be undermined or diminished by the Proposed Project. This is not the case. The AA specifically considered direct effects, indirect effects, ex-situ effects, hydrologically connected pathways, functionally linked habitats, and in-combination effects with other plans and projects. The assessment concluded that the Proposed Project would not result in degradation, functional loss, fragmentation, or deterioration of the habitats or species for which the relevant SACs and SPAs have been designated.

1037. The Applicant also notes that the operation of the abstraction has been assessed on the basis that ESB will continue to manage Lough Derg and Parteen Basin within its existing operational framework (i.e. maintaining water levels within the Normal Operating Band for Lough Derg and within the established upper and lower operational limits for Parteen Basin). Water abstracted by the Proposed Project will be accommodated through adjustment to flows that would otherwise be directed to hydroelectric generation, while statutory compensation and fish pass flows to the Old River Shannon will continue to be maintained. As previously noted, the hydrological modelling demonstrates that, for approximately 99% of the 52-year modelled period, no perceptible changes to lake levels or flow regimes would occur and that, even during extreme drought conditions, predicted changes would remain within the range of historical fluctuations managed by ESB. Accordingly, the assessment concludes that the proposed abstraction would not result in changes to hydrological processes, flow patterns, or water levels of a magnitude capable of affecting the conservation objectives or restoration measures associated with European sites.

1038. Furthermore, the NIS applies the precautionary principle throughout and incorporates a range of mitigation measures designed to avoid effects on designated habitats and species, including measures relating to water quality protection, INNS prevention, and protection of qualifying species such as salmon, lamprey and otter. The assessment concluded that, with these measures in place, no adverse effects on the integrity of any European site will arise, either alone or in-combination with other plans or projects.

1039. Accordingly, while the Applicant agrees with the Additional Submission that the Habitats Directive and associated Irish legislation are legally binding and must be rigorously applied, the scientific evidence presented in the EIAR, NIS, and the Water Status Impact Assessment Report (insofar as it relates to protected areas), demonstrates that the Proposed Project complies fully with those requirements. The NIS has concluded that the conservation objectives of the Lower River Shannon SAC, the Lough Derg SPA and the wider European site network will continue to be maintained, and that no derogation under Article 6(4) of the Habitats Directive is required.

1040. For further detail, reference should be made to Section 10.3.10 and Section 25.2.1 of the RTS. The Applicant has nothing further to add to the previous responses provided.

25.2.2.4 Appropriate Assessment and Natura Issues

1041. The Additional Submission from Joe Mayo raises issues in relation to the AA, including that it must be distinct from the WFD assessment, that the Applicant has relied on hydrological modelling to reach conclusions on no adverse impacts on European sites, the Applicants response to Golden Plover in the SRTS, and dependence on future abstraction controls. The Applicant considers that these issues have been responded to in detail in the RTS and SRTS, but reiterates key points below.

1042. The Applicant agrees that the legal tests under the Habitats Directive and Water Framework Directive (WFD) are separate and distinct, albeit the Directives themselves are inter-related to the extent that the WFD relates to protected areas, which include areas designated for the protection of habitats or species where the maintenance or improvement of the status of water is an important factor in their protection, including relevant European sites designated under the Habitats and Birds Directives. Accordingly, the assessment presented within the NIS was undertaken specifically for the purposes of Article 6(3) of the Habitats Directive. However, in carrying out that assessment, regard was had to the findings of the Water Status Impact Assessment Report (WFD assessment) and the EIAR, together with all other relevant environmental information available for the Proposed Project. As set out in Section 25.2.1 (Compliance with the Habitats Directive), Section 25.3.1 (Adequacy of the Findings of the Appropriate Assessment) and Section 25.4.17 (Compliance of the Natura Impact Statement) of the RTS, the AA was informed by the best available scientific information and comprised a comprehensive examination, analysis and evaluation of all potential effects on European sites in view of their conservation objectives.

1043. The Additional Submission suggests that hydrological modelling does not demonstrate the ecological relevance of predicted hydrological changes. However, as explained in Section 25.3.1 and Section 25.4.17 of the RTS, the hydrological and water quality modelling formed one component of a wider ecological assessment. The modelling outputs were explicitly translated into site-specific ecological assessments of qualifying interest habitats, qualifying interest species and special conservation interest species, having regard to the conservation objectives, attributes and targets of the relevant European sites.

1044. The Applicant therefore does not accept the characterisation that the assessment relies on hydrological metrics alone. Rather, the assessment considered the complete source-pathway-receptor relationship, including hydrological processes, ecological functioning, species requirements, supporting habitat requirements and conservation objectives. This matter is also addressed in Section 10.3.14 (Site-Specific Ecological Impact Assessment) and Section 10.3.8 (Adequacy of the Ecological Assessment

for the Shannon) of the RTS, which confirms that hydrological modelling outputs were considered within the context of site-specific ecological impact assessment.

1045. In relation to Golden Plover and ex-situ supporting habitat, this matter has already been examined in Section 2.2.13.1 (Potential for Adverse Effects on a Special Conservation Interest or Qualifying Interest Bird Species, Golden Plover) of the SRTS. It is not correct to state that the Applicant has relied on survey variability and the most recent absence in its original response. As outlined in the SRTS, the assessment was informed by extensive winter bird survey data and considered habitat suitability, species distribution and availability of alternative suitable habitat. The same issue is also addressed through the assessment of ex-situ supporting habitat for wintering bird species and associated disturbance effects, including detailed consideration of winter bird survey data and habitat availability. The assessment did not rely solely on recent absence records but considered the full body of ornithological survey evidence collected over multiple survey seasons. The Additional Submission also questions whether ecological baseline surveys remain sufficiently current to support the conclusions of the assessment. This issue has already been addressed in the EIAR, NIS and RTS/SRTS. The ecological datasets were collected over multiple years and seasons using methodologies appropriate to the habitats and species concerned and were reviewed and updated as necessary prior to Additional Submission of the Planning Application. The ecological conclusions were based on the overall body of evidence available rather than any individual survey event. Repeat ecological surveys will continue, where appropriate, to ensure that baseline data remains current and valid. Pre-construction surveys would also be carried out, having regard to the approach outlined in Section 8.8 of EIAR Chapter 8 – Biodiversity. Where pre-construction ecological checks are identified, these represent standard good practice measures and do not indicate any deficiency in the ecological baseline used for the assessment.

1046. The Additional Submission further asserts that the conclusion of no adverse effect on site integrity depends upon future abstraction controls, environmental flow measures and ecological enhancements which have not yet been implemented. The Applicant does not accept this characterisation. This issue is addressed in Section 25.3.2 (In-Combination Assessment with the Fish Passage Project) and Section 25.4.21 (Compliance of the Natura Impact Statement) of the RTS.

1047. As explained in those responses, the AA was undertaken on the basis of the Proposed Project as applied for, including a defined abstraction regime and detailed hydrological modelling of flood, normal, drought and climate change scenarios. The conclusion of no adverse effect on integrity does not depend upon future undefined measures. The reference to ESB's operation of the Normal Operating Band describes the existing baseline conditions against which the Proposed Project has been assessed and does not constitute project mitigation required to conclude no adverse effect on site integrity.

1048. Furthermore, Appendix K of the NIS and the responses contained within Section 25.3.2 (In-Combination Assessment with the Fish Passage Project), Section 25.4.21 (Compliance of the Natura Impact Statement), Section 10.4.18 (Barriers to Connectivity: Salmon and Lamprey Species) and Section 10.4.36 (Restoring the Lower River Shannon SAC) of the RTS specifically address whether the Proposed Project could impede future implementation of fish passage measures, environmental flow regimes, or restoration measures associated with the Shannon Connectivity Project. The assessment concluded that the Proposed Project would not constrain or prevent implementation of such measures.

1049. Accordingly, and for the reasons set out in the NIS and the RTS, the Applicant remains satisfied that the AA documentation provides complete, precise and definitive findings capable of removing reasonable scientific doubt and demonstrates that the Proposed Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of any European site in view of its conservation objectives.

25.2.2.5 Ecological Irreversibility - The 1% Failure Rate and the Waddenzee Standard

1050. The Additional Submission from River Shannon Environmental Protection Alliance. reiterates concerns regarding the possibility of irreversible ecological harm arising from the Proposed Project and refers to the precautionary approach established by the Court of Justice of the European Union (CJEU) in Waddenvereniging and Vogelbeschermingsvereniging (Waddenzee, Case C-127/02), particularly the requirement that a competent authority may only agree to a project where there is no reasonable scientific doubt as to the absence of adverse effects on the integrity of a European site. The Applicant acknowledges the importance of the principles established in Waddenzee. However, the Applicant does not agree that the Proposed Project fails to meet this legal standard.

1051. The matters raised have already been addressed in detail in Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species), Section 10.3.8 (Adequacy of the Ecological Assessment for the Shannon), and Section 25.2.1 (Compliance with the Habitats Directive) of the RTS. As set out in Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species), the assessment of potential impacts on habitats and species within the Lower River Shannon SAC and the wider River Shannon catchment considered hydrological changes, disturbance effects, pollution risks, INNS pathways and potential effects on qualifying interest habitats and species. The hydrological modelling demonstrates that the Proposed Project would not result in significant changes to water levels or flow regimes upstream or downstream of the abstraction location. Consequently, no pathway was identified through which the Proposed Project could adversely affect the conservation objectives of the Lower River Shannon SAC or other European sites.

1052. Section 10.3.8 (Adequacy of the Ecological Assessment for the Shannon) further addresses concerns regarding the adequacy of the ecological assessment. The ecological assessment was undertaken pursuant to Article 6(3) of the Habitats Directive and was informed by extensive ecological surveys, hydrological modelling and consideration of normal, flood, drought and climate change scenarios. The assessment included consideration of in-combination effects and the ecological requirements of qualifying interest/special conservation interest habitats and species. The results demonstrated that the scale of predicted hydrological change would not give rise to any adverse effect on the integrity of the relevant European sites, either alone or in-combination with other plans or projects, having regard to the site's conservation objectives.

1053. The Additional Submission suggests that ecological receptors cannot tolerate a '1% failure rate' because ecological damage may be irreversible. However, the AA process does not require the elimination of all conceivable or hypothetical risk. Rather, the legal test established by Waddenzee is whether the competent authority can be satisfied, on the basis of complete, precise and definitive findings and conclusions, that no reasonable scientific doubt remains as to the absence of adverse effects on site integrity.

1054. The NIS was specifically prepared to facilitate that assessment. As described in Section 25.2.1 (Compliance with the Habitats Directive) of the RTS, the NIS was informed by the best available scientific knowledge and data, applied the precautionary principle throughout, considered all relevant impact pathways (including hydrological and ecological pathways), assessed ex-situ and in-combination effects, and evaluated effects against the conservation objectives of the relevant European sites. Where potential impact pathways were identified, mitigation measures were incorporated into the design, construction and operation of the Proposed Project.

1055. Importantly, the conclusion of the NIS was not based on assumptions that adverse effects would be acceptable if they occurred infrequently. Rather, it was based on detailed hydrological, ecological and environmental assessment which concluded that the Proposed Project will not adversely affect the integrity of any European site, either alone or in-combination with other plans or projects.

1056. The Applicant notes that the Waddenzee judgment does not prohibit projects in environmentally sensitive locations. Instead, it requires that authorisation can only be granted where the competent authority has sufficient scientific evidence to conclude that adverse effects on site integrity can be excluded beyond reasonable scientific doubt. The Applicant's position is that the NIS, the EIAR, supporting hydrological modelling and the wider Planning Application documentation provide precisely that evidential basis.

1057. For these reasons, the Applicant remains satisfied that the Proposed Project fully complies with Article 6(3) of the Habitats Directive, accords with the principles established in Waddenzee, and provides the competent authority with sufficient information to conclude, beyond reasonable scientific doubt, that the Proposed Project will not adversely affect the integrity of any European site.

25.3 Response to Matters Raised Previously – Further Clarification

25.3.1 Additional Submissions

1058. There were seven Additional Submissions received that required further clarification regarding Biodiversity relating to:

- Lough Derg is not a demand-reservoir;
- Potential impact of the proposed abstraction on habitats and species;
- Exclusion of SACs/SPAs and the arbitrary 'Zone of Influence';
- Habitats Directive;
- Hydrological modelling is treated as the ecological assessment;
- Reliance on operational thresholds rather than ecological thresholds;
- Historic variability is not equivalent to ecological insignificance;
- Ecological consequences remain largely unassessed;
- Opportunity to resolve uncertainty;
- Potential impacts to littoral and shoreline habitats;
- Adequacy of the findings of the Appropriate Assessment applicant response;
- Assessment of hydrologically connected European sites applicant response;
- Adequacy of mitigation measures;
- Reliance of the Appropriate Assessment on average flow metrics; and
- Effects on River Little Brosna Callows SPA.

1059. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Christopher Campion Previous: WSP_SUB_10	Christopher Campion	Lough Derg is not a Demand-Reservoir	RTS – Potential Impacts of the Proposed Abstraction on Habitats and Species – Section 10.2.3
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.		

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Cllr. Sean Hartigan Previous: WSP_SUB_11	Cllr. Sean Hartigan	Potential Impact of the Proposed Abstraction on Habitats and Species, including interaction with, and in-combination assessment with, the Fish Passage Project	RTS – Potential Impacts of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18 RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Exclusion of SACs/SPAs and the Arbitrary 'Zone of Influence'	RTS – Potential Impact on Special Conservation Areas and Special Protection Areas in Limerick – Section 25.4.13 RTS – Determination of the Risk of Impact on Lower Shannon Special Conservation Area – Section 25.4.19
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Habitats Directive	RTS – Adequacy of the Findings of the Appropriate Assessment – Section 25.3.1 RTS – Potential Implications of Inter-Basin Water Transfers – Section 25.3.10 RTS – Existing Flow Modification and Interaction with Ardnacrusha Hydroelectric Operation – Section 25.3.12 RTS – Effects on Severe Drought Low Water Level Duration in Designated Sites – Section 25.4.6
Additional Sub – Futureproof Clare Environmental CLG Previous: WSP_SUB_46	Futureproof Clare Environmental CLG	Noise of Construction	RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9 RTS – Potential Disturbance Effect on Wintering Waterfowl in Parteen Basin – Section 10.4.19
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Hydrological Modelling is Treated as the Ecological Assessment	RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Reliance on Operational Thresholds Rather Than Ecological Thresholds	RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Historic Variability is Not Equivalent to Ecological Insignificance	RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Ecological Consequences Remain Largely Unassessed	RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Opportunity to Resolve Uncertainty	RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Potential Impacts to Littoral and Shoreline Habitats	RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Adequacy of the Findings of the Appropriate Assessment Applicant Response	RTS – Adequacy of the Findings of the Appropriate Assessment – Section 25.3.1
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Assessment of Hydrologically Connected European Sites Applicant Response	RTS – Assessment of Hydrologically Connected European Sites – Section 25.3.3
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Adequacy of Mitigation Measures	RTS – Adequacy of Mitigation Measures – Section 25.3.4
Additional Sub – Laura Kavanagh Previous: WSP_SUB_55	Laura Kavanagh	Reliance of the Appropriate Assessment on Average Flow Metrics	RTS – Reliance of the Appropriate Assessment on Average Flow Metrics – Section 25.3.5
Additional Sub – National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU) Previous: WSP_SUB_83	NPWS	Effects on River Little Brosna Callows SPA	RTS – Effects on River Little Brosna Callows SPA – Section 25.4.5

25.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

25.3.2.1 Lough Derg is not a Demand-Reservoir

1060. The Additional Submissions from Christpher Campion and the River Shannon Environmental Protection Alliancestate that Lough Derg will be managed as a 'Demand Management Reservoir' in a manner incompatible with its SAC and SPA designations. The Applicant does not agree with this assertion.

1061. The Proposed Project does not involve the re-designation or re-operation of Lough Derg as a water supply reservoir. As noted in Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species) of the RTS, the abstraction is from Parteen Basin, within the existing ESB operated Ardnacrusha hydroelectric scheme, and the operational assessments are based on the current legally binding water management regime, including the statutory minimum compensation flow of 10m³/s to the Old River Shannon and required fish-pass flows.

1062. The hydrological modelling undertaken for the EIAR, NIS Water Status Impact Assessment Report explicitly assessed drought conditions, including a repeat of the 2018 drought event and future climate change scenarios, with the Proposed Project operating at its peak abstraction of 300Mld (3.47m³/s). The modelling demonstrates that statutory compensation flows can continue to be maintained while keeping Lough Derg and Parteen Basin within their existing operational limits.

1063. The Applicant notes that the Additional Submissions frequently characterise the abstraction as causing a 30% reduction in the statutory compensation flow. As detailed in Section 11.2.2 (Reduction in the Flow Down the Old River Shannon) of the RTS, that assumption is incorrect because the operating

rules assessed for the Proposed Project maintain the statutory compensation flow throughout all modelled scenarios. During drought conditions, abstraction demand is met from the existing storage available within the ESB-managed Lough Derg/Parteen Basin system rather than through a reduction in the statutory compensation release.

1064. The Applicant further notes that the NIS prepared for the Proposed Project considered the conservation objectives of the Lower River Shannon SAC, the Lough Derg (Shannon) SPA, and other relevant European sites. The NIS concluded, beyond reasonable scientific doubt, that the Proposed Project would not adversely affect the integrity of any European site, either alone or in-combination with other plans or projects. Similarly, the Water Status Impact Assessment Report concluded that the Proposed Project would not cause deterioration of WFD status or prevent the achievement of environmental objectives.

1065. While the Additional Submission(s) suggest that any drawdown beyond the current Normal Operating Band on Lough Derg and the upper and lower water level on Parteen Basin would constitute a deterioration of SAC/SPA qualifying interests/special conservation interests, the detailed hydrological and ecological assessments demonstrate that predicted water-level changes associated with the Proposed Project are negligible, occur under extreme drought conditions, remain within the existing managed operating regime, and would not adversely affect the conservation objectives of the relevant European sites.

1066. Accordingly, the Applicant maintains that the Proposed Project is compatible with the requirements of Article 6(3) of the Habitats Directive, the WFD and the conservation objectives of the affected SAC and SPA designations, and does not transform Lough Derg into a demand-management reservoir in the manner suggested by the Additional Submissions. Based on the modelling and assessment undertaken, the Proposed Project would not adversely affect the integrity of any European site nor prejudice future environmental flow or ecological restoration measures that may arise through separate regulatory and/or RBMP processes.

25.3.2.2 Potential Impact of the Proposed Abstraction on Habitats and Species

1067. The Additional Submission from Cllr. Sean Hartigan assumes that because water will be abstracted from flows currently available for hydropower generation, there will necessarily be a reduction in flows available for fish passage and ecological enhancement measures. However, the hydrological modelling undertaken for the Proposed Project demonstrates that the abstraction does not alter the statutory compensation and fish pass flows released to the Old River Shannon. As noted in Section 10.2.3 (Potential Impact of the Proposed Abstraction on Habitats and Species) of the RTS, the modelling demonstrates that the timing, frequency and duration of these flows remain unchanged with the Proposed Project in place.

1068. The Additional Submission also relies on examples of periods when Ardnacrusha generation is reduced or ceased and suggests this invalidates the assessment methodology. This does not reflect the basis of the hydrological assessment. The model was developed using a 52-year record (1972 to 2023), incorporating actual hydrological conditions, including periods of drought, flooding, reduced generation and instances when no hydropower generation occurred. Accordingly, the assessment is based on long-term operational conditions rather than assumptions of continuous power generation.

1069. The Additional Submission further contends that future fish passage improvements requiring increased ecological flows have not been considered. This is not correct. As noted in Section 10.4.18 (Barriers to Connectivity: Salmon and Lamprey Species) of the RTS, a specific sensitivity analysis was undertaken examining a potential future Eflow regime incorporating variable compensation flows and freshet releases to facilitate fish migration. The analysis found that the Proposed Project would not prevent or impede the implementation of such a regime. While future operational decisions regarding flow-sharing remain matters for ESB and the relevant authorities, the Proposed Project would not constrain Parteen

Weir operations, future ecological flow releases, or implementation of measures arising from the Shannon Connectivity Project.

1070. The assertion that there will be 'no capacity' to increase flows for fish passage during drought conditions is speculative and is not supported by the modelling assessment. No objective, scientifically credible, or evidence-based information has been provided to substantiate this assertion or to identify any error, omission, or deficiency in the methodology, assumptions, data, or conclusions of the assessment. The Additional Submission therefore provides no evidential basis upon which the findings of the assessment can reasonably be called into question. Moreover, the Applicant cannot assume future Eflow requirements that have not been formally adopted. Nevertheless, the assessment specifically examined whether the Proposed Project would restrict future ecological enhancement measures and concluded that it would not.

1071. The Additional Submission's conclusion that the Proposed Project would create a mortality risk or barrier to movement for sea lamprey, river lamprey and Atlantic salmon is contrary to the findings of the NIS, and the response provided in Section 10.3.5 (Potential Impact of the Proposed Project on Fish Migration and Passage) of the RTS. Again, no credible scientific evidence has been provided to support this conclusion or to rebut the findings of the assessment. The NIS concluded that the Proposed Project, either alone or in-combination with other plans and projects, would not adversely affect the integrity of the Lower River Shannon SAC. Mitigation measures have been incorporated to ensure that the Proposed Project does not create a barrier to movement or mortality risk for qualifying interest fish species, including Atlantic salmon, sea lamprey and river lamprey. Consequently, no adverse effects on the conservation objectives or integrity of the Lower River Shannon SAC are predicted.

1072. In summary, the concerns raised are based largely on assumptions regarding future flow requirements and drought-period operations. The project-specific hydrological modelling, undertaken over a 52-year period and supported by ecological assessment, demonstrates that the proposed abstraction would have negligible effects on lake levels except during extreme drought conditions, would not alter compensation or fish pass flows to the Old River Shannon, would not impede future ecological flow measures, and would not adversely affect the qualifying interest species or integrity of the Lower River Shannon SAC.

25.3.2.3 Exclusion of SACs/SPAs and the Arbitrary 'Zone of Influence'

1073. The Additional Submission from Environmental Trust Ireland states that the ZoI abruptly ends at the tidal confluence of Limerick Dock and therefore that European sites downstream of the Proposed Project have not been properly considered in the NIS. The Applicant does not agree with the assertion that the ZoI 'abruptly terminates' at Limerick Dock, nor that the NIS improperly excluded downstream European sites, including Tory Hill SAC, Askeaton Fen Complex SAC, or the River Shannon and River Fergus Estuaries SPA. The NIS clearly defined the ZoI and assessed all European sites for which a credible source-pathway-receptor relationship was identified. In this regard, sites that were identified as lying within the ZoI of the proposed abstraction and assessed within the NIS included the River Shannon and River Fergus Estuaries SPA. By contrast, sites such as Tory Hill SAC and Askeaton Fen Complex SAC, located downstream of the hydrological ZoI boundary at the confluence of the Shannon (Limerick Dock) and the Ardnacrusha Tailrace, were not identified as being within the ZoI because no hydrological pathway capable of giving rise to likely significant effects was established. This issue has already been addressed in detail in Section 25.4.13 (Potential Impact on Special Conservation Areas and Special Protection Areas in Limerick) and Section 25.4.19 (Determination of the Risk of Impact on Lower Shannon Special Conservation Area) of the RTS.

1074. As set out in those sections, the Applicant's assessment was based on a detailed understanding of the hydrological regime of the Lower Shannon, including hydrodynamic modelling, water quality assessment and the NIS containing the assessment of hydrologically connected European sites. The assessment concluded that the Proposed Project would not result in significant changes to flow, water

levels or hydromorphological conditions capable of affecting the conservation objectives of downstream SACs or SPAs.

1075. In relation to Limerick Dock specifically, EIAR Appendix A9.1 Annex A – Hydrological Modelling Report confirms that the downstream limit of the ZoI is the confluence of the Shannon (Lower)_060 waterbody and the Ardnacrusha Tailrace at Limerick Dock. This location is subject to strong diurnal tidal influence, with water levels and flows dominated by tidal processes. Consequently, any variation in Tailrace discharge associated with the operation of the Proposed Project would be imperceptible at the confluence and would not result in hydrological changes of a magnitude capable of affecting estuarine processes within Limerick Dock or further downstream.

1076. The Applicant also notes that Limerick Dock (IE_SH_060_0900):

- Is a transitional waterbody designated as a HMWB;
- Receives, on average, approximately 180m³/s from the Lower River Shannon;
- Is currently classified as Poor WFD status and 'At Risk' due to existing hydromorphological pressures associated with port infrastructure, bank reinforcement and weirs;
- Is highly modified and urbanised through the city reach; and
- Is already strongly influenced by tidal processes, estuarine dynamics and long-established channel modifications.

1077. These baseline characteristics are important when considering the Additional Submission statement that the Proposed Project would alter estuarine salinity gradients, sediment transport processes or mudflat ecology. The hydrological modelling undertaken demonstrates that the Proposed Project does not alter the statutory compensation flow to the Old River Shannon, does not introduce new barriers or flow controls, and does not result in hydrological changes of a magnitude capable of affecting downstream estuarine processes. As outlined in Section 25.4.19 (Determination of the Risk of Impact on Lower Shannon Special Conservation Area) of the RTS, abstraction will be supplied through the management of water otherwise utilised for hydropower generation and, during drought conditions, from available storage while maintaining the statutory compensation flow of 10m³/s.

1078. The Additional Submission's assertion that freshwater inflows could be reduced by up to 34.7% during drought conditions is not accurate. As explained in the Planning Application and RTS, the Proposed Project does not reduce the statutory compensation flow to the Old River Shannon, and the hydrological modelling demonstrates that required compensation and fish-pass flows will continue to be maintained during severe drought scenarios. Accordingly, the alleged compression of the freshwater plume and upstream displacement of the estuarine salinity gradient would not arise.

1079. The Applicant further disagrees that there is a 'mere possibility' of significant effects requiring additional European sites beyond the ZoI to be assessed. The NIS considered hydrological pathways, downstream connectivity and the conservation objectives of all relevant European sites for which a source-pathway-receptor capable of given rise to likely significant effects existed. The assessment was informed by comprehensive hydrological modelling under normal, flood and drought conditions and concluded that the Proposed Project would not adversely affect the integrity of any European site, either alone or in-combination with other plans or projects.

1080. Accordingly, the Applicant remains satisfied that the extent of the hydrological assessment, the definition of the downstream ZoI and the conclusions of the NIS are based on the best available scientific evidence and provide a robust basis for concluding that there will be no adverse effects on the integrity of downstream SACs or SPAs, including the the River Shannon and River Fergus Estuaries SPA. The Applicant further remains satisfied that European sites situated beyond the downstream ZoI boundary, including Tory Hill SAC and Askeaton Fen Complex SAC, were correctly excluded from

detailed assessment because no source-pathway-receptor relationship exists through which the Proposed Project could affect those sites.

25.3.2.4 Habitats Directive

1081. The issues raised in this Additional Submission from Futureproof Clare Environmental CLG regarding the Habitats Directive, the adequacy of the AA, the assessment of species associated with Lough Derg, the operation of the Ardnacrusha hydroelectric scheme, inter-basin water transfers, and drought-related effects on designated sites have already been addressed in detail within the RTS and the NIS. In particular, reference should be made to Section 25.3.1 (Adequacy of the Findings of the Appropriate Assessment), Section 25.3.10 (Potential Implications of Inter-Basin Water Transfers), Section 25.3.12 (Existing Flow Modification and Interaction with Ardnacrusha Hydroelectric Operation) and Section 25.4.6 (Effects on Severe Drought Low Water Level Duration in Designated Sites) of the RTS. The Applicant provides the following further clarifications.

Point 2590 – Adequacy of the Appropriate Assessment and Consideration of Species

1082. The Applicant does not agree that the NIS fails to consider protected species within the ZoI or that the threshold under Article 6(3) of the Habitats Directive has been incorrectly applied.

1083. As set out in Section 25.3.1 of the RTS, the NIS was prepared in accordance with Article 6(3) of the Habitats Directive and was informed by the best available scientific information, extensive ecological surveys, hydrological modelling and specialist assessments. The assessment considered direct, indirect, ex-situ and functionally linked ecological relationships relevant to the conservation objectives of European sites.

1084. The purpose of the NIS is to determine whether the Proposed Project would adversely affect the integrity of European sites having regard to their qualifying interests/special conservation interests and conservation objectives. Accordingly, the assessment focuses on those habitats and species for which SACs and SPAs are designated, as well as supporting habitats where functionally linked to those conservation objectives, including the wetland habitats and wetland and waterbirds interests of the Lough Derg (Shannon) SPA, which are specifically assessed in Section 7.12 of the NIS.

1085. In relation to white-tailed eagle, it should be noted that no SPA in Ireland is currently designated for white-tailed eagle as a special conservation interest species. Consequently, white-tailed eagle was not assessed within the NIS. However, as an Annex I species under the Birds Directive and a protected species of conservation importance, white-tailed eagle was considered within Chapter 8 – Biodiversity of the EIAR and the wider ecological assessment of the Proposed Project.

1086. Similarly, several of the bird species referenced in the Additional Submission, including whooper swan, grebe and egret species, occur within the wider Lough Derg area but are not special conservation interest species of the Lough Derg (Shannon) SPA. The qualifying interests of the Lough Derg (Shannon) SPA are common tern, cormorant, tufted duck, goldeneye and wetland and waterbirds assemblage. While whooper swan is not a named special conservation interest of the SPA, it may contribute to the SPA's wetland and waterbirds assemblage feature. Therefore, as set out in Section 7.12 of the NIS, the assessment considered both the SPA's named special conservation interest species and the conservation objective relating to the wetland and waterbirds assemblage, including the supporting wetland habitats upon which waterbirds depend and the potential for effects on waterbird use of those habitats.

1087. Accordingly, species such as white-tailed eagle, whooper swan, grebe and egret species were considered in Chapter 8 – Biodiversity of the EIAR, where relevant impact pathways existed. In addition, the NIS specifically assessed the special conservation interests of the Lough Derg (Shannon) SPA, including common tern, cormorant, tufted duck, goldeneye and the wetland and waterbirds assemblage

(Section 7.12 of the NIS). The assessment therefore considered potential effects not only on the named special conservation interest species but also on the wetland habitats and broader assemblage of waterbirds supported by the SPA. The NIS concluded that the negligible changes in water levels and flows predicted as a result of the Proposed Project would not adversely affect the conservation objectives of the SPA, habitat availability, ecological functioning or population viability of special conservation interest bird species or other protected bird species occurring within the receiving environment.

1088. The presence of discussion regarding bats, otter or fish migration within the EIAR and NIS does not indicate that a legal threshold requiring Article 6(4) derogation has been triggered. Rather, these matters were assessed in accordance with the precautionary principle and the assessment concluded that the Proposed Project would not result in adverse effects on the integrity of any European site, either alone or in-combination with other plans or projects. Consequently, no Article 6(4) derogation is required.

Point 2674 - Smolt Migration and Ardnacrusha Operations

1089. The Additional Submission queries how smolts would be 'encouraged' to migrate downstream over Parteen Weir rather than through the Ardnacrusha turbines.

1090. This matter must be considered in the context of the existing regulated Shannon system and the relationship between the Proposed Project and the operation of the Ardnacrusha hydroelectric scheme.

1091. As detailed in Section 25.3.12 of the RTS, the ecological baseline used in the NIS explicitly incorporates the current operation of the Ardnacrusha Generating Station, including the long-established diversion of flows through the hydroelectric scheme and the existing statutory compensation and fish-pass flows. The assessment therefore evaluated the Proposed Project against the actual managed conditions that presently exist.

1092. The Proposed Project does not introduce any new barrier to fish movement, does not modify established fish passage infrastructure and does not alter the existing operational arrangements that govern migration pathways. The abstraction does not generate hydromorphological changes of a magnitude capable of affecting species movement, habitat function or the conservation status of qualifying interest fish species.

1093. Furthermore, the hydrological modelling demonstrates that the statutory compensation flow and fish-pass flows are maintained under the assessed operational scenarios, including severe drought conditions. Accordingly, the NIS concluded that the Proposed Project would not adversely affect migratory fish species or the integrity of the Lower River Shannon SAC.

Point 2686 - Effects On Hydromorphology and Qualifying Habitats

1094. The Additional Submission suggests that the conclusion that no changes would occur to hydromorphological or flow conditions affecting qualifying interest habitats is inconsistent with statements that construction and operation will influence flow conditions. The Applicant does not agree. There is an important distinction between measurable changes being modelled and those changes being of sufficient magnitude to affect the structure and function of qualifying interest habitats.

1095. As explained in Section 25.3.12 of the RTS and throughout the NIS and EIAR, changes arising from the abstraction were assessed through detailed hydrological modelling covering normal, drought and flood conditions. Those assessments concluded that any predicted alterations in water levels and flow conditions are negligible, remain within the existing Normal Operating Band on Lough Derg and within the upper and lower water levels that ESB apply to Parteen Basin, and do not affect habitat extent, habitat structure, habitat function or supporting ecological processes.

1096. Therefore, while the abstraction is represented in the modelling, any changes are not of a magnitude capable of affecting qualifying interest habitats or species and do not undermine the conservation objectives of any European site.

Point 2722 - Existing Regulation of Lough Derg and Resilience of Habitats

1097. The Applicant notes the Additional Submission's concern that historical habitat decline means that habitats may not be resilient to further pressure. This issue is specifically addressed in Section 25.4.6 of the RTS, which examines the effect of severe drought conditions and associated low water levels on designated sites, including the Lough Derg North-East Shore SAC.

1098. The assessment demonstrates that:

- Lough Derg has been managed within a defined Normal Operating Band of approximately 460mm since the late 1970s;
- Shoreline and littoral habitats have developed under, and are adapted to, this long-established managed regime;
- Hydrological modelling undertaken over a 52-year period shows that any influence from the Proposed Project occurs only during extreme drought conditions and brief recovery periods;
- Even during the 2018 drought (which is the worst on record for the Shannon Catchment), modelled water-level changes remained within the historical operating range and within ESB operational limits; and
- Natural wind-driven fluctuations across the lake frequently exceed the magnitude of any changes attributable to the Proposed Project.

1099. Accordingly, the assessment concluded that the effects of the Proposed Project on water level duration, including severe drought scenarios, would be ecologically imperceptible relative to the existing natural and operational variability of the system and would not adversely affect the integrity of designated sites.

25.3.2.5 Noise of Construction

1100. The Additional Submission from Futureproof Clare Environmental CLG states that concerns regarding construction noise have not been adequately addressed in the Applicant's response. In particular, it contends that, while the EIAR assesses construction noise impacts on nearby residents, it does not adequately consider the potential effects of construction noise on 'wildlife in protected areas' including the Lower River Shannon SAC and the Lough Derg (Shannon) SPA.

1101. This assertion is not supported by the information contained in EIAR Chapter 8 – Biodiversity or in the NIS. Both documents include a detailed assessment of potential disturbance and displacement effects arising from construction noise, vibration, increased human presence and associated activities, together with specific mitigation measures designed to avoid or reduce effects on Key Ecological Receptors (KERs) and/or qualifying interest/special conservation interest species.

1102. Within EIAR Chapter 8 – Biodiversity, noise and vibration were identified as potential disturbance pathways for a range of KERs, including birds, mammals and aquatic fauna (and those associated with the Lower River Shannon SAC and Lough Derg (Shannon) SPA), and were considered in determining the ecological ZoI for the assessment. The assessment of disturbance and displacement effects informed the proposed mitigation measures, including restrictions on working hours in ecologically sensitive locations, cessation of works before sunset in areas used by bats for commuting and foraging, and the implementation of noise abatement measures in accordance with BS 5228-1 and best practice guidance. These measures were specifically designed to avoid or reduce disturbance effects on ecological receptors during the Construction Phase.

1103. Section 5 of the NIS presents a detailed assessment of construction-related noise associated with the Proposed Project. Construction noise was quantified using the methodology set out in BS 5228-1, with noise predictions provided for the principal construction activities and infrastructure locations. The assessment explicitly identifies noise, vibration, increased human presence and associated disturbance as potential impact pathways during the Construction Phase.

1104. In relation to the Lower River Shannon SAC, the NIS assesses the potential for disturbance and displacement of qualifying interest species, including otter and aquatic fauna. The assessment acknowledges that construction activities associated with the RWI&PS, including noise, vibration and increased human presence, have the potential to result in temporary disturbance. However, it concludes that any such effects would be temporary, localised and intermittent in nature and would not result in significant disturbance or long-term displacement of qualifying interest species.

1105. The NIS also includes a dedicated underwater noise assessment for Parteen Basin. Baseline underwater noise monitoring and underwater noise modelling were undertaken for secant piling and vibropiling activities. Potential effects on fish species, including Atlantic salmon and lamprey species, were assessed using recognised criteria. The assessment concluded that, while temporary behavioural responses may occur in close proximity to the works, significant disturbance or displacement effects are not predicted due to the short-term and localised nature of the activities and the implementation of mitigation measures.

1106. Section 7.1.4 of the NIS sets out specific mitigation measures to avoid or reduce disturbance and displacement effects during construction, including:

- Construction noise management in accordance with BS 5228-1 and relevant national guidance;
- Installation of acoustic screening around the RWI&PS during secant pile construction;
- Specific restrictions and controls relating to piling activities; and
- Installation of silt curtains and implementation of fish rescue measures, including electrofishing, prior to piling works.

1107. With regard to the Lough Derg (Shannon) SPA, the NIS identifies disturbance/displacement and effective habitat loss as potential impact pathways for special conservation interest bird species, including wintering tufted duck, cormorant and goldeneye associated with Parteen Basin. These potential effects were therefore screened in and assessed in detail within the NIS.

1108. Having regard to the predicted impacts and the mitigation measures incorporated into the Project design, the NIS concludes that no residual direct or indirect effects will arise that could adversely affect the integrity of the Lough Derg (Shannon) SPA. The assessment further concludes, beyond reasonable scientific doubt, that the Proposed Project will not adversely affect the integrity of the SPA, having regard to its conservation objectives.

1109. Similarly, the NIS assesses the potential for disturbance and displacement effects on the qualifying interests of the Lower River Shannon SAC arising from construction noise, vibration, increased human presence and piling activities. This assessment includes underwater noise modelling for aquatic species, consideration of potential effects on otter, Atlantic salmon and lamprey species, and the implementation of the mitigation measures described in Section 7.1.4 of the NIS. On the basis of this assessment, the NIS concludes that any construction-related disturbance would be temporary, localised and effectively mitigated, and would not result in significant disturbance to qualifying interest species. Accordingly, the NIS concludes, beyond reasonable scientific doubt, that the Proposed Project, either alone or in-combination with other plans or projects, will not adversely affect the integrity of the Lower River Shannon SAC, having regard to its conservation objectives.

1110. Accordingly, the contention that ecological noise impacts have not been assessed is not supported by the findings of the NIS. The NIS includes a project-specific assessment of noise and vibration, evaluates disturbance and displacement pathways for qualifying interest and special conservation interest species, incorporates underwater noise modelling for aquatic receptors, prescribes mitigation measures to minimise disturbance effects, and concludes, beyond reasonable scientific doubt, that the Proposed Project will not adversely affect the integrity of either the Lower River Shannon SAC or the Lough Derg (Shannon) SPA, having regard to their respective conservation objectives.

25.3.2.6 Hydrological Modelling is Treated as the Ecological Assessment

1111. The Additional Submission from Laura Kavanagh contends that the AA relies on hydrological modelling and does not adequately translate hydrological outputs into ecological conclusions. This does not accurately reflect the approach taken in the NIS.

1112. The proposed abstraction has the potential to interact with the receiving environment principally through changes to hydrology. Consequently, hydrological modelling was required to quantify any potential alteration to water levels, flows and hydraulic conditions. However, the NIS did not solely rely upon the modelling outputs. Rather, those outputs were integrated with a comprehensive ecological assessment undertaken specifically in relation to the qualifying interests and conservation objectives of the Lower River Shannon SAC. Importantly, this approach is consistent with advice received from the NPWS, which identified the need for hydrological, hydraulic and water quality assessments to be fully integrated with the ecological assessment. The hydrological modelling therefore constitutes a supporting line of evidence rather than the ecological assessment itself.

1113. The NIS was informed by an extensive body of site-specific ecological information recorded between 2016 and 2025; including habitat, botanical, fisheries, benthic invertebrate, otter, breeding and wintering bird, aquatic INNS, and underwater acoustic surveys within the ZoI of the Proposed Project. These surveys informed the assessment of potential impacts on qualifying interest habitats and species and their supporting ecological conditions.

1114. The modelling demonstrates that water level changes in Lough Derg and Parteen Basin are negligible for approximately 99% of the modelled period and remain within the established Normal Operating Band on Lough Derg and within the upper and lower water levels that ESB apply to Parteen Basin, even under severe drought conditions. The assessment concludes that the scale of variation is negligible and relative to natural wind- and weather-driven fluctuations and therefore would not alter the ecological processes that support qualifying interest/special conservation interest habitats and species from a hydrological pathway of effect.

1115. Most importantly, the NIS was undertaken having regard to site-specific conservation objectives. The question considered was not whether a hydrological change could be detected, but whether the Proposed Project could undermine the maintenance or restoration of the attributes supporting favourable conservation condition of the SAC's qualifying interests. The NIS concluded that it would not.

25.3.2.7 Reliance on Operational Thresholds Rather Than Ecological Thresholds

1116. The Additional Submission from Laura Kavanagh suggests that the assessment relies upon ‘operational thresholds’ i.e. the Normal Operating Band and statutory compensation flows rather than ecological thresholds. This interpretation overlooks the context in which these operational parameters were considered. The Normal Operating Band forms part of the existing baseline environment under which the qualifying interests of the Lower River Shannon SAC currently persist. The purpose of referencing the Normal Operating Band was therefore to provide context for the magnitude of predicted change and to demonstrate that proposed abstraction-related effects remain within the range of conditions that characterise the existing system.

1117. The NIS was not undertaken against operational criteria. The relevant test under Article 6(3) is whether the Proposed Project could adversely affect the integrity of the European site in view of its conservation objectives. The AA therefore focused on the specific conservation objective attributes, measures and targets for the Lower River Shannon SAC, including habitat area, habitat distribution, habitat structure and functions, species populations, species distribution, supporting habitats, and the ecological and hydrological processes necessary to restore or maintain these interests in favourable conservation condition.

1118. The modelling demonstrates that changes in water levels and flows are negligible for the vast majority of the modelled period and remain within the existing Normal Operating Band, including during severe drought scenarios. The AA considered whether these predicted changes could affect any conservation objective attribute or target, including those relating to habitat extent, habitat quality, hydrological regime, ecological connectivity, water quality, sediment processes, or the availability and condition of supporting habitat for qualifying species. The NIS concluded that the predicted changes are insufficient to result in any measurable alteration to these attributes or to the ecological processes upon which they depend.

1119. The AA test requires consideration of conservation objectives and site integrity rather than the identification of a singular ecological threshold. Ecological effects are assessed by reference to whether a project could undermine the attributes, measures and targets that underpin the conservation objectives of the European site. In this case, the NIS confirmed that the Proposed Project would not result in a deviation from the condition required to maintain or restore favourable conservation condition for any conservation objective attribute, measure or target.

1120. Accordingly, while the Normal Operating Band and compensation flow requirements were used to provide context regarding the magnitude of predicted change relative to the existing baseline environment, the determination of effects was based on the ecological characteristics that define the conservation objectives of the Lower River Shannon SAC. The assessment therefore appropriately concluded that the predicted changes would not affect the extent, distribution, structure or function of qualifying habitats, the population or distribution of qualifying species, or the ecological processes supporting them, and that the Proposed Project would not adversely affect the integrity of the Lower River Shannon SAC, either alone or in-combination with other plans or projects.

25.3.2.8 Historic Variability is Not Equivalent to Ecological Insignificance

1121. The Additional Submission from Laura Kavanagh states that the responses in the RTS do not explain why habitats and species dependent upon shallow littoral margins, groundwater interaction, floodplain inundation or habitat availability would remain unaffected simply because predicted water levels fall within historical operating range. The Applicant acknowledges that historic variability is not, in itself, evidence that ecological effects cannot occur. However, this is not the basis upon which the NIS conclusions have been reached. Historic hydrological records were used to provide context regarding the magnitude of the predicted effects and to demonstrate that abstraction-related changes fall within the range of conditions historically experienced by the system. This information assists in understanding the scale of the predicted changes but was not relied upon as the sole basis for concluding no adverse effect.

1122. The key consideration is that the modelled changes are negligible in magnitude and do not significantly alter the hydrological conditions that support qualifying interest habitats and species. The assessment therefore combines historical evidence, hydrological modelling, ecological survey information and site-specific evaluation of conservation objectives.

1123. Furthermore, the assessment considered not only maintenance objectives but also restoration objectives applicable to qualifying interests of the Lower River Shannon SAC. The relevant question is whether the Proposed Project could impede the achievement of favourable conservation condition,

including where restoration is required. No mechanism was identified by which the predicted abstraction-related changes could prevent or delay the achievement of those restoration objectives.

1124. Consequently, the conclusion that adverse effects on site integrity can be excluded is based on the ecological significance of the predicted changes rather than simply the fact that similar water levels have occurred historically.

25.3.2.9 Ecological Consequences Remain Largely Unassessed

1125. The Additional Submission from Laura Kavanagh states that receptor-specific 'ecological consequences' have not been adequately assessed. The Applicant does not agree. The NIS contains extensive consideration of potential effects on qualifying interest habitats and species and supporting ecological processes of the Lower River Shannon SAC. Potential effects were assessed through habitat evaluations, species-specific assessments, hydrological analysis, water quality assessment and consideration of ecological pathways linking the Proposed Project to European sites.

1126. Significantly, the assessment was informed by a substantial programme of ecological surveys undertaken between 2016 and 2025. These surveys included investigations relevant to Atlantic salmon, sea lamprey, river lamprey, brook lamprey, otter, aquatic habitats, benthic communities, and associated supporting habitats. Site-specific ecological data therefore formed a fundamental component of the assessment.

1127. The assessment considered not only direct habitat loss but also potential indirect effects including changes to hydrology, water quality, aquatic habitat availability, ecological connectivity, disturbance and INNS pathways. The ecological consequences of the Proposed Project were therefore explicitly evaluated.

1128. The Additional Submission's concern appears to arise from the fact that the hydrological modelling represents a key line of evidence. This is consistent with the nature of the assessment, given that the principal pathway by which the proposed abstraction could affect the environment is hydrological. Where robust modelling demonstrates negligible changes to water levels and flow conditions, and where detailed ecological assessment demonstrates that such changes would not affect qualifying interests or conservation objective attributes, it is reasonable to conclude that significant adverse ecological effects will not occur.

1129. In particular, the assessment concluded that the Proposed Project will not affect habitat availability, migration requirements, spawning habitat, nursery habitat, foraging habitat or supporting ecological conditions relied upon by Atlantic salmon, lamprey species, otter or other qualifying interests of the SAC.

25.3.2.10 Opportunity to Resolve Uncertainty

1130. The Additional Submission from Laura Kavanagh argues that uncertainty remains regarding ecological thresholds and the relationship between hydrological changes and ecological response. The Applicant recognises that some degree of uncertainty is inherent in all ecological assessments. However, uncertainty must be considered in the context of the magnitude of the predicted effects and the evidence available.

1131. The hydrological assessment included consideration of severe historical droughts, future climate change scenarios, low-flow conditions and abstraction at maximum design capacity. Conservative assumptions were applied throughout the assessment process to ensure that potential effects were not underestimated.

1132. In addition, the assessment is informed by extensive ecological survey information collected over a prolonged period, together with a detailed understanding of the qualifying interests and conservation objectives of the Lower River Shannon SAC. This body of evidence provides a robust basis for evaluating ecological effects.

1133. While the Additional Submission proposes additional ecological threshold analysis, the absence of a specific threshold does not invalidate the conclusions of the NIS. The relevant question is whether the Proposed Project can be shown, beyond reasonable scientific doubt, not to adversely affect site integrity. Given the negligible magnitude of the predicted hydrological changes and the absence of any identified ecological mechanism linking those changes to adverse effects on qualifying interests, the remaining uncertainty is not of a nature that undermines the assessment conclusions and does not create any reasonable scientific doubt.

1134. Furthermore, no evidence has been presented demonstrating that the Proposed Project would constrain future ecological restoration measures or future management interventions intended to support achievement of the conservation objectives of the Lower River Shannon SAC.

25.3.2.11 Potential Impacts to Littoral and Shoreline Habitats

1135. The Additional Submission from Laura Kavanagh raises concerns regarding possible recession of shoreline habitats, reduction of littoral habitat availability and associated ecological impacts arising from the proposed abstraction-related water level changes. As outlined in Section 10.3.12 (Potential Impacts to Littoral and Shoreline Habitats) of the RTS, the hydrological modelling predicts negligible water level changes for approximately 99% of the modelled period, with only limited additional drawdown occurring during extreme drought conditions. These changes remain within the normal range of hydrological conditions experienced within Lough Derg and Parteen Basin (i.e. the Normal Operating Band on Lough Derg and within the upper and lower water levels that ESB apply to Parteen Basin).

1136. The Applicant acknowledges that relatively small vertical changes in water level can translate into larger horizontal movements of the shoreline in shallow-gradient areas. However, the significance of such changes must be evaluated in terms of their ability to affect the conservation objectives of the SAC.

1137. The NIS includes detailed site-specific investigations of aquatic and shoreline habitats at and around the proposed RWI&PS, including repeated habitat, aquatic, and protected species surveys undertaken over multiple survey seasons. These surveys were specifically designed to characterise substrates, aquatic vegetation, fish habitat, lamprey habitat and associated biological communities within the ZoI where any abstraction-related effects, if present, would be expected to occur.

1138. Comprehensive field surveys were not undertaken across the entire littoral zone of Lough Derg and Parteen Basin. This approach was considered appropriate in light of the hydrological modelling results, which demonstrate that abstraction-related changes are negligible for the vast majority of the time, remain within the Normal Operating Band, and are not predicted to result in ecologically meaningful alterations to lake-wide shoreline or littoral habitat conditions. The assessment therefore focused on the area of potential influence identified through the modelling and on the habitats and species relevant to the conservation objectives of the SAC.

1139. Importantly, the conservation objectives of the Lower River Shannon SAC require the maintenance or restoration of habitat area, habitat distribution, habitat structure and function, species populations and supporting habitats. The assessment concluded that the predicted abstraction-related changes are insufficient to alter any of these attributes.

1140. No credible scientific evidence has been provided that the Proposed Project would result in measurable reductions in habitat area, habitat quality, ecological function or habitat availability for Atlantic salmon, sea lamprey, river lamprey, brook lamprey, otter or any other qualifying interest of the SAC. Similarly,

no mechanism has been identified whereby the predicted changes could impede restoration of favourable conservation condition where restoration objectives apply.

1141. Accordingly, when assessed against the site-specific conservation objectives of the Lower River Shannon SAC, the hydrological modelling, targeted ecological surveys at the RWI&PS site, and ecological impact assessment collectively demonstrate that the proposed abstraction will not adversely affect littoral or shoreline habitats in a manner capable of affecting the integrity of the SAC, either alone or in-combination with other plans or projects.

25.3.2.12 Adequacy of the Findings of the Appropriate Assessment Applicant Response

1142. The assertion in the Additional Submission from Laura Kavanagh that the AA is inadequate is not supported by either the scope or level of detail of the NIS. The NIS was prepared specifically to inform the competent authority's AA under Article 6(3) of the Habitats Directive and was undertaken in accordance with European Commission guidance, Irish guidance, relevant CJEU jurisprudence and the requirements of Part XAB of the Planning and Development Act 2000 (as amended). It comprises a comprehensive scientific assessment of the best available ecological, hydrological, hydrogeological and engineering information and was prepared by suitably qualified specialists across relevant disciplines. The assessment was informed by extensive desktop studies, consultation with statutory bodies, multiple years of ecological surveys, hydrological monitoring, hydrogeological investigations, hydrodynamic modelling and water quality modelling.

1143. The Additional Submission's assertion that the assessment relies on hydrological and operational metrics without adequate receptor-specific ecological assessment is not supported by the NIS. Hydrological modelling formed part of an integrated assessment framework and was interpreted in the context of the ecological requirements of qualifying interests, supporting habitats and site-specific conservation objectives of relevant European sites. Predicted changes in hydrology, hydraulic conditions and water quality were assessed in the context of the ecological requirements of designated habitats and species, including aquatic habitats, fish species, otter, supporting habitats and ex-situ functionally linked habitats. The assessment therefore considered whether any identified changes could affect the conservation objective attributes and targets of European sites rather than presenting hydrological outputs alone.

1144. Similarly, the suggestion that there is an absence of ecological threshold analysis linking predicted changes in flow and water level to qualifying interest habitats and species is not accepted. The NIS was prepared having regard to the site-specific conservation objectives for each European site and considered whether the Proposed Project could affect the distribution, structure, function or ecological condition of qualifying habitats and species, or otherwise interfere with the achievement of conservation objectives. Hydrological and ecological assessments were undertaken in an integrated manner, with modelling used to determine whether the scale of any predicted change was capable of affecting ecological receptors. The assessment concluded that the predicted changes would not adversely affect the attributes supporting favourable conservation condition and would not adversely affect site integrity.

1145. The Additional Submission also questions the adequacy of the assessment under prolonged low-flow, drought and climate-adjusted conditions. However, these scenarios were specifically examined within the NIS and supporting hydrological assessments as they represent the circumstances under which abstraction-related effects would be most likely to occur. The modelling assessed historical drought events, severe low-flow periods within the available record and future climate change scenarios, and examined the continued maintenance of statutory compensation flows, fish-pass flows, lake operating levels and existing operational controls. The conclusions of the NIS are therefore based on detailed consideration of reasonably foreseeable worst-case conditions rather than average hydrological conditions.

1146. The criticism regarding the sensitivity of the modelling to alternative lake storage conditions is likewise not supported by the evidence. The hydrological assessment was based on long-term simulation of the Shannon system and incorporated the operational rules governing Lough Derg and Parteen Basin. The modelling assessed system behaviour across a broad range of hydrological conditions, including periods of sustained low inflow and drought, and evaluated the capacity of available storage within the system to accommodate abstraction while maintaining existing operational and environmental requirements. The assessment therefore does not rely on a single initial storage condition but instead considers performance across a range of representative operating scenarios.

1147. The Additional Submission further suggests that not all potentially hydrologically connected European sites were assessed. This is not correct. The NIS applied a source-pathway-receptor approach and assessed direct, indirect, ex-situ, hydrological, hydrogeological and ecological pathways. A total of 19 European sites were screened in and examined in detail, with separate assessments undertaken against their qualifying interests, special conservation interests and conservation objectives (Section 7 of the NIS). The NIS also included a dedicated in-combination assessment (Section 8 of the NIS). Hydrological connectivity was determined using hydraulic evidence, hydrodynamic modelling and an understanding of the operational characteristics of the Shannon system rather than arbitrary distance thresholds. Particular consideration was given to supporting habitats and functionally linked lands outside designated site boundaries. Where no credible source-pathway-receptor relationship existed, sites were excluded from further assessment in accordance with established AA methodology.

1148. The Additional Submission also questions whether mitigation measures and future operational management merely manage uncertainty rather than remove it. This does not reflect the approach adopted in the NIS. The assessment follows the mitigation hierarchy and incorporates extensive avoidance and embedded mitigation measures within the project design, including abstraction operating rules, maintenance of statutory compensation flows, fish protection measures, INNS controls, process water management systems, construction controls and environmental management commitments. Importantly, the hydrological modelling demonstrates that the proposed abstraction would not give rise to significant hydrological effects. The mitigation measures are therefore not relied upon to address significant adverse effects after they occur but form part of a design-led approach that avoids adverse effects arising in the first instance.

1149. Accordingly, the criticism that the NIS does not identify the complete, precise and definitive findings upon which its conclusions depend is not supported by the evidence. The AA is informed by extensive ecological survey data, hydrological and hydraulic modelling, drought and climate change assessment, detailed conservation objective analysis, assessment of all relevant source-pathway-receptor relationships and a comprehensive suite of embedded mitigation measures. Collectively, these assessments provide a robust and scientifically defensible basis for the conclusion that the Proposed Project, either alone or in-combination with other plans and projects, will not adversely affect the integrity of any European site in view of its conservation objectives and that this conclusion can be reached beyond reasonable scientific doubt.

25.3.2.13 Assessment of Hydrologically Connected European Sites Applicant Response

1150. The Additional Submission from Laura Kavanagh raises several issues in relation to hydrological connections to European sites.

Meelick Weir as the Upstream Hydraulic Boundary of Influence

1151. The Applicant disagrees with the conclusion that no ‘quantitative evidence’ has been provided in support of Meelick Weir as the upstream limit of proposed abstraction ZoI. EIAR Appendix A9.1 – Abstraction Assessment sets out both the hydraulic basis and supporting evidence for defining Meelick Weir as the upstream limit.

1152. EIAR Appendix A9.1 – Abstraction Assessment identifies Meelick Weir and the Corclough Bridge on Incherky are points of hydraulic control, which 'entirely partition the whole Shannon upstream from activities at the Derg TN (Lough Derg) and the Derg HMWB (Parteen Basin)'. The report states that examination of these control points demonstrated that flow and water level at these locations are determined only by upstream conditions and not by downstream conditions. It confirms that:

- Meelick Weir is a hydraulic control structure on the Shannon (Lower)_030;
- There is free fall over the weir during medium and low flow conditions;
- Under these conditions, changes in water level within Lough Derg cannot propagate upstream beyond the weir; and
- Consequently, it is 'not physically possible' for water levels in Lough Derg to influence water levels upstream of Meelick Weir during the flow conditions relevant to the proposed abstraction.

1153. The assessment also defines the ZoI on this basis, with Shannon (Lower)_030 included only as far as Meelick Weir, reflecting the conclusion that hydraulic connectivity with upstream reaches is interrupted at this control structure.

1154. In addition, the hydrological modelling undertaken for the Proposed Project was based on a 52-year dataset (1972 to 2023) and assessed changes in lake levels and flows within the hydraulically connected Lough Derg/Parteen Basin system. The modelling demonstrated negligible changes in lake levels, while maintaining existing compensation flow requirements and normal operating conditions. These results support the conclusion that the proposed abstraction could only affect the downstream controlled lake system and does not alter the hydraulic function of Meelick Weir as the upstream control point.

1155. Accordingly, the Applicant considers that quantitative evidence has been provided to support the identification of Meelick Weir as the upstream limit of the ZoI. The report does not rely solely on a qualitative assertion but on the identified hydraulic controls, examination of water level and flow behaviour at those controls, and quantitative hydrological analysis of the water bodies downstream of that boundary.

Barroughter Bog SAC

1156. Barroughter Bog SAC is located downstream of Meelick Weir and therefore falls within the broader hydrological system considered within the proposed abstraction assessment. However, EIAR Appendix A9.1 – Abstraction Assessment demonstrates that the proposed abstraction would result in only negligible changes to water levels and flows within that system. The assessment found that abstraction-related effects are only discernible during rare extreme drought events and that, for approximately 99% of the simulation period, no perceptible impacts on water levels are predicted.

1157. Even during the most sensitive drought event assessed (2018), the maximum additional drawdown was approximately 134mm under the 300Mld abstraction scenario and approximately 168mm under the precautionary climate-change-adjusted scenario. Importantly, these changes remained within the normal range of historical water-level fluctuations observed by ESB and within the established operational limits for both Lough Derg and Parteen Basin. In the context of Barroughter Bog SAC, these findings are significant because they demonstrate that the proposed abstraction would give rise to only negligible changes in lake levels under even the most extreme drought conditions assessed (i.e. the modelling demonstrated negligible effects on lake levels, flows, water quality and hydromorphology, with overall effects assessed as not significant). Accordingly, the negligible changes predicted for the surface water environment indicate no credible mechanism by which the proposed abstraction could give rise to significant changes in groundwater levels, groundwater gradients, floodplain hydrology, or other ecohydrological processes that could affect the qualifying interests of the SAC.

1158. The Additional Submission refers to the absence of piezometric data, groundwater gradient analysis, and ecological thresholds. However, such investigations would only be necessary where the evidence indicates a realistic potential for hydrological changes of sufficient magnitude to influence groundwater-dependent ecological receptors. The modelling results do not indicate such a circumstance. The maximum predicted changes in water level are measured in centimetres during rare drought events and remain within the natural and managed Normal Operating Band on Lough Derg and within the upper and lower water levels that ESB apply to Parteen Basin. No evidence has been identified that these minor and infrequent changes would cause measurable changes in groundwater conditions at Barroughter Bog SAC.

1159. Furthermore, Barroughter Bog SAC is designated for active raised bog and degraded raised bog habitats, which are principally sustained by direct precipitation and their own internal hydrological regime. While local hydrogeological interactions may occur at habitat margins, the assessment did not identify any specific mechanism by which the negligible proposed abstraction changes predicted by the model would alter the ecohydrological functioning of the SAC.

River Shannon Callows SAC

1160. Unlike Barroughter Bog SAC, the River Shannon Callows SAC was screened into the AA process and assessed within the NIS due to its recognised hydrological connection to the River Shannon system.

1161. This SAC extends both upstream and downstream of Meelick Weir. Consistent with the hydrological evidence presented in EIAR Appendix A9.1 – Abstraction Assessment, only those portions of the SAC located downstream of Meelick Weir were considered potentially capable of being affected by the proposed abstraction-related changes because Meelick Weir forms the upstream hydraulic limit of influence.

1162. EIAR Appendix A9.1 – Abstraction Assessment demonstrates that predicted abstraction-related changes in water levels and flows are negligible and confined to exceptional drought conditions. The modelling further demonstrates that statutory compensation flows, fish pass flows and downstream flow requirements are maintained under all modelled abstraction scenarios.

1163. The assessment concludes that there would be no significant alteration to downstream flow regimes, floodplain hydrology, inundation patterns, hydromorphological processes or ecological conditions relevant to the conservation objectives of River Shannon Callows SAC. Accordingly, while River Shannon Callows SAC was screened in and assessed due to its downstream hydrological connectivity, the Applicant's conclusion of no adverse effect is supported by the quantitative hydrological evidence set out in EIAR Appendix A9.1 – Abstraction Assessment.

Summary

1164. In summary, EIAR Appendix A9.1 – Abstraction Assessment provides quantitative evidence supporting the Applicant's identification and assessment of hydrologically connected European sites. In particular, it demonstrates that:

- Meelick Weir functions as a hydraulic control point preventing abstraction-related effects from propagating upstream;
- Predicted abstraction-induced drawdowns are minor, and only become perceptible during rare extreme drought periods and the short recovery period immediately afterwards;
- For approximately 99% of the modelling period, no perceptible impact on lake levels is predicted;
- Compensation flows, fish pass flows and downstream flow requirements may all be maintained under all modelled scenarios;

- No physically plausible pathway exists by which the proposed abstraction could affect upstream hydrological conditions beyond Meelick Weir;
- The exclusion of Barroughter Bog SAC is supported by both the absence of a hydrological pathway and the characteristics of the qualifying habitats; and
- Potential for effects on the River Shannon Callows SAC was assessed separately through the AA process. The assessment, informed by hydrological modelling, concluded that the Proposed Project would not give rise to changes in downstream hydrological conditions of a magnitude capable of adversely affecting the qualifying interests of the SAC, either alone or in-combination with other plans or projects. Accordingly, it was concluded that the Proposed Project would not adversely affect the integrity of the River Shannon Callows SAC.

25.3.2.14 Adequacy of Mitigation Measures

1165. The Additional Submission from Laura Kavanagh contends that the mitigation measures proposed are inadequate and that uncertainty remains regarding the potential effects of the Proposed Project on European sites. However, this position does not reflect the comprehensive assessment and mitigation framework set out in Section 7 of the NIS. The NIS identifies all potential impact pathways arising from the Proposed Project itself, distinguishes these from the existing hydrological regime associated with the operation of the Ardnacrusha Hydroelectric Scheme, and prescribes specific avoidance, design and mitigation measures to address each identified risk. The assessment does not rely on mitigation to address existing conditions within the Shannon system, but rather on measures specifically developed to address the incremental effects of the proposed abstraction and associated infrastructure.

1166. For the Lower River Shannon SAC, the NIS includes a comprehensive suite of project-specific mitigation measures designed to prevent impacts on qualifying interests and supporting habitats. These measures include the design of the intake structure and screening systems to prevent fish entrainment; implementation of biosecurity measures and INNS controls; strict construction-phase water quality protection measures including silt control, settlement systems and controlled dewatering; timing restrictions on works in sensitive aquatic environments; otter protection measures; and the implementation of a CEMP and associated monitoring requirements. Operational mitigation measures further ensure that maintenance waters, washout discharges and WTP operations do not adversely affect receiving waters. These measures were specifically developed in response to the impacts identified for the Proposed Project and were incorporated directly into the NIS.

1167. The same mitigation framework is applied throughout the assessment of other European sites within the ZoI of the proposed abstraction, including the River Shannon Callows SAC, Lough Derg North-East Shore SAC, Lough Derg (Shannon) SPA, and Middle Shannon Callows SPA. For each site, the NIS identifies the relevant impact pathways, including potential effects on water quality, hydrological conditions, sediment mobilisation, pollution risk and INNS introduction/spread, and assesses the effectiveness of the prescribed mitigation measures in eliminating or reducing these effects. The conclusion reached for each site is based on the implementation of these measures and the predicted residual effects following mitigation.

1168. Importantly, the Additional Submission's concerns regarding hydrological impacts fail to distinguish between the effects of the Proposed Project and the existing operation of Ardnacrusha. The NIS assesses only the incremental effects arising from the Proposed Project. The hydrological modelling demonstrates that the proposed abstraction would result in negligible changes in water levels and flows across the system, with statutory compensation flows maintained and water levels remaining within established operational parameters. Consequently, the mitigation measures are directed at addressing the specific and limited pathways through which the Proposed Project could affect European sites, rather than broader hydrological characteristics that are associated with the long-established management of the Shannon system.

1169. The Additional Submission also places significant emphasis on uncertainty. However, uncertainty has been extensively examined through hydrological modelling based on a long-term dataset incorporating historic drought periods, climate-adjusted scenarios and worst-case operational assumptions. The modelling assessed conditions substantially more severe than those expected during normal operation and consistently demonstrated negligible hydrological effects attributable to the Proposed Project. The results show that the proposed abstraction would not result in significant effects on the hydrological conditions supporting the qualifying interests/special conservation interests of the assessed European sites. Accordingly, the NIS conclusions are not based on speculative future management responses or untested assumptions, but on a robust evidence base supported by detailed modelling, conservative assessment assumptions and clearly defined mitigation measures.

1170. In light of the extensive mitigation incorporated into the design, construction and operation of the Proposed Project, together with the high level of confidence provided by the hydrological modelling and ecological assessments, there is no reasonable scientific basis to conclude that the mitigation measures are inadequate. The NIS demonstrates that the potential effects of the Proposed Project have been comprehensively identified, appropriately mitigated and assessed, and that no adverse effects on the integrity of the Lower River Shannon SAC or any other European site within the ZoI will arise as a result of the Project, either alone or in-combination with other plans or projects.

25.3.2.15 Reliance of the Appropriate Assessment on Average Flow Metrics

1171. The Additional Submission from Laura Kavanagh asserts that the AA relies principally on average flow metrics and, as a consequence, fails to adequately assess ecological effects under low-flow and drought conditions. This characterisation of the assessment is not supported by the evidence. The hydrological assessment was specifically designed to identify the conditions under which the proposed abstraction would have its greatest effect and therefore focused particular attention on historic extreme droughts, including the severe drought events of 1995 and 2018, together with future climate change scenarios based on a precautionary 2080s reasonable worst-case climate projection. The modelling was undertaken across a continuous 52-year period from 1972 to 2023 and therefore assessed a full range of hydrological conditions experienced within the Shannon system, including extended periods of exceptionally low inflow, rather than relying solely on average conditions.

1172. The modelling demonstrated that the proposed abstraction-related impacts are confined almost entirely to rare drought periods and are absent for approximately 99% of the 52-year simulation period. The only periods where measurable differences between baseline and abstraction scenarios occurred were the droughts of 1995 and 2018, with other notable drought years, including 1976, 1989, 2006 and 2010, showing negligible differences. The assessment therefore specifically examined the conditions identified in the Additional Submission as being of greatest ecological sensitivity and found that impacts are extremely limited both in duration and magnitude.

1173. Importantly, the drought analysis considered not only water levels but also the severity and duration of low inflow conditions. The modelling identified the 2018 drought as the most severe historical event within the assessment period, during which inflows to the Lough Derg and Parteen Basin system fell below 15m³/s on 54 days and below 10m³/s on 33 days. The 1995 drought similarly experienced inflows below 15m³/s on 31 days and below 10m³/s on 16 days. These represent exceptionally severe drought conditions against which the resilience of the system was explicitly tested. Even under these circumstances, the maximum additional drawdown attributable to the proposed abstraction was limited to 65mm under the 154Mld abstraction scenario and 134mm under the precautionary 300Mld scenario. Under the reasonable worst-case 2080s climate change scenario, the maximum additional drawdown was 168mm (for the 300Mld abstraction scenario).

1174. The ecological relevance of these changes was specifically investigated and not merely inferred from hydrological outputs. The assessment applied the UKTAG WFD lake-level methodology, which is expressly designed to evaluate effects on the littoral zone, recognised as the most biologically

productive area of a lake (note a response to comments in other Additional Submissions in relation to use of UKTAG in the context of WFD is provided in Section 26.3.2.3 of this Report). This assessment evaluated the extent of habitat available from the shoreline to 5m below the euphotic depth and therefore directly addresses the concern raised regarding potential reductions in shallow shoreline habitat. The results demonstrated that both Lough Derg and Parteen Basin continue to achieve the requirements for Good Ecological Status or Good Ecological Potential under both the 154Mld and 300Mld abstraction scenarios, including under future climate change conditions. The maximum reduction in littoral habitat area remained below the threshold associated with deterioration in ecological status, with the 300Mld scenario resulting in a maximum reduction of only 2.37%, substantially below the 5% threshold for Good Status. Accordingly, the modelling did not identify ecological deterioration of littoral habitats under any scenario examined.

1175. The Additional Submission also raises concerns regarding ecological sensitivity during drought conditions. However, the modelling demonstrates that the system recovers rapidly following the cessation of drought. Once inflows recover above drought levels, any storage deficit created by the proposed abstraction is preferentially replenished before hydroelectric generation recommences. As a result, proposed abstraction-related effects are limited to the drought period itself and the immediate recovery phase, typically lasting only a number of days and generally no more than approximately one week. There is therefore no evidence of prolonged depression of lake levels, long-term habitat loss, cumulative deterioration, or persistent alteration of hydrological conditions following drought events.

1176. The assessment further demonstrates that even during the most severe modelled drought events, including the climate-change-adjusted scenarios, water levels remain within the established Normal Operating Band of the system. Lough Derg levels remain within the Normal Operating Band of 30.40m Above Ordnance Datum (AOD) to 30.86mAOD, while Parteen Basin remains within its upper and lower limits of 30.00mAOD to 30.86mAOD. In addition, statutory compensation flows and fish pass flows are maintained throughout all modelled scenarios, including during the most severe drought conditions. Consequently, the hydrological conditions upon which downstream aquatic habitats depend continue to be maintained.

1177. The ecological significance of the drought scenarios was also assessed through hydrodynamic and water quality modelling using the 2018 drought, identified as the worst drought period in the historical record, as the baseline condition. If proposed abstraction-related ecological effects were likely to arise during drought, they would reasonably be expected to manifest through measurable changes in water quality parameters. However, the modelling predicted only negligible variations in key indicators. Biochemical oxygen demand varied by no more than approximately 2%, dissolved oxygen by less than 1%, chlorophyll-*a* by between -2% and +1%, and nutrient concentrations by similarly small amounts. The assessment found that these differences were smaller than natural variability within the system and fell within the normal bounds of analytical uncertainty. It therefore concluded that impacts on water quality under both drought and climate change scenarios are of a negligible magnitude and are not significant.

1178. Accordingly, the evidence demonstrates that the NIS does not rely solely on average flow metrics. Rather, it specifically modelled the most severe historic droughts in the available record, tested future climate change scenarios, examined duration, frequency and severity of low-flow events, assessed impacts on littoral habitat through the UKTAG lake-level methodology, evaluated water quality under extreme drought conditions, and quantified recovery following drought cessation. The results show that the proposed abstraction-related effects occur only during rare drought periods, affect approximately 1% of the modelled record, recover within days of drought cessation, remain within the Normal Operating Band and within the upper and lower water levels that ESB apply to Parteen Basin, enable the statutory compensation and fish pass flows to be maintained, preserve Good Ecological Status and Good Ecological Potential thresholds, and do not result in measurable ecological deterioration. The modelling therefore provides a robust evidential basis for concluding that the predicted drought-related changes would not adversely affect the ecological integrity of the receiving environment.

25.3.2.16 Effects on River Little Brosna Callows SPA

1179. The Additional Submission from NPWS queries a clarification provided by the Applicant in Section 25.4.5 (Effects on River Little Brosna Callows SPA) of the RTS regarding the anticipated construction and commissioning programme. This clarification indicated that the overall programme may range from approximately 18 to 24 months depending on construction sequencing and logistics. It does not represent an extension of the Proposed Project or a change to the nature or scale of the works assessed.

1180. The Applicant does not consider that this clarification materially changes the assessment of disturbance effects on River Little Brosna Callows SPA. While the overall programme may extend over a period of 18 to 24 months, works will not be undertaken continuously across the entire route for that duration. As outlined in the assessment, construction will be undertaken in discrete work packages, with temporary occupation and activity limited to specific sections of the route at any one time.

1181. Accordingly, the overall programme duration should not be interpreted as representing continuous disturbance over two winter periods. Individual areas will not be subject to construction activity for the full duration of the programme, and land occupation and disturbance will be temporary, localised and intermittent. The proposed phasing of works is specifically intended to minimise the duration of disturbance at any given location and to reduce the period over which individual landowners and environmental receptors are affected.

1182. The clarification of the programme duration does not alter the disturbance mechanisms, receptors, pathways, mitigation measures or conclusions of the assessment. No evidence has been presented that the clarified programme duration would result in additional habitat loss, increased disturbance intensity, or a significantly different effect on the conservation objectives of River Little Brosna Callows SPA.

1183. Given the separation distance between the Proposed Project and the River Little Brosna Callows SPA (>10 km), together with the temporary, localised and intermittent nature of the works, no additional disturbance effects on SPA qualifying interests are predicted as a result of the clarified programme duration. Similarly, commissioning activities are expected to be short-term and limited in nature and are not anticipated to result in significant disturbance effects alone, or in-combination.

25.4 Response to New Matters Raised in Additional Submissions

25.4.1 Additional Submissions

1184. Two additional Submissions raised matters that had not been previously responded to regarding:

- In-combination assessment three gaps;
- Qualifying Interests not fully addressed Holohan lacunae;
- Power v An Bord Pleanála Conservation Objectives; and
- European Natura 2000 sites along the Shannon and pipeline route.

1185. The following Additional Submission raised matters which related to this.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	In-combination assessment three gaps

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Qualifying Interests not fully addressed Holohan Lacunae
Additional Sub – River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Power v An Bord Pleanála Conservation Objectives
Additional Sub – Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	European Natura 2000 Sites Along the Shannon and Route

25.4.2 Applicant's Response to New Matters Raised

25.4.2.1 In-Combination Assessment

1186. The Additional Submission from River Shannon Environmental Protection Alliance. states that the 'cumulative burden' of third-party public water supply and industrial abstractions on low-flow conditions during drought periods has not been specifically assessed in the NIS.

1187. In response, it should be noted that the in-combination assessment in the NIS (Section 8) considered the proposed abstraction within the context of the existing and ongoing management of the wider Shannon catchment and hydrological system. The baseline against which effects were assessed inherently reflects all existing influences operating on the river system, including existing abstractions, water resource management practices, hydropower operations and other pressures affecting flows and water levels within the catchment.

1188. The NIS explains that the hydrological model was developed using observed flow and water level data from 1 January 1972 to 31 October 2023, representing 52 years of actual river conditions. The model assessed the proposed abstraction against the existing baseline conditions of the Shannon system rather than against a theoretical natural river regime. Consequently, the assessment evaluated the incremental effect of the Proposed Project in-combination with all existing conditions already reflected in the observed hydrological record.

1189. The in-combination assessment specifically examined the interaction of the Proposed Project with the operation of the ESB hydroelectric scheme, management of water levels in Lough Derg and Parteen Basin, statutory compensation flow requirements at Parteen Weir, and potential future Eflow management measures.

1190. Importantly, the methodology adopted for the in-combination assessment was based on comparison of model simulations with and without the proposed abstraction under the existing managed Shannon system. This approach allowed the assessment to determine whether the Proposed Project would result in any additional hydrological effect over and above the cumulative pressures already represented within the historical dataset and operational regime. The assessment found that impacts on lake levels and forward flows to the Old River Shannon were barely distinguishable from baseline conditions, with no perceptible impacts during approximately 99% of the 52-year simulation period. Compensation and fish-pass flows were capable of being maintained throughout the modelling scenarios.

1191. Accordingly, the in-combination assessment was undertaken against a baseline derived from the actual operation of the catchment over a 52-year period. The assessment therefore considered the effects of the Proposed Project in-combination with the existing water management regime and cumulative pressures already influencing the Shannon system and concluded that the Proposed Project would not adversely affect the integrity of the relevant European sites, either alone or in-combination with other plans and projects.

25.4.2.2 Treatment of Qualifying Interests

1192. The Additional Submission from River Shannon Environmental Protection Alliance. contends that the NIS fails to address all qualifying interests/special conservation interests and therefore contains a lacuna of the type identified in Holohan. That characterisation is not accurate.

1193. The Applicant notes that the judgment in Holohan does not require an AA to examine every habitat or species present within a European site irrespective of its relevance to the site's conservation objectives. Rather, the purpose of the assessment is to determine whether a plan or project could adversely affect the integrity of the site having regard to the site's qualifying interests/special conservation interests, conservation objectives and any other habitats or species that are necessary to the conservation of those qualifying interests/special conservation interests.

1194. Accordingly, the relevant question is not whether every species or ecological receptor occurring within the wider Shannon catchment has been individually assessed, but whether all qualifying interests, special conservation interests and any typical species relevant to the conservation objectives of the affected European sites have been considered to the extent necessary to rule out adverse effects on site integrity.

1195. The NIS adopts precisely that approach. It identifies impact pathways, assesses the qualifying interests/special conservation interests and conservation objectives of each relevant European site, considers the ecological processes and supporting habitats upon which those interests depend, and concludes, beyond reasonable scientific doubt, that the Proposed Project will not adversely affect the integrity of any European site, either alone or in-combination with other plans or projects, subject to implementation of the proposed mitigation measures.

Atlantic Salmon

1196. The Additional Submission states that flow regime thresholds for migration and spawning, sediment transport dynamics, and temperature/dissolved oxygen effects under altered abstraction regimes have not been demonstrated.

1197. The assessment specifically examined the effects of abstraction on lake levels, flow regimes and future EFlow requirements using hydrological modelling covering the period 1972 to 2023. The modelling demonstrated that, for approximately 99% of the 52-year simulation period, there would be no perceptible impact on water levels as a result of abstraction. Even during the most severe drought events modelled (1995 and 2018), maximum water level reductions remained minor (65mm under the 154Mld scenario and 134mm under the 300Mld scenario, increasing to 168mm at 300Mld when the ‘reasonable worst-case’ climate change scenario for the 2080s was also assessed) and remained entirely within the existing Normal Operating Band for Lough Derg and within the upper and lower water levels that ESB apply to Parteen Basin. Statutory compensation flows and fish pass flows would be capable of being maintained at all times.

1198. The assessment also considered a future EFlow regime currently being considered under the Water Action Plan 2024. The modelling demonstrated that the Proposed Project would not impede implementation of such measures and would not adversely affect restoration actions intended to support migratory fish species within the Lower River Shannon SAC. The assessment also considered hydromorphological processes associated with flow alteration and concluded that the Proposed Project would have a negligible impact. As there would be no reduction in compensation flows and fish pass flows, there would be no potential for reduced channel flushing and therefore no impact on sediment transport processes, wetland habitats, or alluvial woodland.

1199. Concerns regarding algeal bloom and dissolved oxygen were also specifically assessed through water quality modelling under conservative drought conditions. Predicted changes were negligible and

remained within normal background variability. No mechanism was identified by which the Proposed Project could affect salmon migration, spawning habitat, water quality requirements or the conservation objectives of the Lower River Shannon SAC.

Freshwater Pearl Mussel

1200. The Additional Submission asserts that freshwater pearl mussel has not been adequately assessed. However, no impact pathway has been identified between the proposed abstraction and freshwater pearl mussel populations.

1201. The abstraction assessment identified Meelick Weir as the upstream hydraulic limit of influence and Limerick Dock as the downstream limit of influence. The assessment therefore focused on those waterbodies that are hydrologically connected to the proposed abstraction and capable of being affected.

1202. The hydrological modelling demonstrated that statutory compensation flows and fish pass flows would be maintained at all times and that the Proposed Project would not impede the implementation of the proposed Eflow regime. Therefore, the assessment concluded that the Proposed Project would not alter sediment transport processes or adversely affect hydromorphological conditions within the affected waterbodies. Accordingly, no hydrological pathway was identified by which the Proposed Project could affect freshwater pearl mussel populations.

1203. Seperately, water quality modelling undertaken under the conservative 2018 drought scenario predicted only negligible changes in dissolved oxygen, nutrients, ammonia, orthophosphate and chlorophyll-*a*, all remaining within normal natural variability.

1204. In circumstances where no hydrological, water quality or sediment pathway has been identified, and where the assessment demonstrates that the conservation objectives of the relevant SACs would not be affected, no Holohan-type lacuna arises. The necessary nexus between the species concerned and an effect on the conservation objectives of the European site does not exist.

Lamprey Species

1205. The Additional Submission suggests that species-specific flow thresholds and migration cues have not been assessed.

1206. The assessment specifically examined whether the Proposed Project could affect compensation flows, fish pass flows and future EFlow measures intended to support migratory fish species. The modelling confirmed that existing statutory flows would continue to be maintained with and without abstraction and that abstraction would not impede future fish migration enhancement measures, including Eflows, fish passage improvements and measures envisaged under the RBMPs, the Shannon Connectivity Project or other environmental initiatives.

1207. No pathway has therefore been identified by which the Proposed Project could adversely affect the conservation objectives relating to sea lamprey, river lamprey or brook lamprey. The NIS accordingly concludes that the integrity of the Lower River Shannon SAC would not be adversely affected.

Lough Derg (Shannon) SPA and Common Tern

1208. The Additional Submission argues that the NIS does not address whether the proposed abstraction could contribute to the continued decline of common tern populations within the Lough Derg (Shannon) SPA.

1209. The assessment demonstrates that the proposed abstraction would not result in any significant alteration to the hydrological regime of Lough Derg. Hydrological modelling shows that, for approximately 99% of the assessment period, there would be no perceptible change in lake levels and that, even during extreme drought conditions, any reductions remain within normal historical fluctuations and within the existing operational regime.

1210. The assessment further concludes that the Proposed Project would not adversely affect water quality, ecological functioning, foraging conditions, nesting habitat or prey availability within the SPA.

1211. The fact that common tern populations may be experiencing wider population pressures does not establish a pathway by which the Proposed Project would adversely affect the SPA. The relevant Article 6(3) question is whether the Proposed Project, either alone or in-combination with other plans and projects, would adversely affect the integrity of the SPA and the achievement of its conservation objectives.

1212. No such pathway has been identified. Accordingly, the NIS concludes, beyond reasonable scientific doubt, that the Proposed Project would not adversely affect the integrity of the Lough Derg (Shannon) SPA.

Middle Shannon Callows SPA

1213. The Additional Submission states that no hydro-ecological analysis has been undertaken regarding potential effects on floodplain inundation and the special conservation interest bird species of the Middle Shannon Callows SPA.

1214. The SPA was screened into the AA process and assessed within the NIS because of its recognised hydrological connection to the River Shannon system.

1215. The assessment identified Meelick Weir as the upstream hydraulic limit of influence. Accordingly, only those portions of the SPA situated downstream of Meelick Weir are capable of being affected by the proposed abstraction.

1216. The assessment concluded that water levels in Lough Derg could not influence water levels upstream of Meelick Weir and that the Proposed Project would not result in significant changes to downstream flow regimes, floodplain hydrology, inundation patterns, hydromorphological processes or ecological conditions relevant to the SPA's conservation objectives.

1217. Consequently, no pathway has been identified by which the Proposed Project could affect the ecological conditions supporting the special conservation interest bird species of the Middle Shannon Callows SPA, and therefore, any adverse effect on site integrity can be ruled out.

Conclusion

1218. The allegation of a Holohan lacuna is not substantiated. The NIS does not omit consideration of qualifying interests, special conservation interests, supporting habitats or relevant ecological processes. Consistent with Holohan and the approach subsequently explained by the Court of Appeal in Hayes, the assessment focuses on those habitats and species for which there is a credible pathway by which the Proposed Project could affect the conservation objectives of a European site.

1219. The Additional Submission has not identified any qualifying interest, special conservation interest, habitat or typical species for which such a nexus has been demonstrated. Nor has it identified any impact pathway that was omitted from the assessment, and which could adversely affect the integrity of a European site.

1220. The NIS identifies potential pathways for effect, assesses the relevant conservation objectives, evaluates the Proposed Project both alone and in-combination with other plans and projects, and concludes, beyond reasonable scientific doubt, that the Proposed Project will not adversely affect the integrity of any European site. Accordingly, no Holohan deficiency arises.

25.4.2.3 Power v An Bord Pleanála Conservation Objectives

1221. The Additional Submission from River Shannon Environmental Protection Alliance. refers to the preliminary reference in Power v An Bord Pleanála ([2024] IECA 295), in which the Irish Court of Appeal referred a question to the CJEU concerning whether valid site-specific conservation objectives are a prerequisite to a competent authority carrying out an AA under Article 6(3) of the Habitats Directive.

1222. The NIS prepared for the Proposed Project identifies all relevant European sites within the ZoI and assesses the potential for impacts on those sites in light of their conservation interests and conservation objectives. The NIS notes that 78 European sites were initially considered, with 19 sites progressing for Stage 2 AA where source-pathway-receptor connections were identified.

1223. Prior to the Planning Application being submitted, the NPWS published site-specific conservation objectives for Ireland's Natura 2000 network, including the sites within the ZoI of the Proposed Project. The issue that arose in 'Power' concerned a planning permission granted at a time when only generic conservation objectives existed for the relevant SPA. Commentary on the reference notes that the State has since completed publication of site-specific conservation objectives for all relevant sites following infringement proceedings by the European Commission.

1224. Accordingly:

- The NIS has been undertaken having regard to the conservation objectives of the relevant European sites, consistent with Article 6(3) requirements and current NPWS guidance;
- The NIS identifies the qualifying interests/special conservation interests and conservation objectives of the European sites potentially affected and assesses the implications of the Proposed Project for the integrity of those sites. The assessment concludes that, with the embedded design and additional mitigation measures specified, the Proposed Project will not adversely affect the integrity of any European site;
- The circumstances underlying the 'Power' reference do not arise for the European sites assessed in the NIS, as the assessment has been undertaken by reference to the conservation objectives available for the relevant sites at the time of preparation of the application documentation; and
- While the CJEU's judgment in 'Power' may provide further clarification on the interpretation of Article 6(3), the outcome does not alter the fact that the Proposed Project planning application is supported by a detailed NIS that identifies, evaluates and assesses effects on the conservation objectives and site integrity of the relevant European sites.

1225. For these reasons, no amendment to the NIS is considered necessary in response to this Additional Submission. The AA process for the Proposed Project has been undertaken on the basis of the conservation objectives applicable to the relevant European sites and provides sufficient information for the competent authority to complete its assessment under Article 6(3) of the Habitats Directive.

25.4.2.4 European Natura 2000 Sites Along the Shannon and Route

1226. The Additional Submission from Environment Trust Ireland lists four European sites in Section 6.6 of the Additional Submission, however it is not clear what point the Additional Submission is making in relation to these sites. The NIS has already considered and assessed the European sites referenced in this Additional Submission as part of the AA process for the Proposed Project. These sites were identified within the ZoI and were subject to detailed assessment in Section 7 of the NIS, including

consideration of qualifying interests/special conservation interests, potential impact pathways, mitigation measures and residual effects. Specifically:

- Lough Derg, North-east Shore SAC (Site Code 002241) is assessed in Section 7.5 of the NIS, including a detailed analysis of potential hydrological and water quality pathways and the effects of the proposed abstraction. The assessment concludes that the Proposed Project would not adversely affect the integrity of the SAC;
- Sharavogue Bog SAC (Site Code 000585) is assessed in Section 7.3 of the NIS. Potential hydrological, water quality and groundwater-related pathways were examined, together with mitigation measures, and the NIS concludes that there would be no adverse effect on the integrity of the SAC;
- River Barrow and River Nore SAC (Site Code 002162) is assessed in Section 7.4 of the NIS. The assessment considered hydrological connectivity, aquatic ecology, water quality, INNS and species-specific impact pathways. The conclusion reached is that the Proposed Project would not adversely affect the integrity of the SAC; and
- Poulaphouca Reservoir SPA (Site Code 004063) is assessed in Section 7.18 of the NIS. The NIS specifically considered connectivity with supporting habitats used by the SPA's special conservation interest bird species and concluded that the Proposed Project would not result in adverse effects on the integrity of the SPA.

1227. The findings of the site-specific assessments for these European sites, together with the in-combination assessment presented in Section 8 of the NIS, demonstrate that the Proposed Project would not adversely affect the integrity of any of these European sites, either alone or in-combination with other plans or projects.

26. Water Status Impact Assessment Report (Water Framework Directive)

26.1 Overview

1228. Twenty-three of the initial 114 submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to the Water Status Impact Assessment Report (WSIAR) (WFD Assessment) produced for the Proposed Project. These were considered in the RTS Report submitted to the ACP in May 2026.

1229. One of the further two submissions received by ACP in response to the Statutory Consultation raised matters which the Applicant identified as most relevant to WFD. These were considered in the SRTS Report submitted to the ACP in June 2026.

1230. Five of the 43 Additional Submissions received by ACP raised matters relevant to WFD and are responded to in this Report.

1231. The Applicant included a WFD Assessment (the WSIAR) in the documentation submitted as part of the SID Planning Application. This document, supported by the rest of the planning application including the NIS and EIAR, provides the evidential basis for demonstrating that the Proposed Project is compliant with the WFD. The assessment complied with the relevant legislation, standards and guidance as set out in the report and was prepared by a team of competent experts.

1232. This Report and its supporting appendix respond specifically to matters raised in the Additional Submissions to ACP in respect of WFD and should be read in conjunction with the RTS and SRTS. Cross references to the relevant chapters of the RTS and SRTS have been included, where appropriate, to assist the reader.

1233. This Chapter responds specifically to WFD matters raised in the Additional Submissions to ACP. The responses in this Chapter are related to those in the following Chapters of this Report, which should be read alongside this Chapter:

- Chapter 10 – Biodiversity;
- Chapter 11 – Water (Hydrological Modelling and Water Levels);
- Chapter 12 – Water (General); and
- Chapter 26 – Water Status Impact Assessment Report (Water Framework Directive).

1234. Cross references to these other relevant chapters have been included, where appropriate, to assist the reader. However, the Applicant's response to the Additional Submissions made to ACP comprises this entire Report.

1235. Chapter 11 – Water (Hydrological Modelling and Water Levels) and Chapter 12 - Water (General) of this Report have been provided separately to this WFD Chapter. This is to allow the matters raised within the Additional Submissions that are specific to the modelling, the assessment of water levels due to the proposed abstraction and any general water related responses to be addressed altogether.

1236. This Chapter is structured around the following sections:

- Matters raised regarding WFD and previously responded to;
- Matters raised previously and further clarification being provided; and
- New matters raised regarding WFD in the Additional Submissions.

26.2 Response to Matters Raised Previously

26.2.1 Additional Submissions

1237. Three responses raised matters that had been considered previously including:

- Compliance with the Water Framework Directive;
- Failure to satisfy Article 4(7) of the Water Framework Directive;
- Wastewater return flows – an unassessed full water cycle impact; and
- Heightened evidential burden for Shannon (Lower)_050.

1238. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub - Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Compliance with the Water Framework Directive	RTS – Compliance with the Water Framework Directive – Section 26.2.1
Additional Sub - Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council		
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.		
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Failure to satisfy Article 4(7) of the Water Framework Directive	RTS - Compliance with Article 4 Requirements - Section 26.3.3
Additional Sub - Joe Mayo Previous: WSP_SUB_17	Joe Mayo		
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Wastewater return flows – An unassessed full water cycle impact	RTS - Receiving Wastewater Capacity - Section 12.3.3 RTS - Receiving Wastewater Capacity Assessment Under the Water Framework Directive - Section 26.3.1 RTS - Reflection of the Water Cycle in the Assessment - Section 26.3.6
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Heightened WFD evidential burden for the Shannon (Lower)_050	RTS - Reliance on Heavily Modified Water Body Designation – Section 26.3.4

26.2.2 Applicant's Summary Response on Matters Raised Previously

26.2.2.1 Compliance with the Water Framework Directive

1239. Additional Submissions from Joe Mayo, Limerick City and County Council, and the River Shannon Environmental Protection Alliance have challenged the Proposed Project's compliance with the WFD. This includes, for example, whether the evidence in the application is robust enough to allow ACP to lawfully conclude that the proposed abstraction will not cause deterioration under Article 4 of the Water Framework Directive.

1240. The Applicant has previously responded to Additional Submissions regarding the compliance of the Proposed Project with the Water Framework Directive in Section 26.2.1 (Compliance with the Water Framework Directive) of the RTS, as well as other responses in Chapter 26 of the RTS. The Applicant

has nothing further to add on the response previously provided, but would reiterate the following key points.

1241. The Applicant considers that the Proposed Project is fully compliant with the WFD and that a comprehensive and proportionate WFD compliance assessment has been carried out and presented in the WSIAR with reference to the EIAR and NIS.

1242. The assessment applies the correct legal test under Article 4(1) of the WFD, examining whether the Proposed Project may cause deterioration in the status of any surface water or groundwater body, or jeopardise the achievement of good status or good ecological potential where there is a Heavily Modified Water Body designation. This assessment takes account of baseline conditions, project design parameters, mitigation measures and relevant hydrological scenarios. The WSIAR evaluates potential effects on surface water and groundwater receptors, and lakes using Annex V quality elements, and is informed by detailed hydrological modelling presented in EIAR Appendix A9.1 – Abstraction Assessment. That modelling includes assessment of low-flow and drought conditions and demonstrates that predicted changes in flows and water levels are extremely small and within the natural and operational variability of the system.

1243. The assessment demonstrates that the Proposed Project will not affect the status of a water body or any Annex V quality element and therefore the Proposed Project does not require reliance on the derogation mechanisms under Articles 4(6) or 4(7) of the WFD.

1244. Assessment of the Proposed Project against WFD objectives is outlined in the WSIAR as part of impact assessments.

1245. The role of the WSIAR is to ensure that the Proposed Project does not introduce new pressures that would cause deterioration or undermine the achievement of WFD objectives that are delivered through Ireland's River Basin Management Plan (RBMP) (Water Action Plan 2024). The assessment demonstrates that this requirement is met.

1246. Article 4 requires the prevention of deterioration, the achievement of good status or good ecological potential, and compliance with objectives for protected areas. Compliance with these requirements has been assessed through the WFD assessment presented in the WSIAR.

1247. Separately, Natura 2000 sites that may be affected by the Proposed Project have been assessed under Article 6(3) of the Habitats Directive through the NIS and Appropriate Assessment process. Relevant SACs and SPAs were identified and their water-dependent conservation objectives considered where source-pathway-receptor linkages (including hydrological pathways) exist.

1248. Whilst the WFD and Habitats Directive assessments are undertaken under separate legislative requirements, they have been applied in a coordinated manner using a consistent understanding of the hydrological and ecological effects of the Proposed Development. The WFD assessment has considered potential effects on relevant water body quality elements, including hydromorphological, ecological and water quality conditions, and no deterioration has been identified. Accordingly, the Proposed Project is not expected to result in conflict with WFD objectives. Overall, the WFD has been applied correctly, the assessment is adequate to inform decision making, and no basis has been identified on which non-compliance with the WFD could be substantiated.

26.2.2.2 Failure to Satisfy Article 4(7) of the Water Framework Directive

1249. The Additional Submissions from Joe Mayo and the River Shannon Environmental Protection Alliance state that the conclusion that no Article 4(7) derogation analysis was needed because no deterioration is predicted is not established on the available evidence, and that this is a gap.

1250. The Applicant has previously responded to Additional Submissions regarding the compliance of the Proposed Project with the requirements of Article 4 of Water Framework Directive in Section 26.3.3 (Compliance with Article 4 Requirements) of the RTS. The Applicant has nothing further to add on the response previously provided, but would reiterate the following key points.

1251. Article 4(7) is a is a derogation mechanism, not a general requirement applicable to all proposed development, including abstractions. It is engaged only where a project would otherwise cause deterioration, or prevent achievement, of Good Ecological Status (GES) or Good Ecological Potential (GEP), and where those effects cannot be avoided. As the Proposed Project would neither cause deterioration nor prejudice the achievement of WFD objectives, Article 4(7) is not engaged. The WSIAR assessed the Proposed Project against GES, as a conservative proxy, in the absence of an established GEP assessment framework for the relevant Heavily Modified Water Body designations. GES represents a more stringent ecological benchmark than GEP, and demonstrates that the Proposed Project would not adversely affect the relevant quality elements. It therefore provides a conservative basis for assessing whether future attainment of GEP could be prejudiced. On that basis, the WSIAR concluded that the Proposed Project would not cause deterioration in status, would not adversely affect relevant quality elements, and would not compromise the achievement of WFD objectives – whether assessed against GES or GEP.

1252. The WSIAR demonstrates that the Proposed Project does not cause deterioration in any WFD quality element or status class, nor does it compromise the ability of any affected water body to achieve GES or GEP. Assessment of the Proposed Project against WFD objectives is outlined in the WSIAR as part of impact assessments. The WSIAR forms the evidence to reach this conclusion and was informed by other assessments undertaken for the Proposed Project, including the hydrological modelling, the EIAR, and NIS. No credible scientific evidence has been submitted to suggest that the Proposed Project would cause deterioration.

1253. Because the WSIAR concludes that no deterioration will occur, Article 4(7) is not engaged. This is consistent with EU guidance (CIS guidance) and Irish practice, where Article 4(7) is applied only in cases where deterioration is unavoidable and must be justified. The Proposed Project documentation proceeds on the basis that deterioration will not occur, and therefore does not present a structured, sequential Article 4(7) analysis. This approach is consistent with the WFD. Article 4(7), including the alternatives test in Article 4(7)(d), is engaged only where deterioration of status or failure to achieve environmental objectives is accepted or unavoidable.

1254. Article 4(7) is a test for a derogation and is undertaken after WFD compliance has been undertaken should a compliance assessment (the WSIAR) conclude that the WFD objectives are not met as a result of the Proposed Project.

1255. It may only be applied where a project is predicted to cause deterioration of a water body or prevent the achievement of environmental objectives. It is not a general requirement that applies to all abstractions or all physical modifications. Before Article 4(7) can be considered, the competent authority must first determine whether deterioration will occur.

26.2.2.3 Wastewater Return Flows – An Unassessed Full Water Cycle Impact

1256. The Additional Submission from the River Shannon Environmental Protection Alliance. states that the Applicant has not provided a regional water balance assessment to demonstrate the ability of receiving waters to accommodate additional loading without risk of WFD deterioration. The response further states that "*Outcome-based obligations under Article 4 WFD require assessment on the basis of demonstrated environmental performance, not anticipated future infrastructure upgrades.*"

1257. The Applicant has previously responded to Additional Submissions regarding receiving wastewater capacity and water cycle impacts of wastewater returns in Section 12.3.3 (Receiving Wastewater

Capacity), Section 26.3.1 (Receiving Wastewater Capacity Assessment Under the Water Framework Directive), and Section 26.3.6 (Reflection of the Water Cycle in the Assessment) of the RTS. The Applicant has nothing further to add on the response previously provided, but would reiterate the following key points.

1258. The WFD does not require a catchment wide water balance that formally links abstraction volumes to regional wastewater discharges where no causal pathway exists by which the abstraction could influence receiving water status. Wastewater discharges arising within the Eastern and Midlands Region are regulated under separate statutory frameworks. This requires that discharges are permitted and managed so as to ensure that receiving water bodies have sufficient assimilative capacity and that deterioration of status is prevented. Any discharge of water originating from the project area to receiving waters must comply with these requirements and therefore it is not a requirement of the Proposed Project WSIAR. The capacity of receiving waters has been considered through assessment of the performance and emission limits of relevant wastewater treatment infrastructure. These assessments are not part of the Proposed Project. In line with this principle, the WSIAR considers whether the Proposed Project could contribute, either directly or indirectly, to a risk of deterioration in receiving waters. The Proposed Project does not give rise to a WFD relevant wastewater pressure or a risk of deterioration when assessed in combination with existing and permitted discharges.

1259. The WFD does not require assessment across the full cycle of abstraction, use and return flows, nor does it mandate a catchment-wide analysis. It requires an evaluation of potential impacts on the specific water bodies concerned in order to test no deterioration and support environmental objectives. It is therefore appropriate and proportionate to focus the assessment in the manner that it has, as presented in the WSIAR.

26.2.2.4 Heightened WFD Evidential Burden for the Shannon (Lower)_050

1260. The Additional Submission from the River Shannon Environmental Protection Alliance. states that ACP should require the Applicant to address the "*heightened WFD evidential burden*" for the Shannon (Lower)_050, which has Poor status, and demonstrate that the Proposed Project will not jeopardise the recovery of the water body to Good Status. The Applicant addressed this in Section 26.3.4 (Reliance on Heavily Modified Water Body Designation) of the RTS. The Applicant has nothing further to add on the response previously provided, but would reiterate the following.

1261. With regard to the Shannon (Lower)_050 water body and its current Poor status, the WFD does not prohibit development proposals within water bodies that are currently below Good status. Rather, it requires that a proposal demonstrates that it will not cause deterioration in status and will not prevent the achievement of the applicable environmental objectives. The WSIAR concludes that the Proposed Project would not impede recovery or prevent the achievement of those objectives.

26.3 Response to Matters Raised Previously – Further Clarification

26.3.1 Additional Submissions

1262. There were five Additional Submissions received that required further clarification in relation to WFD. These were:

- Failure to adequately consider requirements of Article 4(8) of the Water Framework Directive;
- Use of UK guidance in the Water Status Impact Assessment Report;
- Assessment based on UKTAG methodology;
- Projected future water demand, cumulative impacts with the Shannon Fish Passage Project, ecological flow requirements, hydrological modelling assumptions and compliance with obligations under the Water Framework Directive; and

- Groundwater Integrity Surface Water-Groundwater Disconnect.

1263. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised	Previous Response
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Failure to Adequately consider requirements Article 4(8) of the Water Framework Directive	RTS - Transfer of Water Between River Catchments and Article 4(8) Basin Integrity - Section 26.4.3
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Use of UK guidance in WSIAR	RTS - Compliance with the Water Framework Directive - Section 26.2.1 RTS - Assessment Based on UKTAG Methodology - Section 26.3.5
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Assessment based on UKTAG Methodology	RTS - Assessment Based on UKTAG Methodology - Section 26.3.5
Additional Sub - Joe Mayo Previous: WSP_SUB_17	Joe Mayo		
Additional Sub - Limerick City and County Council Previous: WSP_SUB_112	Limerick City and County Council	Projected future water demand, cumulative impacts with the Shannon Fish Passage Project, ecological flow requirements, hydrological modelling assumptions and compliance with obligations under the Water Framework Directive	RTS - Whether Environmental Recovery may be Constrained - Section 11.2.6 RTS - In-Combination Assessment with the Fish Passage Project - Section 25.3.2 RTS - Compliance of the Flow with the Water Framework Directive - Section 26.4.5
Additional Sub - Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Groundwater Integrity Surface Water-Groundwater Disconnect	SRTS - Groundwater Bodies and Water Framework Directive Compliance - Section 3.2.4.1
Additional Sub: Michael Reidy Previous: WSP_SUB_22	Michael Reidy	Water Management and Effect on Lough Derg	RTS - Compliance with the Water Framework Directive - Section 26.2.1 RTS - Reliance of the Assessment on Average Flow Metrics – Section 26.3.2 RTS - Compliance with Article 4 Requirements – 26.3.3 RTS - Compliance of the Flow with the Water Framework Directive - Section 26.4.5

26.3.2 Applicant's Summary Response Providing Further Clarification on Matters Raised Previously

26.3.2.1 Failure to Adequately Consider Requirements if Article 4(8) of the Water Framework Directive

1264. The Additional Submission from the River Shannon Environmental Protection Alliance. states that under Article 4(8) of the WFD, measures implemented must not permanently exclude or compromise achievement of the Directive's objectives in other water bodies of the same river basin district. The response goes on to contend that there has been no assessment at the scale of the Shannon basin's Programme of Measures (PoMs) under the Water Action Plan 2024 and that the WSIAR does not demonstrate that abstraction during critical flow periods will not compromise the Shannon basin's PoMs.

1265. The Applicant does not accept the assertion that the Proposed Project has not adequately considered the requirements of Article 4(8) of the WFD. The Applicant responded to this matter in Section 26.4.3 (Transfer of Water Between River Catchments and Article 4(8) Basin Integrity) of the RTS, but offers the following further clarification.

1266. Article 4(8) requires that the application of the WFD's environmental objectives does not permanently exclude or compromise the achievement of those objectives in other water bodies within the same river basin district.

1267. The WSIAR assessed the potential effects of the Proposed Project on all water bodies with a viable hydrological connection to the abstraction and associated infrastructure. This included consideration of water bodies identified through the screening and scoping process, together with an assessment of relevant biological, hydromorphological and physico-chemical quality elements where a credible impact pathway was identified.

1268. The assessment concluded that the Proposed Project would not result in deterioration of any water body or quality element and would not compromise the achievement of applicable WFD objectives. In addition, the assessment considered the relevant River Basin Management Plan Programme of Measures and concluded that the Proposed Project would not prevent or undermine their implementation.

1269. The Additional Submission provides no evidence that abstraction during low-flow or drought conditions would compromise the achievement of WFD objectives elsewhere within the Shannon River Basin District. On the contrary, the hydrological modelling undertaken for the EIAR specifically assessed drought conditions, including the most sensitive historical drought events, and demonstrated that abstraction can be accommodated whilst not interfering with the maintenance of the statutory compensation flow and without causing effects that would result in deterioration or prevent the achievement of WFD objectives.

1270. As no deterioration has been identified and no impediment to the achievement of environmental objectives or Programme of Measures has been identified in any connected water body, the Proposed Project would not secure environmental objectives in one water body at the expense of another. Accordingly, the Applicant is satisfied that the requirements of Article 4(8) have been appropriately considered and met.

26.3.2.2 Use of UK Guidance in the WSIAR

1271. The Additional Submission from the River Shannon Environmental Protection Alliance. states that the WSIAR relies on UK Environment Agency guidance rather than the European Commission's Common Implementation Strategy (CIS) guidance. The response contends that post-Brexit UK guidance is not interpretively authoritative in EU law and the CIS guidance Document No. 36 (2017) requires deterioration to be assessed on the level of individual quality elements with precise findings. The Applicant previously responded to this matter in Section 26.2.1 (Compliance with the Water Framework Directive) and Section 26.3.5 (Assessment Based on UKTAG Methodology) of the RTS, but offers the following clarification.

1272. The relevant legal requirements arise from the WFD itself, together with the interpretation provided by the Court of Justice of the European Union (CJEU), rather than from any Common Implementation Strategy (CIS) guidance document. The CIS documents are expressly described as technical implementation guidance intended to facilitate application of the Directive and are not legally binding. The methodology adopted in the WSIAR was informed by Environment Agency guidance as a technical and methodological aid. That guidance reflects established WFD principles developed while the UK was an EU Member State and remains consistent with the objectives and principles underpinning the

CIS guidance. There is no requirement to disregard relevant technical guidance solely because it was published by the UK Environment Agency, particularly where it is addressing EU law.

1273. The relevant consideration is not the source of the guidance adopted but whether the assessment addresses the legal tests arising from the WFD, including the prohibition of deterioration and the protection of WFD objectives. The WSIAR identifies relevant water bodies and quality elements, assesses those for which a credible impact pathway exists, and reaches conclusions based on the available hydrological, hydrodynamic and ecological evidence. References to likelihood, risk or significance form part of the technical assessment process and do not replace the underlying WFD compliance tests.

26.3.2.3 Assessment Based on UKTAG Methodology

1274. The Additional Submission from the River Shannon Environmental Protection Alliance. states that the proposed abstraction exceeds UKTAG low flow percentage benchmarks when measured against the Q95 value in the Applicant's modelling and compliance with UKTAG river standards have not been demonstrated. The response goes on to state that UKTAG is selectively used and that either UKTAG thresholds are relevant (and therefore the exceedance at Q95 is a finding ACP must address) or they are not relevant (and therefore the Applicant's claim that the Proposed Project has "passed the UKTAG test" must be withdrawn). The response further states that ACP should require either an Irish-specific calibration of UKTAG thresholds against Irish EPA biological class boundaries, or a WFD compliance assessment based purely on CIS guidance and Irish biological monitoring methodology without use of UKTAG guidance. The Additional Submission from Joe Mayo includes similar matters.

1275. The Applicant does not accept that there is any inconsistency in its use of UKTAG guidance. The Applicant previously responded to this matter in Section 26.3.5 (Assessment Based on UKTAG Methodology) of the RTS, but offers the following clarification.

1276. As previously stated, UKTAG thresholds are not used to define WFD ecological status or deterioration. They are not statutory standards in Ireland, nor are they intended to operate as biological class-boundary metrics. In Ireland, WFD status classification and deterioration assessment are based on EPA biological quality elements and supporting conditions in accordance with Annex V of the WFD. Hydrological parameters, including flow and lake-level variation, are supporting indicators rather than determinative criteria.

1277. References to UKTAG guidance within the assessment provide a useful line of supporting evidence in relation to potential hydrological effects. The Applicant's observation that the Proposed Project satisfies relevant UKTAG screening criteria does not elevate those criteria to a statutory test for WFD compliance, nor does it imply that the outcome of the WFD assessment is dependent upon them.

1278. Accordingly, even if alternative interpretations of UKTAG screening metrics are advanced by submitters, this would not alter the conclusions of the WSIAR, which are based on the overall evidence base, including hydrological modelling, hydrodynamic modelling, ecological assessment and consideration of relevant WFD quality elements. The assessment of deterioration has not been based solely on UKTAG thresholds.

1279. The Applicant also does not accept that WFD compliance assessments must be undertaken solely in accordance with CIS Guidance Document No. 36. As set out in Section 26.3.2.2 (Use of UK Guidance in the WSIAR) of this Report, CIS Guidance No. 36 is non-binding implementation guidance and is not a prescribed methodology for project-level WFD assessment. The relevant legal test remains whether the Proposed Project would result in deterioration of water body status or prevent the achievement of WFD objectives.

1280. The WSIAR applies that legal test directly and concludes that the Proposed Project would not result in deterioration of any relevant quality element or water body status and would not compromise the achievement of WFD objectives. The Applicant therefore does not consider that any further calibration of UKTAG thresholds, or a revised assessment based solely on either UKTAG or CIS guidance, is necessary.

26.3.2.4 Projected Future Water Demand, Cumulative Impacts with the Shannon Fish Passage Project, Ecological Flow Requirements, Hydrological Modelling Assumptions and Compliance with Obligations Under the Water Framework Directive

1281. The Additional Submission from Limerick City and County Council states that issues remain unresolved regarding future water demand, cumulative impacts with the Shannon Fish Passage Project, ecological flow requirements, hydrological modelling assumptions and compliance with the Water Framework Directive and Habitats Directive. The matters raised in the Additional Submission have been addressed in various sections of the RTS, including:

- Section 11.2.6 (Whether Environmental Recovery may be Constrained)
- Section 25.3.2 (In-Combination Assessment with the Fish Passage Project)
- Section 26.4.5 (Compliance of the Flow with the Water Framework Directive)

1282. The Applicant maintains that these matters have been assessed within the application documentation and have been the subject of detailed responses to Additional Submissions received during the consultation process.

1283. The Applicant does not accept that any of the matters identified demonstrate a deficiency in the assessment or undermine the conclusions reached in the EIAR, NIS or WSIAR. The assessments have been informed by an extensive evidence base, including hydrological and ecological modelling, and have considered cumulative effects, future operational scenarios and relevant legislative requirements.

1284. Whilst the submitter continues to disagree with the conclusions of those assessments, no new evidence has been provided that demonstrates that the Proposed Project would result in significant adverse environmental effects, deterioration in WFD status, adverse effects on the integrity of any European site, or non-compliance with applicable environmental legislation.

1285. Accordingly, the Applicant remains satisfied that the information submitted provides a robust basis for ACP's assessment of the Proposed Project and supports the conclusions presented within the application documentation.

26.3.2.5 Groundwater Integrity Surface Water-Groundwater Disconnect

1286. The Additional Submission from Environmental Trust Ireland state that groundwater was scoped out of the WSIAR and therefore the Applicant has failed to conduct a legally compliant, comprehensive cumulative WFD compliance assessment. Environmental Trust Ireland also contend that impacts on GWDTEs are not fully considered due to surface water-groundwater connectivity. The Applicant responded to this matter in Section 3.2.4.1 (Groundwater Bodies and Water Framework Directive Compliance) of the SRTS, but offers the following clarification.

1287. The WSIAR did not simply "scope out" groundwater bodies. Table 4.3 of the WSIAR identifies and screens groundwater bodies with the potential to interact with the Proposed Project, and Table 4.5 presents the assessment of relevant groundwater quality and supporting elements. The assessment concluded that the Proposed Project would not cause deterioration in groundwater status or compromise the achievement of WFD objectives.

1288. Groundwater-surface water interactions were also specifically considered as part of the hydrogeological assessment presented in EIAR Chapter 10 - Soils, Geology and Hydrogeology. The scope of the assessment expressly included groundwater flow effects and groundwater-surface water interactions. Having regard to the nature of the Proposed Project, the hydrogeological setting and the assessment findings, Chapter 10 concluded that significant operational effects on groundwater are not likely.

1289. The Additional Submission is based on the premise that the Proposed Project will materially lower river levels during drought conditions. This is not supported by the hydrological modelling. The modelling demonstrates that any changes to water levels would be limited, would occur only during extreme drought conditions, would remain within the range of normal historical fluctuations, and would not alter the statutory compensation flow regime. Accordingly, the assessment did not identify any mechanism by which the Proposed Project would significantly alter hydraulic gradients, adversely affect groundwater bodies, or cause drawdown of GWDTEs.

1290. The Additional Submission provides no evidence demonstrating that the Proposed Project would result in groundwater drawdown of a magnitude capable of adversely affecting GWDTEs, protected fens, springs or groundwater status. Similarly, no evidence has been provided to demonstrate that the proposed abstraction would alter groundwater flow regimes so as to mobilise historic contamination within the Silvermines area.

1291. The Applicant also notes that the Silvermines Gravels groundwater body was screened into the assessment and considered within the WSIAR. Available EPA Catchments data indicates that this groundwater body is currently classified as having Good overall status and is not identified as being at risk. While the Historic Mines (Silvermines) groundwater body is identified separately, the Additional Submission has not demonstrated any credible pathway by which the Proposed Project could affect groundwater quality or contamination within that water body.

1292. The Applicant does not accept the assertion that the Zone of Influence (ZoI) was arbitrarily defined or that groundwater-surface water interactions, GWDTEs or designated sites were excluded from assessment. A further response on this matter in relation to the perceived omission of downstream European sites is provided in Section 25.3.2.3 (Exclusion of SACs/SPAs and the Arbitrary ‘Zone of Influence’) of this Report.

1293. The WSIAR concludes that, taking account of the identified impact pathways and the proposed mitigation measures, the Proposed Project would not compromise WFD objectives or cause deterioration in the status of any surface water or groundwater body. The Applicant therefore does not accept that reasonable scientific doubt remains in relation to groundwater effects, nor that the Additional Submission identifies any deficiency in the groundwater assessment.

26.3.2.6 Water Management and Effect on Lough Derg

1294. The Applicant notes that the submission raises two distinct matters: firstly, whether the Proposed Project would adversely affect Lough Derg such that WFD objectives could be compromised; and secondly, broader questions relating to the long-term management and allocation of water resources within the Shannon catchment, including future demands and competing uses. The WSIAR addresses the former through project-specific hydrological, ecological and WFD assessment. The latter are matters for River Basin Management Planning, national water resources planning and regulatory decision-making processes.

1295. In relation to the WFD assessment, the submission refers to methodologies developed during preparation of the original RBMPs, including work undertaken in support of the former Eastern River Basin District, to assess the effects of water level changes on lakes. The Applicant acknowledges the existence of these strategic planning tools. However, such methodologies were developed to support catchment-

scale water resource management and River Basin Management Planning, rather than as prescribed methodologies for project-level WFD assessment.

1296. The WSIAR nevertheless addresses the underlying question that these methodologies were intended to inform, namely whether changes in water levels have the potential to affect ecological conditions within a lake system, through a project-specific assessment supported by detailed hydrological modelling of the Shannon system, including low-flow and drought conditions, together with consideration of relevant WFD quality elements and environmental objectives. This included considering the role of Lough Derg within the wider Shannon system and whether operation of the Proposed Project would result in hydrological or ecological changes of a magnitude capable of affecting ecological condition.

1297. The assessment concluded that the predicted changes in water levels and flows would not cause deterioration in any water body or quality element and would not compromise the achievement of current or future WFD objectives. The WSIAR applies that legal test directly and concludes that the Proposed Project would not cause deterioration and would not prejudice the achievement of current or future WFD objectives. Reference to an alternative RBMP methodology would not alter those conclusions.

26.4 Response to New Matters Raised in Additional Submissions

26.4.1 Additional Submissions

1298. Four responses raised new matters including:

- Failure to consider Article 7 of the Water Framework Directive;
- Lack of WFD classification and objective for Derg TN;
- Groundwater bodies along the route;
- Abstraction licencing process and Article 4(7) of the WFD;
- Low flow rebuttal.

1299. The following Additional Submissions raised matters which related to these.

Additional Submission Ref	Name of Individual or Organisation	Matter Raised
Additional Sub - Joe Mayo Previous: WSP_SUB_17	Joe Mayo	Failure to consider Article 4(7) of the Water Framework Directive
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Lack of WFD classification and objective for Derg TN
Additional Sub - Environmental Trust Ireland Previous: WSP_SUB_43	Environmental Trust Ireland	Groundwater bodies along the route
Additional Sub - River Shannon Environmental Protection Alliance. Previous: WSP_SUB_26	River Shannon Environmental Protection Alliance.	Abstraction licencing process and Article 4(7) of the WFD
Additional Sub – Garrett Reil and Cliona Geary Previous: WSP_SUB_48	Garrett Reil and Cliona Geary	Low flow rebuttal

26.4.2 Applicant's Response to New Matters Raised

26.4.2.1 Failure to Consider Article 7 of the Water Framework Directive

1300. The Additional Submission from Joe Mayo contends that the Parteen Basin (Derg HMWB) abstraction point will mean that the water body is intended to be used for the abstraction of drinking water and therefore ACP should require the Applicant to identify whether the obligations under Article 7 of the WFD have been assessed.

1301. The Applicant does not agree that a separate Article 7 assessment has been omitted.

1302. Article 7 Protected Areas are designated by the competent authorities and the WSIAR has taken account of all relevant protected areas identified within the applicable regulatory datasets. The abstraction is located within the Parteen Basin (Derg HMWB) water body. This water body is not designated as an Article 7 Drinking Water Protected Area, notwithstanding that the adjacent Lough Derg (Derg TN) water body is so designated.

1303. The WSIAR assessed the Proposed Project against the requirements of Article 4 of the WFD, including the obligation to prevent deterioration in water body status and to protect and enhance the aquatic environment. The assessment concluded that the Proposed Project would not result in deterioration of any relevant water body or compromise the achievement of WFD objectives.

1304. In any event, the concerns underlying Article 7 relate to the protection of waters used for the abstraction of drinking water so as to reduce the level of treatment required. The hydrological and ecological assessments supporting the WSIAR demonstrate that the proposed abstraction would not give rise to changes in water quantity, water quality or ecological conditions of a magnitude capable of causing deterioration in any relevant WFD quality element. Accordingly, no effects have been identified that would conflict with the objectives of Article 7.

1305. The Applicant therefore considers that the relevant WFD obligations have been appropriately assessed and that no separate deficiency in relation to Article 7 has been identified.

26.4.2.2 Lack of WFD Classification and Objective for Derg TN

1306. The Additional Submission from the River Shannon Environmental Protection Alliance. states that ACP should require the Applicant to confirm the WFD classification and applicable objective for Derg TN as a natural water body and demonstrate that conclusions reached in the WSIAR hold against the classification and objective.

1307. The Derg Transitional water body (TN) is included within the WSIAR baseline and was identified as requiring consideration within the assessment process. The WSIAR includes a scoping assessment of all relevant WFD quality elements. For the construction and commissioning phase, the Derg TN was scoped out of detailed assessment as no construction or commissioning activities are proposed within, adjacent to, or hydrologically connected to the 24 tributaries that drain to the Derg TN. For the operational phase, all relevant quality elements, with the exception of specific pollutants, were scoped into further assessment due to the potential for abstraction from the Derg HMWB to influence connected water bodies, including the Derg TN. The WSIAR therefore considers the potential implications of the abstraction on the Derg TN and other hydrologically connected WFD water bodies. The WSIAR also includes assessment of potential effects on the Derg TN Drinking Water Protected Area and Nutrient Sensitive Area and considers compliance with relevant objectives and requirements. In addition, the Proposed Project has been assessed against the measures set out within the Water Action Plan 2024. Therefore, the Applicant maintains that the Derg TN has been assessed appropriately and comprehensively within the WSIAR.

26.4.2.3 Groundwater Bodies Along the Route

1308. The Additional Submission from Environmental Trust Ireland states that the Applicant *"only noted one groundwater body scoped in their project documentation – Limerick City Northwest (IE SH GW 140) – associated with local influenza of flows into North Ballycannan and Crompaun East surface water bodies."* The response contends that, based on EPA Catchments.ie Cycle 3 catchment reports, the groundwater bodies within the Lower Shannon and Shannon Estuary South catchments should be fully documented.

1309. The Applicant does not agree with the Additional Submission's characterisation of the groundwater assessment. The WSIAR does not identify only one groundwater body for assessment. Rather, Table 4.3 of the WSIAR identifies and assesses 18 groundwater bodies with the potential to interact with the Proposed Project.

1310. The Applicant is also unclear as to the source of the reference to the Limerick City Northwest groundwater body (IE_SH_GW_140), as this groundwater body is not identified as a groundwater receptor requiring detailed assessment within the WSIAR. Groundwater bodies were screened on the basis of the potential for interaction with the Proposed Project, taking account of the location of project activities and the presence of hydrological pathways. Groundwater bodies with no credible pathway for impact were appropriately screened out in accordance with the assessment methodology.

1311. The fact that additional groundwater bodies exist within the wider Lower Shannon and Shannon Estuary South catchments does not mean that all such groundwater bodies require detailed assessment. The WFD assessment methodology requires consideration of those water bodies for which an impact pathway exists.

1312. Table 4.5 of the WSIAR presents the assessment of the screened groundwater bodies and provides justification where groundwater quality elements and supporting elements were scoped out. The assessment concluded that the Proposed Project would not cause deterioration in groundwater status or compromise the achievement of WFD objectives.

1313. Similarly, water bodies such as Crompaun (East)_010 were not identified as receptors requiring detailed assessment because no activities associated with the Proposed Project occur within, adjacent to, or hydrologically connected to those water bodies.

1314. The Applicant therefore remains satisfied that the groundwater assessment was undertaken on a proportionate and evidence-based basis, considering all groundwater bodies with the potential to be affected by the Proposed Project, and that no additional groundwater assessment is required.

26.4.2.4 Abstraction Licencing Process and Article 4(7) of the WFD

1315. The Additional Submission from the River Shannon Environmental Protection Alliance. contends that Article 4(7) should not be excluded due to the fact that the abstraction licence has not yet been applied for from the EPA which means abstraction volumes, curtailment rules and ecological controls are as yet unknown.

1316. The Applicant does not agree that the future abstraction licensing process creates uncertainty such that a conclusion on WFD compliance cannot be reached at this stage.

1317. The WSIAR assesses the Proposed Project based on the design, operational assumptions, abstraction regime, mitigation measures and environmental controls that form part of the application and accompanying environmental assessments. The conclusion is that, under those assessed parameters, the Proposed Project would not cause deterioration in water body status or compromise the achievement of WFD objectives.

1318. Whilst the abstraction licence will be consented separately by the EPA, this does not prevent the Commission from undertaking an assessment and reaching a conclusion based on the information before it. The licensing process does not remove the requirement for the abstraction to comply with applicable environmental legislation, including the objectives of the WFD.

1319. The possibility that the EPA may refine operational controls through the licensing process does not undermine the assessment undertaken or the conclusions reached.

1320. In summary, the Applicant remains satisfied that sufficient information has been provided to enable the Commission to assess the effects of the Proposed Project and conclude that the Proposed Project would not cause deterioration in water body status or compromise the achievement of WFD objectives.

26.4.2.5 Low Flow Rebuttal

1321. The Additional Submission from Garrett Reil and Cliona Geary contends that the low flow rebuttal addressed the wrong claim. The Additional Submission states that the Proposed Project would abstract approximately 30% of the Q95 flow and contends that this demonstrates a significant ecological effect. A response in relation to the percentage of the flow used by the Proposed Project is provided in Section 11.3.2.1 of this Report. The Applicant does not agree that the percentage of flow abstracted in isolation is an appropriate measure of WFD compliance or ecological effect.

1322. The WFD requires assessment of whether a proposal would cause deterioration in the status of a water body or prevent the achievement of environmental objectives. It does not establish a regulatory threshold based on the proportion of Q95 flow abstracted. Accordingly, the assessment did not rely on a comparison between abstraction volumes and Q95 flow statistics alone. Rather, the assessment considered the resulting changes to water levels, flows and relevant WFD quality elements through detailed hydrological modelling and ecological assessment.

1323. The hydrological modelling specifically assessed low-flow and drought conditions, including historic drought events and future climate change scenarios. The modelling demonstrates that, even under these conservative scenarios, the resulting changes in water levels and hydrological conditions are small, remain within the normal operating range of the system and do not result in changes of a magnitude capable of causing deterioration in any WFD quality element or preventing the achievement of WFD objectives.

1324. The focus on Q95 abstraction percentages also does not reflect the operation of the Parteen Basin system. During low-flow periods, abstraction is supplied through the managed operation of the reservoir system, with the statutory compensation flow and fish-pass flow continuing to be maintained. The relevant question is therefore not the proportion of the instantaneous inflow represented by the abstraction, but whether the operation of the system with the abstraction results in hydrological changes capable of adversely affecting ecological status or objectives. The assessment concludes that it does not.

1325. Consequently, while the Additional Submission identifies the proportion of Q95 flow represented by the abstraction, this statistic does not in itself demonstrate deterioration, non-compliance with the WFD, or adverse ecological effects, and prevent water bodies from meeting Good status. These matters were assessed directly through the hydrological, ecological and WFD assessments undertaken for the Proposed Project, all of which conclude that the Proposed Project would not cause deterioration in status and would not impede the achievement of WFD objectives.

27. Additional Topics

1326. The Additional Topics Chapter provided in the RTS considered matters raised in the submissions to ACP regarding the Proposed Project which did not fall within the scope of Chapters 2 to 26 of the RTS.

1327. A number of those matters have been raised again by Ballymore Eustace Trout and Salmon Anglers Association, Richard Cahill and River Shannon Environmental Protection Alliance, in the Additional Submissions including;

- Ballymore Eustace Water Treatment Plant;
- Regulatory Compliance;
- Health Impact of Lead in Piping;
- Geotechnical Sinkhole Risk;
- Environmental Liability Directive 2004/35/EC; and
- Carbon Cost Comparison.

1328. The Applicant has no further response to add to the previous responses provided in the RTS regarding these matters.

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Appendix A – Additional Submission Identification Table

Unique ID	ACP Reference Number**	Name of Individual or Organisation	Topics Raised (as per Structure of this Report)	Matter raised	Has the Applicant responded to the matter in the Response to Submission Report / Supplementary Response to Submissions Report?	Does the Applicant rely on its original response and not clarify further?	Is this a new matter?
Additional Sub: Castleconnell River Association Previous: WSP_SUB_35	11	Castleconnell River Association	Project Description	Availability of water	Yes RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)	Yes – see Section 6.2.2.4 of this Report	No
			Water (Modelling)	Protecting the Statutory Minimum Compensation Flow	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3	No – see Section 11.2.2.1 of this Report.	No
				Whether Environmental Recovery may be Constrained – Fish Passage Project	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.9 of this Report.	No
				Delivery of measures for Environmental Recovery – Fish Pass Project	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.10 of this Report.	No

Unique ID	ACP Reference Number**	Name of Individual or Organisation	Topics Raised (as per Structure of this Report)	Matter raised	Has the Applicant responded to the matter in the Response to Submission Report / Supplementary Response to Submissions Report?	Does the Applicant rely on its original response and not clarify further?	Is this a new matter?
				Availability of Water - Calculation of Storage	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3	No – see Section 11.3.2.4 of this Report.	No
				Cumulative modelling and assessment	Yes RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6	No – see Section 11.3.2.13 of this Report	No
				Severity of modelled drought - 2018 not in the top 10 worst droughts on record	No	N/A	Yes – See Section 11.4.2.1
			Resource and Waste Management	Risk of pollution from the WTP	Yes RTS – Management of Waste at the Proposed Water Treatment Plant – Section 22.2.1. RTS – Wastewater Infrastructure – Section 6.4.11.	Yes – see Section 22.2.2.1 of this report.	No

Unique ID	ACP Reference Number**	Name of Individual or Organisation	Topics Raised (as per Structure of this Report)	Matter raised	Has the Applicant responded to the matter in the Response to Submission Report / Supplementary Response to Submissions Report?	Does the Applicant rely on its original response and not clarify further?	Is this a new matter?
			Cumulative Effects and Interaction	Cumulative impact with the Shannon Fish Passage Study	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – Potential Cumulative Impact with the Shannon Fish Passage Study – Section 24.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 24.2.2.1 of this Report	No
			Natura Impact Statement	In-combination assessment with the Fish Passage Project	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 25.2.2.1 of this Report	No
				Degradation of wild salmon habitat	Yes RTS – Degradation of Wild Salmon Habitat – Section 25.3.8	Yes – see Section 25.2.2.2 of this Report	No
Additional submission Chambers Ireland Previous: WSP_SUB_09	12	Chambers Ireland	Planning	Support for the project and timely delivery	Yes RTS - Support / Acknowledgement for the Need for the Proposed Project - Section 3.2.1	Yes – see Section 3.2.2.1 of this Report	No

Unique ID	ACP Reference Number**	Name of Individual or Organisation	Topics Raised (as per Structure of this Report)	Matter raised	Has the Applicant responded to the matter in the Response to Submission Report / Supplementary Response to Submissions Report?	Does the Applicant rely on its original response and not clarify further?	Is this a new matter?
Additional Sub: Christopher Campion Previous: WSP_SUB_10	13	Christopher Campion	Overarching Matters	3. UE rejection of submissions without substantial argument – costs.	Yes Section 2.5 (Project Costs / Cost Benefit)	No – see Section 2.3.2.1 of this Report	No
				2,14. Data centre demand not included.	No	No	Yes - see Section 2.4.2.1 of this Report
			Consideration of Reasonable Alternatives	Pre-occupation with single solution	Yes RTS – Alternative Assessment – Section 5.2.9	Yes – see Section 5.2.2.3 of this Report	No
				Alternative groundwater sources	Yes RTS – Alternative Source – Section 5.2.2	Yes – see Section 5.2.2.2 and 5.2.2.4 of this Report	No
				Lough Ree abstractions	Yes RTS – Groundwater Alternatives – Section 5.2.3	Yes – see Section 5.2.2.2 of this Report	No

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			Planning	Balanced Regional Development	Yes RTS - Balanced Regional Development - Section 3.2.3	Yes- see Section 3.2.2.3 of this Report	No
			Project Description	Availability of water	Yes RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)	Yes – 6.2.2.4	No
				4. Proposed project is not at all 'resilient'.	Yes RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10	No – see Section 6.3.2 of this Report	No
				5. Threats and risks demonstrate vulnerability.	Yes RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10	No – see Section 6.3.2.1 of this Report	No

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			Biodiversity	Abstraction at Parteen will cause ecological damage in Lough Derg	Yes RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Potential Fisheries Impacts – Section 10.4.6	Yes – see Section 10.2.2.1 of this Report	No
			Water (Modelling)	Prolonged drought	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS – Future Climate Change – Section 11.2.4 RTS – Operation of the model / Management of Water Levels – Section 11.2.9	Yes – see Section 11.2.2.1 of this report	No

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				Availability of water - Revisiting the 2018 drought including: 12. Deceptive presentation of the project's impact.	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3 RTS - Future Climate Change – Section 11.2.4 RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5 RTS- Operation of the Model / Management of Water Levels – Section 11.2.9 RTS - Sensitivity Test on Starting water Level – Section 11 .3.6 RTS – Water Abstraction Adaptive Management – Section 11.4.3	No – see Section 11.3.2.3 of this Report.	No
				Climate Change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.6 of this report	No
				Maintaining the minimum compensation flow – 50% reduction in the residual flow on the Shannon	Yes RTS –Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow– Section 11.2.3	Yes – see Section 11.3.2.1 of this report	No

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				15. Clareville WTP supplies Limerick: water is from the Shannon tool	Yes RTS – Human Health – 18.3.5	No – see Section 11.3.2.13 of this Report	No
			Climate	Climate change induced drought conditions and the impact on water abstraction	Yes RTS – Climate Adaptation - Section 16.2.4	Yes – see Section 16.2.2.1 of this Report	No
			Natura Impact Statement	European and Irish Habitats Directives are legally binding.	Yes RTS – Potential Breach of S.I. No. 331/2019 – Section 10.3.10 RTS – Compliance with the Habitats Directive – Section 25.2.1	Yes – see Section 25.2.2.3 of this Report	No
				Lough Derg is not a Demand-Reservoir	Yes RTS – Potential Impacts of the Proposed Abstraction on Habitats and Species – Section 10.2.3	No – see Section 25.3.2.1 of this report	No
Additional Sub: Cllr. Sean Hartigan Previous: WSP_SUB_11	17	Councillor Seán Hartigan	Project Description	Capacity of the Proposed Pipeline - The full capacity of the pipe needs to be divulged.	Yes RTS - Capacity of the Proposed Pipeline – Section 6.2.2	Yes – see Section 6.2.2.1 of this Report	No

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				Adequacy of Designed Storage Capacity - Increased storage capacity.	Yes RTS - Adequacy of Designed Storage Capacity – Section 6.2.5	Yes – see Section 6.2.2.3 of this Report	No
			Water (Modelling)	Delivery of measures for Environmental Recovery – Fish Pass Project	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.10 of this Report	No
				Downstream effects on the River Shannon – Fish Pass	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.9 of this Report	No
				Cumulative modelling – Fish Pass	Yes RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.11 of this Report	No
				Whether Environmental Recovery may be Constrained - A higher eflow and / freshets should apply during a drought	No	N/A	Yes – see Section 11.4.2.3

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			Cumulative Effects and Interactions	Cumulative Impact with the Shannon Fish Passage Study	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – Potential Cumulative Impact with the Shannon Fish Passage Study – Section 24.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 24.2.2.1 of this Report	No
			Natura Impact Statement	Potential Impact of the Proposed Abstraction on Habitats and Species, including interaction with, and in-combination assessment with, the Fish Passage Project	Yes RTS – Potential Impacts of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18 RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	No – see Section 25.3.2.2 of this Report	No
Additional Sub: Joe Mayo Previous: WSP_SUB_17	54	Joe Mayo	Overarching matters	RTS / SRTS thematic responses	No RTS report did not answer all matters raised	No	Yes - see Section 2.4.2.4 of this Report

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				Reliance on mitigation	Yes RTS – Mitigation Measures in EIAR and NIS - 2.8	Yes – see Section 2.2.2.3 of this Report	No
				ACP not yet applied for an abstraction licence.	Yes RTS – Abstraction Licensing - 2.5	Yes – see Section 2.2.2.2 of this Report	No
				ESB licence not yet lodged.	Yes RTS – Abstraction Licensing - 2.5	Yes – see Section 2.2.2.2 of this Report	No
				Clarity, efficacy, enforceability and auditability of mitigation in the EIAR	Yes RTS – Mitigation Measures in EIAR and NIS – Section 2.8	Yes – see Section 2.2.2.3 of this Report	No
				Alternatives Assessment does not comply with EIA Directive	RTS – Compliance with the Environmental Impact Assessment and Strategic Environmental Assessment Directives – Section 2.6	No – see Section 2.3.2.3 of this Report	No

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				RTS report did not answer all matters raised and did not provide evidence	No	N/A	Yes – see Section 2.4.2.4
				ESB operation excluded from the project- not considering the whole project.	Yes RTS – Abstraction Licensing – Section 2.3	Yes – see Section 2.2.2.2 of this Report	No
			Planning	N/A			
			Consideration of Reasonable Alternatives	NWRP only assessed at a strategic level rather than project level.	Yes RTS – Alternative Assessment – Section 5.2.9	Yes – see Section 5.2.2.3	No
			Consultation & Communication	N/A			
			Biodiversity	Invasive species risk under altered flow	Yes RTS – Pathways for Invasive Species Introduction or Pathogen Transfer – Section 25.4.17 RTS – Impact of Aquatic Invasive Species on Native Fauna – Section 10.4.33	Yes – see Section 10.2.2.2 of this Report	No

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				Groundwater dependent terrestrial ecosystems	Yes RTS – Assessment of Groundwater Dependent Terrestrial Ecosystems – Section 10.4.32 RTS – Landscape Abstraction Impacts and Changes to Seasonal Flow – Section 12.4.6 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12	Yes – see Section 10.2.2.3 of this Report	No
			Water (Modelling)	Integration of operational variables into the hydrological modelling	Yes RTS – Overview (Chapter 11) – Section 11.1	Yes – see Section 11.2.2.3 of this Report.	No
				Climate Change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.2.3.6 of this Report.	No

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				Low flow duration	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow – Section 11.2.3 RTS - Future Climate Change – Section 11.2.4 RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5	No – see Section 11.2.3.12 of this Report.	No
				Multi-year droughts	Yes RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5	No – see Section 11.2.3.8 of this Report.	No
				Framework for Adaptive Management	No	N/A	Yes – 11.4.2.6
			Cumulative Effects and Interactions	The whole project and impermissible project-splitting	Yes RTS – Cumulative Impacts with ESB at Parteen Basin – Section 24.4.2	No – see Section 24.3.2.1 of this Report	No

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			Natura Impact Statement	Appropriate Assessment and Natura issues	Yes RTS – Compliance with the Habitats Directive – Section 25.2.1 RTS – Adequacy of the Findings of the Appropriate Assessment – Section 25.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2 RTS – Compliance of the Natura Impact Statement – Section 25.4.21 RTS – Adequacy of the Ecological Assessment for the Shannon – Section 10.3.8 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18 RTS – Restoring the Lower River Shannon SAC – Section 10.4.36 SRTS – Potential for Adverse Effects on a Special Conservation Interest or Qualifying Interest Bird Species, Golden Plover – Section 2.2.13.1	Yes – see Section 25.2.2.4 of this Report	No
			Water Status Impact Assessment Report (Water Framework Directive)	Compliance with the Water Framework Directive	Yes RTS – Compliance with the Water Framework Directive – Section 26.2.1	Yes – see Section 26.2.2.1 of this Report	No

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				Failure to satisfy Article 4(7) of the Water Framework Directive	Yes RTS - Compliance with Article 4 Requirements - Section 26.3.3	Yes – see Section 26.2.2.2 of this Report	No
				Assessment based on UKTAG Methodology	RTS - Assessment Based on UKTAG Methodology - Section 26.3.5	No – see Section 26.3.2.3 of this Report	No
				Failure to consider Article 7 of the Water Framework Directive	No	N/A	Yes – see Section 26.4.2.1 of this Report
Additional sub: John Fingleton Previous: WSP_SUB_19	57	John Fingleton	Planning	N/A			
			Consideration of Reasonable Alternatives	Response does not provide a rational reason why the source should not be changed from Parteen basin to Slevoir.	Yes RTS – Alternative Abstraction Location / Shortest Route – Section 5.2.8	No – see Section 5.3.2.1 of this Report	No
				Does not include metrics used in selection the pipe diameter.	Yes RTS – Alternative Design Pipeline Design Measures – Section 5.3.6	No – see Section 5.3.2.2 of this Report	No

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			Project Description	Opportunities to reduce the number of valves, pipeline diameter and the use of butterfly valves.	Yes RTS - Alternative Design Pipeline Design Measures – Section 5.3.6	Yes – see Section 6.2.2.2 of this Report	No
				Pipeline design and high point of the BPT Inconsistent use of the BPT	Yes RTS -Use of Gravity Pressure – Section 6.3.5	No – see Section 6.3.2.2 of this Report.	No
Additional Sub: Michael Reidy Previous: WSP_SUB_22	81	Michael Reidy	Overarching Matters	Sufficient legislative detail for Water Resource Plans and holistic view of the management of the resource.	Yes RTS –Status of the Regional Water Resources Plan – Section 2.1	No – see Section 2.3.2.1 of this Report	No
			Consultation and Communication	5.Future development of the midlands now no longer part of the proposal.	Section 4.3.1 (Future Take Offs)	Yes – see Section 4.2.2.3 of this Report	No
			Consideration of Reasonable Alternatives	2.Introduction of an alternative that has not been examined.	Yes RTS – Alternative Source – Section 5.2.2 RTS – Alternative Assessment – Section 5.2.9	No – see Section 5.2.2.3 of this Report	No

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			Project Description	Availability of water	Yes RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)	Yes – see Section 6.2.2.4 of this Report	No
				Shut down of the pipeline	Yes RTS – Systemic Vulnerability of the Proposed Project – 6.3.10	No – see Section 6.3.2 of this Report	No
			Biodiversity	Decline of fish life	Yes RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18	Yes – see Section 10.2.2.4 of this Report	No
			Water (Modelling)	Availability of water in a drought	Yes RTS - Availability of Water in a drought - Section 11.3.3	No – see Section 11.3.2.3 of this Report	No

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			Population	Environmental issues associated with Lough Derg are inadequately addressed. Populations, tourism industries and future potential usage are interwoven	RTS – Potential Impact on Local Tourism and Amenity Impacts of the Proposed Project on Lough Derg and the Lower River Shannon – Section 17.2.2 RTS – Potential Economic Impact on Mountshannon – Section 17.3.1 RTS – Potential Recreation and Tourism Impacts of Reduction in Fish Stock – Section 17.3.2 RTS – Considerations for Tourism Assessment – Section 17.4.2	Yes – see Section 17.2.2.1 of this Report	No
			Water Status Impact Assessment Report (Water Framework Directive)	Water Management and Effect on Lough Derg	RTS - Compliance with the Water Framework Directive - Section 26.2.1 RTS - Reliance of the Assessment on Average Flow Metrics – Section 26.3.2 RTS - Compliance with Article 4 Requirements – 26.3.3 RTS - Compliance of the Flow with the Water Framework Directive - Section 26.4.5	No – see Section 26.3.2.6 of this Report	No
Additional sub: Richard Cahill Previous: WSP_SUB_25	93	Richard Cahill	Overarching matters	Data centres.	No	No	Yes - see Section 2.4.2.1 of this Report
			Consideration of Reasonable Alternatives	Alternative abstraction location / shortest route.	Yes RTS – Alternative Abstraction Location / Shortest Route – Section 5.2.8	No – see Section 5.3.2.1 of this Report	No

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			Project Description	Adequacy of designed storage capacity.	Yes RTS -Adequacy of Designed Storage Capacity) - Section 6.2.5	See Section 6.2.2.3 and 6.3.2.4 of this Report	No
			Additional Topics	Regulatory Compliance	Section 27.1	Yes – see Chapter 27 of this Report	No
Additional Sub: River Shannon Protection Alliance Previous: WSP_SUB_26	94	River Shannon Environmental Protection Alliance	Overarching Matters	22.1 census data	Yes RTS – Population Growth Forecast – Section 2.2	Yes – see Section 2.2.2.1 of this Report	No
				7 Piecemeal Consenting – Abstraction Licence Sequencing	Yes RTS – Abstraction Licensing - 2.5	Yes – see Section 2.2.2.2 of this Report	No
				20. CEMP mitigation enforceability	Yes RTS – Mitigation Measures in EIAR and NIS - 2.8	Yes – see Section 2.2.2.3 of this Report	No

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				19 The 10:1 CBA Ratio and the Preliminary Business Case	Yes RTS – Project Costs / Cost Benefit – 2.5	No – see Section 2.3.2.2	No
				Alternatives Assessment does not comply with EIA Directive	Yes RTS – Compliance with the Environmental Impact Assessment and Strategic Environmental Assessment Directive – Section 2.6	No – see Section 2.3.2.3 of this Report	No
				Inaccurate Leakage Values	Yes RTS – Challenging the Need for the Proposed Project – Section 3.2.2	No – see Section 2.3.2.4 of this Report	No
				3.2 Access to information	No	No	Yes - see Section 2.4.2.3 of this Report
				4.2, 4.3 RtS report did not answer all matters raised	No	No	Yes - see Section 2.4.2.4 of this Report
				Missed Leakage Targets	No	N/A	Yes – see Section – 2.4.2.5 of this Report
			Planning	N/A			

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			Consideration of Reasonable Alternatives	Groundwater Sources in Kildare	Yes - RTS – Groundwater Alternatives – Section 5.2.3	Yes – see Section 5.2.2.2 of this Report	No
				Alternative sources plan level assessment	Yes – RTS - Alternative Sources - Section 5.2.2	Yes – see Section 5.2.2.4 of this Report	No
				Approach to alternatives	Yes – RTS - Alternative Assessment - Section 5.2.9	yes – see Section 5.3.2.3 of this Report	No
				Desalination as an Alternative	Yes – RTS - Desalination – Section 5.2.4	Yes – see Section 5.3.2.5 of this Report	No
				Alternative Abstraction point in north Lough Derg combined with shorter pipeline route	Yes – RTS - Alternative Abstraction Location / Shortest Route – Section 5.2.8	Yes – see Section 5.3.2.1 of this Report	No

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			Project Description	Availability of water	Yes RTS – Availability of water – Section 6.3.9 RTS – Chapter 11 – Water (Hydrological Modelling and Water Levels)	Yes – see Section 6.2.2.4 of this Report	No
			Biodiversity	Groundwater dependent terrestrial ecosystems	Yes RTS – Assessment of Groundwater Dependent Terrestrial Ecosystems – Section 10.4.32 RTS – Landscape Abstraction Impacts and Changes to Seasonal Flow – Section 12.4.6 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12	Yes – see Section 10.2.2.3 of this Report	No
				Atlantic salmon at approximately 5% of conservation limits	Yes RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact of the Proposed Project on Fish Migration and Passage – Section 10.3.5 RTS – Adequacy of the Ecological Assessment for the Shannon – Section 10.3.8 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18	Yes – see Section 10.2.2.5 of this Report	No

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				Invasive non-native species inter-catchment transfer	Yes RTS – Impact of Aquatic Invasive Species on Native Fauna – Section 10.4.33 RTS – Pathways for Invasive Species Introduction or Pathogen Transfer – Section 25.4.17	Yes – see Section 10.2.2.6 of this Report	No
			Water (Modelling)	The 2% figure is legally impermissible - 50% reduction in the residual flow on the Shannon including matters related to: ESB Flow Data and the 2018 Drought	Yes RTS –Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Maintaining the Minimum Compensation Flow– Section 11.2.3	No – see Section 11.3.2.1 of this Report	No
				1929 Baseline & Compensation flow - Whether Environmental Recovery may be Constrained	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.9 of this Report	No
				Availability of water - Ardnacrusha Already Idles 20 Days Per Year — Drawdown Is an Annual Routine	Yes RTS - Availability of Water in a drought - Section 11.3.3	No – see Section 11.3.2.2 and 11.3.2.3 of this Report	No

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				Availability of water – system water budget including matters related to: Lough Derg Cannot Be Operated as a Demand-Management Reservoir	Yes RTS - Availability of Water in a drought - Section 11.3.3	No – see Section 11.3.2.3 and 11.3.2.4 of this Report	No
				Roadmap for the Lower River Shannon (2021)	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.9 and 11.3.2.10 of this Report	No
				Rate of evaporation (Lough Derg Evaporation — A Significant Unassessed Demand on the System)	No	N/A	Yes – Section 11.4.2.2
				Legally Binding Mechanism on Water Levels (6.2 — Emergency derogation mechanism gap)	No	N/A	Yes – Section 11.4.2.4

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			Climate	Climate change induced drought conditions and the impact on water abstraction	Yes RTS – Climate Adaptation - Section 16.2.4	Yes – see Section 16.2.2.1 of this Report	No
				Compliance with carbon budgets	Yes RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3	Yes – see Section 16.2.2.2 of this Report	No
				Carbon costs associated with current leakage rates in the water distribution system	Yes RTS – Carbon Emissions Assessment - Section 16.4.2 RTS - Carbon from Water Leakage – Section 27.6	Yes – see Section 16.2.2.3 of this Report	No
				GHG emissions and whether the State has headroom in its sectoral ceilings for this and all other major infrastructure projects competing for the same shrinking carbon budget	Yes RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3	No – see Section 16.3.2.3 of this Report	No
			Resource and Waste Management	Management of sludge production from the Proposed Water Treatment Plant	No	N/A	Yes – See Section 22.4.2.1 of this Report

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			Human Health	Request for scientific assessment of water quality risks specifically associated with 172km pressurised water transfer	Yes RTS - Potential Health Impacts Associated with Transport of Drinking Water - 18.2.2	Yes - see Section 18.2.2.1 of this Report	No
			Natura Impact Statement	In-combination assessment with the Fish Passage Project	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 25.2.2.1 of this Report	No
				Ecological irreversibility - the 1% failure rate and the Waddenzee Standard	Yes RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Adequacy of the Ecological Assessment for the Shannon – Section 10.3.8 RTS – Compliance with the Habitats Directive – Section 25.2.1	Yes – see Section 25.2.2.5 of this Report	No
				Lough Derg is not a Demand-Reservoir	RTS – Potential Impacts of the Proposed Abstraction on Habitats and Species – Section 10.2.3	No - see Section 25.3.2.1 of this Report	No

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				In-combination assessment	No	N/A	Yes - see Section 25.4.2.1 of this Report
				Treatment of Qualifying Interests	No	N/A	Yes - see Section 25.4.2.2 of this Report
				Power v An Bord Pleanála Conservation Objectives	No	N/A	Yes - see Section 25.4.2.3 of this Report
			Water Status Impact Assessment Report (Water Framework Directive)	Compliance with the Water Framework Directive	Yes RTS – Compliance with the Water Framework Directive – Section 26.2.1	Yes – see Section 26.2.2.1 of this Report	No
				Failure to satisfy Article 4(7) of the Water Framework Directive	Yes RTS - Compliance with Article 4 Requirements - Section 26.3.3	Yes – see Section 26.2.2.2 of this Report	No

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				Wastewater return flows – An unassessed full water cycle impact	Yes RTS - Receiving Wastewater Capacity - Section 12.3.3 RTS - Receiving Wastewater Capacity Assessment Under the Water Framework Directive - Section 26.3.1 RTS - Reflection of the Water Cycle in the Assessment - Section 26.3.6	Yes – see Section 26.2.2.3 of this Report	No
				Heightened WFD evidential burden for the Shannon (Lower)_050	Yes RTS - Reliance on Heavily Modified Water Body Designation – Section 26.3.4	Yes – see Section 26.2.2.4 of this Report	No
				Failure to Adequately consider requirements Article 4(8) of the Water Framework Directive	Yes RTS - Transfer of Water Between River Catchments and Article 4(8) Basin Integrity - Section 26.4.3	No – see Section 26.3.2.1 of this Report	No
				Use of UK guidance in WSIAR	Yes RTS - Compliance with the Water Framework Directive - Section 26.2.1 RTS - Assessment Based on UKTAG Methodology - Section 26.3.5	No – see Section 26.3.2.2 of this Report	No
				Assessment based on UKTAG Methodology	Yes RTS - Assessment Based on UKTAG Methodology - Section 26.3.5	No – see Section 26.3.2.3 of this Report	No

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				Lack of WFD classification and objective for Derg TN	No	N/A	Yes – see Section 26.4.2.2 of this Report
				Abstraction licencing process and Article 4(7) of the WFD	No	N/A	Yes – see Section 26.4.2.4 of this Report
			Additional Topics	25.1 Geotechnical Sinkhole Risk	Yes – RTS Section 27.2	Yes – see Section 27 of this Report	No
				25.2 Environmental Liability Directive 2004/35/EC	Yes – RTS Section 27.4	Yes – see Section 27 of this Report	No
				25.3 Carbon Cost Comparison	Yes – RTS Section 27.6	Yes – see Section 27 of this Report	No
				25.4 Lead Pipes	Yes – RTS Section 27.3	Yes – see Section 27 of this Report	No
Additional Sub: Stefan and Olvia Hahne Previous: WSP_SUB_28	102	Stefan and Olivia Hahne	Overarching matters	How much water will be going to industry and data centres?	No	No	Yes - see Section 2.4.2.1 of this Report

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			Consideration of Reasonable Alternatives	Leakage reduction.	Yes RTS - Section 5.2.1 (Leakage Reduction)	Yes – see Section 5.2.2.1 of this Report	No
				Poulaphouca, groundwater, reservoirs, desalination	Yes RTS – Alternative Source – Section 5.2.2	Yes – see Section 5.2.2.3 of this Report	No
			Water (Modelling)	Low flow and drought conditions – 30% reduction in flows	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2	No – see Section 11.3.2.1 of this Report	No
				Prioritisation of water supplies	Yes RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2	No – see Section 11.3.2.6 of this Report	No

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				Statutory minimum compensation flow to the Old River Shannon (Whether Environmental Recovery may be Constrained – Fish Passage Project Delivery of measures for Environmental Recovery – Fish Pass Project)	Yes RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.9 and 11.3.2.10 of this Report	No
				Climate change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.6 of this Report	No
				Legally Binding Mechanism on Water Levels	No	N/A	Yes – see Section 11.4.2.4 of this Report
			Agriculture	N/A			
Additional Sub: Derg Open Water Swim School and the Swim Group Previous: WSP_SUB_39	21	Derg Open Water Swim School and the Swim Group “Lively Wimmin Swimmin”	Water (General)	Reduced water levels in Lough Derg leading to growth of algae	Yes RTS – Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth – Section 12.2.3	Yes – see Section 12.2.2.1 of this Report	No

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				Agricultural land management and impacts on phosphates and nitrates entering Lough Derg	Yes RTS – Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth – Section 12.2.3	No – see Section 12.3.2.1 of this Report	No
Additional Sub : Dubin Chamber Previous: WSP_SUB_41	25	Dublin Chamber	Planning	Support for the Project	3.2.1 RTS		N/A – no response required
Additional Sub: Environmental Trust Ireland Previous: WSP_SUB_43	32	Environmental Trust Ireland	Project Description	N/A	N/A		
			Consideration of Reasonable Alternatives	Aggressive water leak remediation	Yes RTS – Leakage Reduction – Section 5.2.1	Yes – see Section 5.2.2.1 of this Report	No
			Consultation and Communication	Public Consultation Adequacy	Yes RTS - Public Consultation Adequacy – Section 4.2.1	Yes – see Section 4.2.2.1 of this Report	No
			Planning	Site notices.	Yes RTS - Notification of Planning - Section 3.3.3	No – see Section 3.3.2.1 of this Report	No

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			Biodiversity	Failure to assess impacts on ecosystem services	Yes RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5	Yes – see Section 10.2.2.7 of this Report	No
				EU Nature Restoration Law	Yes RTS – Avoiding Impacts to Wetlands and Bogs – Section 10.4.21 RTS – Biodiversity Net Gain – Section 10.4.24 RTS – Assessment of Groundwater Dependent Terrestrial Ecosystems – Section 10.4.32	No – see Section 10.3.2.1 of this Report	No
				Benthic Communities in the Shannon SAC	Yes RTS – Potential for Aquatic Habitat Loss or Damage – Section 10.2.6 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Consideration of Baseline Conditions for the Conservation Objectives of the Lower River Shannon SAC – Section 25.4.8	No – see Section 10.3.2.2 of this Report	No
			Climate	Climate change induced drought conditions and the impact on water abstraction	Yes RTS – Climate Adaptation - Section 16.2.4	Yes – see Section 16.2.2.1 of this Report	No

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				Compliance with carbon budgets	Yes RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3	Yes – see Section 16.2.2.2 of this Report	No
				The degradation of the Lower Shannon's blue carbon storage capacity directly breaches Ireland's statutory climate frameworks	No	N/A	Yes – See Section 16.4.2 of this Report
			Water (Hydrological Modelling and Water Levels)	Statutory Minimum Compensation Flow (Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow)	Yes SRTS - Water (Hydrological Modelling and Water Levels) – Section 3.2.2 RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2	No – see Section 11.3.2.2 of this Report	No
				Climate Change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.7 of this Report	No
				Cumulative modelling	Yes RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6	No – see Section 11.3.2.13 of this Report	No

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				Severity of drought modelled – 1 in 50 drought scenario	No	N/A	Yes – see Section 11.4.2.1 of this Report
			Water (General)	Flow regime alteration in the Lower River Shannon	Yes RTS - Potential Biodiversity Impacts to the River Shannon - Section 10.2.2 RTS - Potential Impact of the Proposed Abstraction on Habitats and Species - Section 10.2.3 RTS - Potential Impact of the Proposed Project on Fish Migration and Passage - Section 10.3.5 RTS - Reduction in the Flow Down the Old River Shannon - Section 11.2.2 RTS - Downstream Effects on the River Shannon - Section 11.2.7 RTS - Adequacy of Mitigation Measures - Section 25.3.4 RTS - Impingement Mortality and Entrainment Characterisation Study - Section 25.3.7 RTS - Determination of the Risk of Impact on Lower Shannon Special Conservation Area - Section 25.4.19 RTS - Assessment of Direct Effects of Abstraction on European Sites - Section 25.4.20 RTS - Reliance on Heavily Modified Water Body Designation - Section 26.3.4	No – see Section 12.3.2.2 of this Report	No

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					RTS - Adequacy of the Water Framework Directive Assessment for Potential Impacts on Fish - Section 26.4.2		
			Water Status Impact Assessment Report (Water Framework Directive)	Groundwater Integrity Surface Water-Groundwater Disconnect	Yes SRTS - Groundwater Bodies and Water Framework Directive Compliance - Section 3.2.4.1	No – see Section 26.3.2.5 of this Report	No
				Groundwater bodies along the route	No	N/A	Yes – see Section 26.4.2.3 of this Report
			Natura Impact Statement	Exclusion of SACs/SPAs and the Arbitrary 'Zone of Influence'	Yes RTS – Potential Impact on Special Conservation Areas and Special Protection Areas in Limerick – Section 25.4.13 RTS – Determination of the Risk of Impact on Lower Shannon Special Conservation Area – Section 25.4.19	No – see Section 25.3.2.3 of this Report	No
				European Natura 2000 Sites Along the Shannon and Route	No	N/A	Yes – see Section 25.4.2.4 of this report
Additional Sub: Futureproof Clare Environmental CLG Previous: WSP_SUB_46	41	Futureproof Clare Environmental CLG	Planning	Challenging the Need for the Project	Yes - RTS - Balanced Regional Development - Section 3.2.3	Yes – see Section 3.2.2.2 of the report.	No

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				Notification of planning	Yes - RTS - Notification of Planning - Section 3.3.3	No- See section 3.3.2.1	No
			Overarching Matters	Use of Chat GPT.	No	N/A	Yes - see Section 2.4.2.2 of this Report
				Water being used for data centres.	No	N/A	Yes - see Section 2.4.2.1 of this Report
			Consideration of Reasonable Alternatives	Lack of alternatives & leakage reduction inadequate	RTS – Leakage Reduction – Section 5.2.1	Yes	No
				Groundwater Sources.	RTS – Groundwater Alternatives – Section 5.2.3	Yes	No
				Regional Scale Rainwater harvesting aka reservoirs	RTS – Alternative Source – Section 5.2.2	Yes	No
			Consultation and Communication	Consultation process.	Yes RTS - Public Consultation Adequacy – Section 4.2.1	Yes – see Section 4.2.2.1 of this Report	No
			Project Description	Vulnerability of relying on Proposed Project.	Yes RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10	No – see Section 6.3.2.1 of this Report	No

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			Biodiversity	Impacts of project on biodiversity, habitats and species	Yes RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5	Yes – see Section 10.2.2.8 of this Report	No
				Otters, Bats and Other Protected Species and Habitats	Yes RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9	No – see Section 10.3.2.3 of this Report	No
			Water (Modelling)	Climate change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.6 of this Report	No
				Cumulative modelling	Yes RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6	No – see Section 11.3.2.11 of this Report.	No
				Monitoring of flows	Yes RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6	No – see Section 11.3.2.12 of this Report.	No

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			Climate	GHG emissions from the Proposed Project and alignment with the climate act	Yes RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3 RTS – Alignment of the Proposed Project with Climate Legislation - Section 16.2.5	No – see Section 16.3.2.1 of this Report	No
				Loss of renewable energy generation	Yes RTS – Potential Impact of the Proposed Project on Renewable Energy Generation – Section 16.3.2	Yes – See Section 16.2.2.4 of this Report	No
			Natura Impact Statement	Habitats Directive	Yes RTS – Adequacy of the Findings of the Appropriate Assessment – Section 25.3.1 RTS – Potential Implications of Inter-Basin Water Transfers – Section 25.3.10 RTS – Existing Flow Modification and Interaction with Ardnacrusha Hydroelectric Operation – Section 25.3.12 RTS – Effects on Severe Drought Low Water Level Duration in Designated Sites – Section 25.4.6	No – see Section 25.3.2.4 of this Report	No

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			Natura Impact Statement	Noise of Construction	Yes RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9 RTS – Potential Disturbance Effect on Wintering Waterfowl in Parteen Basin – Section 10.4.19	No see Section 25.3.2.5 of this Report	Noise of Construction
Additional Sub: Garrett Reil and Cliona Geary Previous: WSP_SUB_48	43	Garrett Reil and Cliona Geary	Overarching Matters	6.3 Use of AI for initial review of statutory submissions.	No	N/A	Yes - see Section 2.4.2.2 of this Report
				6.4 Operational Competence 6.5 Cost-benefit analysis credibility.	Yes RTS – Project Costs / Cost Benefit – Section 2.5	No – see Section 2.3.2.2 of this Report	No
				2. The Kennedy Analysis demand errors remain unaddressed.	Yes RTS – Challenging the Need for the Proposed Project – Section 3.2.2	No – see Section 2.3.2.4 of this Report	No
			Planning	5. International best practice response is superficial.	Yes RTS - Best Practice in Urban Water Resource Management - Section 3.3.4	No – see Section 3.3.2.2 of this Report	No
				6.2 Information withheld from prescribed bodies.	No	No – see Section 3.4.2.1 of this Report	Yes

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				6.4 Regional Equity	Yes RTS - Balanced Regional Development - Section 3.2.3	Yes- see Section 3.2.2.3 of this Report	No
			Consideration of Reasonable Alternatives	Alternative assessment remains inadequate.	Yes RTS – Alternative Assessment – Section 5.2.9	Yes – see Section 5.2.2.3 of this Report	No
			Water (Modelling)	Statutory Minimum Compensation Flow - The low-flow rebuttal addresses the wrong claim.	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2	No – see Section 11.3.2.1 of this Report	No
				Fish Pass Project	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.2.39 and 11.3.2.10 of this Report	No

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				Continuous abstraction during drought - water levels, trigger levels and response	Yes RTS- Operation of the Model / Management of Water Levels – Section 11.2.9 RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4	No – see Section 11.3.2.12 of this Report	Noi
			Soils, Geology and Hydrogeology	N/A			
			Agriculture	N/A			
			Cumulative Effects and Interactions	Cumulative impact with the Shannon Fish Pass Study	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – Potential Cumulative Impact with the Shannon Fish Passage Study – Section 24.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 24.2.2.1 of this Report	No
			Natura Impact Statement	In-combination assessment with the Fish Passage Project	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 25.2.2.1 of this Report	No

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			Water Status Impact Assessment Report (Water Framework Directive)	Low flow rebuttal	No	N/A	Yes – see Section 26.4.2.5 of this Report
Additional Sub: Geological Survey of Ireland (GSI) Previous: WSP_SUB_87	44	GSI	Soils, Geology and Hydrogeology	N/A – GSI raised no further comments and this is referred to in Chapter 13 - soils, geology and hydrogeology, Section 13.1.			
Additional Sub: Irish Business and Employers Confederation (IBEC) Previous: WSP_SUB_49	47	IBEC	Planning	Support for the project.	Section 3.2.1 (Support / Acknowledgement for the Need for the Proposed Project)	Yes – see Section 3.2.2.1 of this Report	No
Additional Sub: James Crowley Previous: WSP_SUB_50	49	James Crowley	Planning	N/A			
			Consideration of Reasonable Alternatives	Pipeline best solution – alternatives?	Yes RTS - Section 5.2.9 (Alternative Assessment)	Yes – see section 5.2.2.3	No
			Project Description	Systematic Vulnerability s / Invasive Species).	Yes RTS - Proposed Project – Section 6.3.10	No – see Section 6.3.2.1 of this Report	No
				Washouts			
				Invasive Species			

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			Biodiversity	Loss of ecological resilience	Yes RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5 RTS – Reduction in the Flow Down the Old River Shannon – Section 11.2.2 RTS – Potential for Reduced Water Levels to Result in Pollution Concentration and Algae Growth – Section 12.2.3	Yes – see Section 10.2.2.9 of this Report	No
				Ecological impacts of the Pipeline Project	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6	Yes – see Section 10.2.2.10 of this Report	No
			Water (Modelling)	Assessment of impacts	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1	Yes – see Section 11.2.2.4 of this Report.	No

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				Statutory Minimum Compensation Flow (Maintaining the Minimum Compensation Flow and 2% compared with 30 -50% loss of flow)	Yes RTS –Assessment of Low Flow and Drought Conditions – Section 11.2.1 RTS - Reduction in the Flow Down the Old River Shannon – Section 11.2.2	No – see Section 11.3.2.1 of this Report	No
				Climate Change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.6 of this Report	No
				Future of Ardnacrusha	Yes RTS - Compatibility of the Proposed Project with Ardnacrusha Dam – Section 11.3.8	Yes – see section 11.2.2.5	No
			Climate	Climate change induced drought conditions and the impact on water abstraction	Yes RTS – Climate Adaptation - Section 16.2.4	Yes – see Section 16.2.2.1 of this Report	No
			Cultural Heritage	Cultural significance of the Shannon.	Yes RTS – Potential Impact on the Cultural Significance of the Shannon – Section 20.2.2	Yes – see Section 20.2.2.1 of this Report	No
Additional Sub: Laura Kavanagh Previous: WSP_SUB_55	67	Laura Kavanagh	Overarching matters	RTS report did not answer all matters raised and did not provide evidence	No	N/A	Yes – see Section 2.4.2.4

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			Water (Modelling)	Starting Water Level – Availability of Water	Yes RTS- Operation of the Model / Management of Water Levels – Section 11.2.9	No – see Section 11.3.2.3 of this Report	No
				Climate Change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.6 of this Report	No
				Compensation flow - Whether Environmental Recovery may be Constrained – Fish Passage Project	Yes RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.9 of this Report	No
				Multi-year droughts	Yes RTS – Increase in periods of droughts under future climate change scenarios– 11.2.5	No – see Section 11.3.2.8 of this Report	No
			Natura Impact Statement	Hydrological Modelling is Treated as the Ecological Assessment	Yes RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14	No – see Section 25.3.2.6 of this Report	No

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				Reliance on Operational Thresholds Rather Than Ecological Thresholds	Yes RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14	No – see Section 25.3.2.7 of this Report	No
				Historic Variability is Not Equivalent to Ecological Insignificance	Yes RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14	No – see Section 25.3.2.8 of this Report	No
				Ecological Consequences Remain Largely Unassessed	Yes RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14	No – see Section 25.3.2.9 of this Report	No
				Opportunity to Resolve Uncertainty	Yes RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14	No – see Section 25.3.2.10 of this Report	No
				Potential Impacts to Littoral and Shoreline Habitats	Yes RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Site-Specific Ecological Impact Assessment – Section 10.3.14	No – see Section 25.3.2.11 of this Report	No

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				Adequacy of the Findings of the Appropriate Assessment Applicant Response	Yes RTS – Adequacy of the Findings of the Appropriate Assessment – Section 25.3.1	No – see Section 25.3.2.12 of this Report	No
				Assessment of Hydrologically Connected European Sites Applicant Response	Yes RTS – Assessment of Hydrologically Connected European Sites – Section 25.3.3	No – see Section 25.3.2.13 of this Report	No
				Adequacy of Mitigation Measures	Yes RTS – Adequacy of Mitigation Measures – Section 25.3.4	No – see Section 25.3.2.14 of this Report	No
				Reliance of the Appropriate Assessment on Average Flow Metrics	Yes RTS – Reliance of the Appropriate Assessment on Average Flow Metrics – Section 25.3.5	No – see Section 25.3.2.15 of this Report	No
Additional Sub: Melina Sharp and Michael Eversen Previous: WSP_SUB_59	75	Melina Sharp and Michael Eversen	Planning	N/A			
			Other matters	Data Centres		No – see Section 2.4.2.1 of this Report	Yes

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			Consideration of Reasonable Alternatives	Combination of multiple alternatives would provide better solution	Yes RTS – Alternative Source – Section 5.2.2 RTS – Alternative Assessment – Section 5.2.9	Yes – see Section 5.2.2 of this Report	No
Additional Sub: Senator Dee Ryan Previous: WSP_SUB_67	99	Senator Dee Ryan	Planning	N/A			
			Consideration of Reasonable Alternatives	Desalination.	Yes RTS – Desalination – Section 5.2.4	Yes – see Section 5.2.2.5 of this Report	No
				Alternative water sources.	Yes RTS – Alternative Source – Section 5.2.2	Yes see Sections 5.2.2.2 and 5.2.2.4 of this Report	No
				Leakage reduction.	Yes RTS – Leakage Reduction – Section 5.2.1	Yes – see Section 5.2.2.1 of this Report	No
			Water (Modelling)	N/A			

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			Biodiversity	Ecological impact of water abstraction from Lough Derg and River Shannon	Yes RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impacts of Algal Bloom in Lough Derg – Section 10.2.5 RTS – Potential Impacts to Littoral and Shoreline Habitats – Section 10.3.12 RTS – Assessment of Abstraction from the Parteen Basin – Section 10.4.1	Yes – see Section 10.2.2.11 of this Report	No
Additional Sub: Ballymore Eustace Trout and Anglers Association Previous: WSP_SUB_71	3	Ballymore Eustace Trout and Salmon Anglers Association	Planning	Peak Abstraction and Recommended conditions P92 - Conditions – non compliance	Yes RTS -Compliance with the Environmental Liability Directive and Article 191(2) of Treaty on the Functioning of the European Union Section 27.5.1	Yes – See Section 3.2.2.5 of this Report	No
			Consideration of Reasonable Alternatives	N/A			
			Project Description	Chemical Treatment Process and Residues at the Proposed Water Treatment Plant	Section 6.3.7 (Chemicals at the Proposed Water Treatment Plant)	No – see Section 6.3.2.6 of this Report	No

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				Recommended conditions	RTS – Recommended Conditions - Section 6.3.11	Yes – see Section 6.2.2.5 of this Report	No
			Air Quality	Potential for Odour Impacts. Potential of Odour Impacts resulting from the transport of wastewater.	Yes RTS - Potential for Odour Impacts - 15.2.1 RTS - Potential Odour Impacts Resulting from the Transport of Wastewater - 15.3.3	Yes – See Section 15.2.2.1 of this Report	No
			Resource and Waste Management	Management of waste at the proposed water treatment plant.	Yes RTS - Management of Waste at the Proposed Water Treatment Plant - 22.2.1 RTS - Wastewater Infrastructure - 6.4.11	Yes - see Section 22.2.2.1 of this Report	No
			Additional Topics	Ballymore Eustace Water Treatment Plant.	Section 27.5 (Ballymore Eustace Water Treatment Plant)	Yes – see Chapter 27 of this Report	No
Additional Sub: EirGrid Previous: WSP_SUB_73	30	EirGrid	Material Assets	Content with response to submission with nothing further to add	N/A	N/A	N/A
Additional Sub: Melissa Anne Kenny Previous: WSP_SUB_76	76	Melissa Anne Kenny	N/A – Matters related to property process only and addressed through CPO response.				

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Additional Sub: Shane Matthews Previous: WSP_SUB_77	100	Shane Mathews	Overarching Matters	Project costs	RTS – Project Costs / Cost Benefit – Section 2.5	No – see Section 2.3.2.2 of this Report	No
			Consideration of Reasonable Alternatives	Combination of alternatives could provide better solution	Yes RTS – Alternative Assessment – Section 5.2.9	Yes – 5.2.2.4 of this Report	No
			Water (Modelling)	N/A			
			Water (General)	Water quality risks – mining and industrial contamination	Yes RTS - Potential for Contamination of Water Sources from Mines - Section 13.2.2	No – see Section 12.3.2.3 of this Report	No
				Flooding and climate change	RTS - Potential Health Impacts Associated with Flood Events in the Shannon Basin – Section 18.3.3	No – see Section 12.3.2.4 of this Report	No
			Soils, Geology and Hydrogeology	N/A			
			Agriculture	Livestock disease transmission	RTS - Risk of Spread of Disease Across Agricultural Land - Section 14.2.4	Yes – see Section 14.2.2.1 of this Report	No

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				Interface with drainage systems	RTS – Potential Land Impacts - Section 14.2.6	Yes – see Section 14.2.2.2 of this Report	No
				Damage to soil structure and productivity	Yes RTS - Potential Land Impacts Section 14.2.6	Yes – see Section 14.2.2.3 of this Report	No
				Identification of the land for the pipeline	No	N/A	Yes – see Section 14.4.2.1
Additional Sub: Waterways Ireland Previous: WSP_SUB_78	112	Waterways Ireland*	Planning	N/A			
			Population	Navigation Assessment	Yes RTS - Section 17.4.1 - Navigation Assessment for Lough Derg	No – see Section 17.3.2.1 of this report	No
			Water (Modelling)	Climate Change	Yes RTS - Future Climate Change – Section 11.2.4	No – see Section 11.3.2.6 of this report	No
	22	NPWS - DAU*	Overarching Matters	N/A			

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Additional Sub: National Parks and Wildlife Service (NPWS) – Development Applications Unit (DAU)* Previous: WSP_SUB_83			Proposed Project Description	(4) Effects of any future emergency discharges from the Water Treatment Plant.	Yes RTS - Wastewater Infrastructure – Section 6.4.11 RTS- Management of Waste at the Proposed Water Treatment Plant – Section 22.2.1	No – see Section 6.3.2.7 of this Report	No
			Biodiversity	Effects on otters	Yes RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9	No – see Section 10.3.2.4 of this Report	No
				Effects on whooper swans	Yes RTS – Potential for Disturbance Impacts on Whooper Swans – Section 10.4.10	No – see Section 10.3.2.5 of this Report	No
				Mitigation for habitat loss (local continuity)	Yes RTS – Mitigation Measures/Survey Conditions – Section 10.4.3 RTS – Potential Impact of the Proposed Project on Otter – Section 10.4.9 RTS – Potential Impact of the Proposed Project on Bat Species – Section 10.4.11	No – see Section 10.3.2.6 of this Report	No
				Effects on lesser horseshoe bats	Yes RTS – Potential Impact of the Proposed Project on Bat Species – Section 10.4.11	No – see Section 10.3.2.7 of this Report	No

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				Effects on bat species	Yes RTS – Potential Impact of the Proposed Project on Bat Species – Section 10.4.11	No – see Section 10.3.2.8 of this Report	No
				Effects on marsh fritillary	Yes RTS – Potential Impact of the Proposed Project on Marsh Fritillary – Section 10.4.12	No – see Section 10.3.2.9 of this Report	No
				Effects on hen harrier	Yes RTS – Potential Impact of the Proposed Project on Hen Harrier – Section 10.4.13	No – see Section 10.3.2.10 of this Report	No
				Effects on molluscs	Yes RTS – Potential Impact of the Proposed Project on Molluscs – Section 10.4.14	No – see Section 10.3.2.11 of this Report	No
				Determining ecological significant effects	Yes RTS – Determining Ecological Significant Effects – Section 10.4.15	No – see Section 10.3.2.12 of this Report	No

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				Matters NPWS have no further comments on	Yes RTS – Effects on Severe Drought Low Water Level Duration in Designated Sites – Section 25.4.6 RTS – Proposed New Water Treatment Plant Access Road – Section 10.4.17 RTS – Barriers to Connectivity: Salmon and Lamprey Species – Section 10.4.18 RTS – Potential Disturbance Effect on Wintering Waterfowl in Parteen Basin – Section 10.4.19 RTS – Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS – Potential Impacts on Alkaline Fen Habitat – Section 25.4.4 RTS - Assessment of Potential Impacts on White-Clawed Crayfish – Section 25.4.2	Yes - see Section 10.2.2.15 of this Report	No
			Water (Modelling)	Monitoring of abstraction	No	N/A	Yes – see Section 11.4.2.5 of this Report
				Monitoring of flows – downstream monitoring	RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4	No - see Section 11.3.2.3	No

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			Resource and Waste Management	Effects of any future emergency discharges from the Water Treatment Plant.	RTS – Management of Waste at the Proposed Water Treatment Plant – 22.2.1. RTS – Wastewater Infrastructure – 6.4.11.	No – see Section 22.2.2.1	No
			Natura Impact Statement	Effects on River Little Brosna Callows SPA	Yes RTS – Effects on River Little Brosna Callows SPA – Section 25.4.5	No – see Section 25.3.2.16 of this Report	No
Additional Sub: Eamonn Dooley Previous: WSP_SUB_84	27	Eamonn Dooley	Planning	Future development of the land.	Section 14.3.2 (Potential Impact of Acquisition on Future Development on Specific Landowner Lands)	Yes – see Section 3.2.2.4	No
			Consideration of Reasonable Alternatives	N/A			
			Construction and Commissioning	Proposed construction compound acquisition.	Yes RTS - Acquisition of Construction Compound Areas on Specific Landowner Lands - Section 7.3.4	Yes – see Section 7.2.2.1 of this Report	No
			Agriculture	Future Development Potential	Yes RTS - Potential Impact of Acquisition on Future Development on Specific Landowner Lands - Section 14.3.2	Yes – see Section 14.2.2.5 of this Report	No

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				Disruption and disturbance to the farming business including the temporary acquisition for the construction compound.	Yes RTS - Disruption to Agriculture and Farmlands - Section 14.2.1 RTS - Potential Impact of Temporary Acquisition on Farming Enterprise - Section 14.3.5	No – see Section 14.3.2.1 of this Report	No
Additional Sub: Fintan Dunne Previous WSP_SUB_86	38	Fintan Dunne	Planning	Future development of the land.	Section 14.3.2 (Potential Impact of Acquisition on Future Development on Specific Landowner Lands)	Yes – see Section 3.2.2.4	No
			Consideration of Reasonable Alternatives	N/A			
			Construction and Commissioning	Proposed construction compound acquisition	Yes RTS - Acquisition of Construction Compound Areas on Specific Landowner Lands - Section 7.3.4	Yes – see Section 7.2.2.1 of this report.	No
				Design of the Construction Compounds	Yes RTS – Alternative Design on Specific Landowners Land – Section 5.3.3 RTS - Proposed Construction Compound Design - Section 7.3.5	Yes – see Section 7.2.2.2 of this Report	No
				Duration of Construction	Yes RTS - Duration of Construction Elements on Specific Landowner Lands Section - Section 7.3.2	No – see Section 7.3.2.1	No

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			Agriculture	Future Development Potential	Yes RTS - Potential Impact of Acquisition on Future Development on Specific Landowner Lands - Section 14.3.2	Yes – see Section 14.2.2.5 of this Report	No
				Disruption and disturbance to the farming business including the temporary acquisition for the construction compound.	Yes RTS - Disruption to Agriculture and Farmlands - Section 14.2.1 RTS - Potential Impact of Temporary Acquisition on Farming Enterprise - Section 14.3.5	No – see Section 14.3.2.1 of this Report	No
Additional Sub: James Cullen Senior Previous: WSP_SUB_89	50	James Cullen Senior	Planning	N/A			
			Consideration of Reasonable Alternatives	The need for the lay-by and the potential for an alternative	RTS – Alternative Access on Specific Landowner Lands – Section 5.3.2	Yes – see Section 5.3.2.5 of this Report	No
				Lack of Evidence of Alternative Layout Assessment for this Holding	No	N/A	Yes – see Section 5.4.2.1 of this Report
			Consultation and Communication	Landowner engagement	RTS - Landowner-Specific Engagement – Section 4.2.5	Yes – see Section 4.2.2.2 of this Report	No

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			Project Description	The health and safety issue raised by the location of the lay-by	RTS - Potential Safety Impact of Proposed Layby at Landowner Property Access – Section 6.3.4	Yes – see Section 6.2.2.8 of this Report	No
				The need for the lay-by and the potential for an alternative	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3	No – see Section 6.3.2.8 of this Report	No
			Construction and Commissioning	Proposed Pipe Storage Depot acquisition	RTS - Acquisition of Construction Compound Areas on Specific Landowner Lands - Section 7.3.4	Yes – see Section 7.2.2.1 of this Report	No
				Design of the Pipe Storage Depot	RTS - Proposed Construction Compound Design - Section 7.3.5	Yes – see Section 7.2.2.2 of this Report	No
				Duration of Construction	RTS - Duration of Construction Elements on Specific Landowner Lands Section - Section 7.3.2	No – see Section 7.3.2.1 of this Report	No

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			Traffic and Transport	Concerns regarding the proposed lay-by/access arrangement on the R407, including its relationship with the existing farm entrance, available sightlines and interaction with farm traffic.	Yes RTS – Potential Safety Impact of Proposed Layby at Landowner Property Access – Section 6.3.4 RTS - Alternative Access on Specific Landowner Lands - 5.3.2	No – see Section 9.3.2.1 of this Report	No
			Agriculture	Disruption and Disturbance to the farming business based on the effect on the Retained Farm Functionality	Section 14.2.1 – Disruption to Agriculture and Farmlands Section 14.3.5 – Potential Impact of Temporary Acquisition on Farming Enterprise	No -see Section 14.3.2.1 of this Report	No
				Reliance on Compensation Rather Than Demonstrating Impact Avoidance	No	N/A	Yes – see Section 14.4.2.4
Additional Sub: Michael McKeogh Previous WSP_SUB_93	80	Michael McKeogh	Planning	N/A			
			Consultation and Communication	N/A.			
			Consideration of Reasonable Alternatives	N/A			
			Soils, Geology and Hydrogeology	See Water (General)			

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			Agriculture	Conclusion of the assessment regarding significant effects.	No	N/A	Yes- see Section 14.4.2.2 of this Report
				Mislabelling of acquisition type	No	N/A	Yes- see Section 14.4.2.3 of this Report
Additional Sub: National Transport Authority (NTA) Previous: WSP_SUB_95	86	National Transport Authority (NTA)	Material Assets	Interfaces between the Proposed Project and existing and planned transport infrastructure and recommended planning conditions.	Yes RTS - Section 21.3.1 - Recommended Conditions for Planning	Yes – see Section 21.2.2.1 of this Report	No
			Planning Compliance	Recommended Conditions for Planning	RTS - Planning Policy Compliance- Section 3.4.1	RTS in Section 21.3.1	
Additional Sub: Transport Infrastructure Ireland (TII) Previous: WSP_SUB_99	111	Transport Infrastructure Ireland (TII)*	Overarching Matters	N/A			
			Planning	Clarification that proposed national road network crossings will comply with relevant TII Publications and planning permission does not constitute nor imply consent to any works within the motorway reservation.	Section 3.4.1 (Planning Policy Compliance)		

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			Project Description	N/A – See Traffic and Transport			
			Construction and Commissioning	N/A – See Traffic and Transport			
			Traffic and Transport	Permanent layby and road crossings Recommended national roads network mitigation measures for proposed pipeline crossings of the national roads network. Proposed haul routing utilisation of the national roads network. Matters relating to direct access to the national road network.	Yes RTS – Traffic Management Plan (TMP) – Section 9.4.1 RTS – Road Safety Audits – Section 9.4.2. RTS - Impact on the Strategic Road Network – 21.4.1	No – see Section 9.3.2.2 of this Report	No
			Material Assets			No – see Section 21.3.2 of this Report (referring to Section 9.3.2 of this Report)	
Additional Sub: John Quinn and Sandra Frayne Previous: WSP_SUB_103	59	John Quinn and Sandra Frayne	Planning	N/A			
			Consultation and Communication	Landowner engagement - Information supplied is incomplete or difficult to understand.	RTS - Landowner-Specific Engagement – Section 4.2.5	Yes – see 4.2.2.2 of this Report.	No

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			Project Description	Location of wash-out valve.	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3	Yes – see Section 6.2.2.6 of this Report	No
			Noise and Vibration	Noise impact on property and equine facility.	Yes RTS - General Noise Impacts Associated with the Proposed Project - Section 8.2.1 RTS - Potential Construction Noise Impacts at Specific Landowner Lands - Section 8.3.1	No – see Section 8.3.2.1 of this Report	No
			Biodiversity	Adequacy of environmental surveys	Yes RTS – Biodiversity Surveys on Landowner Lands – Section 10.3.3	Yes – see Section 10.2.2.12 of this Report	No
				Environmental and Ecological Damage	Yes RTS – Mitigation Measures/Survey Conditions – Section 10.4.3	No – see Section 10.3.2.13 of this Report	No
				Hedgerow Retention	Yes RTS – Potential Biodiversity Impact of Hedgerow Removal on Specific Landowner Lands – Section 10.3.2	No – see Section 10.3.2.14 of this Report	No

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			Agriculture	Drainage	Yes RTS – Potential Land Impacts - Section 14.2.6 RTS - Potential Impacts on Land Drainage on Specific Landholdings - Section 3.3.14	Yes – see Section 14.2.2.2 of this Report	No
				Access to land	Yes RTS - Potential Loss of Agricultural Access – Section 14.2.2 RTS - Impact of Proposed New Stream Crossings During Construction Section 14.3.12	Yes – see Section 14.2.2.4 of this Report	No
				Damage to soil structure and productivity	Yes RTS – Potential Land Impacts - Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7	Yes – see Section 14.2.2.3 of this Report	No
				Disruption to land - Impact of wash out valve location	Yes RTS - Impact of Proposed New Stream Crossings During Construction - Section 14.3.12	No – see Section 14.3.2.1 of this Report	No
				Potential Impact on Equine Stock / Enterprise	Yes Section 14.3.4 (Potential Impact on Equine Stock / Enterprise)	No – see Section 14.3.2.2 of this Report	No
				Access to Agricultural Land	No	N/A	Yes – see Section 14.4.2.5 of this Report.

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			Cultural Heritage	Archaeological heritage	Yes RTS - Archaeological Surveys on Specific Landowner Lands – Section 20.3.1	Yes – see Section 20.2.2.2 of this Report	No
Additional Sub: Peamount Healthcare Previous: WSP_SUB_104	90	Peamount Healthcare	Planning	N/A			
			Consultation and Communication	Landowner engagement	RTS - Landowner-Specific Engagement – Section 4.2.5	Yes – see Section 4.2.2.2	No
			Consideration of Reasonable Alternatives	Consideration of alternative access route	RTS – Alternative Access on Specific Landowner Lands – Section 5.3.2	Yes – See Section 5.2.2.6	No
			Project Description	Access to the TPR	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3	Yes – see Section 6.2.2.7 of this Report	No
			Construction and Commissioning	N/A			
			Noise and Vibration	Potential noise impacts on Peamount Hospital.	Yes RTS - Potential Noise and Vibration Impacts from the TPR on Peamount Healthcare - Section 8.3.2	No – see Section 8.3.2.2	No
				Potential vibration impacts on Peamount Hospital.	RTS - Potential Noise Impacts at Peamount Hospital – Section 8.4.1	No – see Section 8.3.2.3	No

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			Traffic and Transport	Concerns regarding the proposed TPR construction access adjoining Peamount Healthcare and the R120. Concerns regarding construction and operational traffic in proximity to vulnerable residents.	Yes RTS – Potential Traffic Impacts at Peamount Hospital – Section 9.3.1 RTS - Alternative Access on Specific Landowner Lands - 5.3.2	Yes – see Section 9.2.2.2 of this Report	No
			Air Quality	Dust and aspergillus impacts at Peamount Hospital	Yes RTS – Potential Construction Dust Impacts on Peamount Hospital – Section 15.3.2	No – see Section 15.3.2.1 of this Report	No
			Human Health	The health impact assessment, the need for a literature review, a site specific assessment for Peamount Hospital and threshold based mitigation.	Yes RTS – Mis-Classification of Sensitive Health Receptors – 18.3.1 RTS – Potential Health Impacts on Patients at Peamount Hospital – 18.3.2	No – see Section 18.3.2.1 of this Report.	No
			Landscape and Visual	Lighting effects at the TPR on patients of Peamount Hospital	Yes RTS - Recommended Construction Phase Conditions – Section 7.4.2 RTS - Potential Visual Impacts on Specific Landowner Lands – Section 19.3.1 RTS - Potential Health Impacts on Patients at Peamount Hospital – Section 18.3.2	Yes – see Section 19.2.2.2 of this Report.	No

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Additional Sub: Robert Frayne Previous: WSP_SUB_105	95	Robert Frayne	Planning	N/A			
			Consultation and Communication	Landowner engagement - Information supplied is incomplete or difficult to understand.	RTS - Landowner-Specific Engagement – Section 4.2.5	Yes – see 4.2.2.2 of this Report.	No
			Project Description	Location of wash-out valve.	RTS - Design Change Requests on Specific Landowner Lands – Section 6.3.3	Yes – see Section 6.2.2.6 of this Report	No
			Noise and Vibration	Noise impact on property and equine facility.	Yes RTS - General Noise Impacts Associated with the Proposed Project - Section 8.2.1 RTS - Potential Construction Noise Impacts at Specific Landowner Lands - Section 8.3.1	No – see Section 8.3.2.1 of this Report	No
			Biodiversity	Environmental and Ecological Damage	Yes RTS – Mitigation Measures/Survey Conditions – Section 10.4.3	No – see Section 10.3.2.13 of this Report	No
				Hedgerow Retention	Yes RTS – Potential Biodiversity Impact of Hedgerow Removal on Specific Landowner Lands – Section 10.3.2	No – see Section 10.3.2.14 of this Report	No

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			Agriculture	Drainage	Yes RTS – Potential Land Impacts - Section 14.2.6 RTS - Potential Impacts on Land Drainage on Specific Landholdings - Section 3.3.14	Yes – see Section 14.2.2.2 of this Report	No
				Access to land	Yes RTS - Potential Loss of Agricultural Access – Section 14.2.2 RTS - Impact of Proposed New Stream Crossings During Construction Section 14.3.12	Yes – see Section 14.2.2.4 of this Report	No
				Damage to soil structure and productivity	Yes RTS – Potential Land Impacts - Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7	Yes – see Section 14.2.2.3 of this Report	No
				Disruption to land - Impact of wash out valve location	Yes RTS - Impact of Proposed New Stream Crossings During Construction - Section 14.3.12	No – see Section 14.3.2.1 of this Report	No
				Potential Impact on Equine Stock / Enterprise	Yes RTS - Section 14.3.4 (Potential Impact on Equine Stock / Enterprise)	No – see Section 14.3.2.2 of this Report	No
				Access to Agricultural Land	No	N/A	Yes – see Section 14.4.2.5 of this Report.

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Additional Sub: Mark Kinsella Previous: WSP_SUB_107	72	Mark Kinsella	Planning	Not receiving written notification of planning or CPO application.	Section 3.3.3 (Notification of Planning)	Yes – see Section 4.2.2.2	No
			Biodiversity	Sensitive Habitat (Alkaline Fen)	No	N/A	Yes – see Section 10.4.2.1 of this Report
			Agriculture	Impacts of construction on soil structure and crop production	Yes RTS - Potential Land Impacts Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7	Yes – see Section 14.2.2.5 of this Report	No
				Pipeline alignment through agricultural land	No	N/A	Yes – see Section 14.4.2.6
Additional Sub: Michael and Mary Kinsella Previous: WSP_SUB_108	77	Michael and Mary Kinsella	Planning	Potential Impact of Acquisition on Future Development Lands	RTS - Potential Impact of Acquisition on Future Development Lands - Section 14.3.2	Yes – see Section 3.2.2.4	No
				Not receiving written notification of planning or CPO application.	Section 3.3.3 (Notification of Planning)	Yes – see Section 4.2.2.2	No
			Biodiversity	Sensitive Habitat (Alkaline Fen)	No	N/A	Yes – see Section 10.4.2.1 of this Report

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			Agriculture	Impacts of construction on soil structure and crop production	Yes RTS - Potential Land Impacts Section 14.2.6 RTS - Land condition Post Construction - Section 14.3.7	Yes – see Section 14.2.2.3 of this Report	No
				Future Development Potential	Yes RTS - Potential Impact of Acquisition on Future Development on Specific Landowner Lands - Section 14.3.2	Yes – see Section 14.2.2.5 of this Report	No
				Disruption to land - Severance of land	Yes RTS - Permanent Loss of Agricultural Land - Section 14.3.9	No – see Section 14.3.2.1 of this Report	No
				Pipeline alignment through agricultural land	No	N/A	Yes – see Section 14.4.2.6
Additional Sub: Clare County Council WSP_SUB_110	14	Clare County Council*	Overarching Matters	N/A			
			Planning	N/A			
			Consultation and Communication	N/A			

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			Consideration of Reasonable Alternatives	N/A			
			Water (Modelling)	N/A			
Additional Sub: Limerick City and County Council Previous: WSP_SUB_112	69	Limerick City and County Council	Overarching Matters	Cost inconsistency.	Yes RTS – Project Costs / Cost Benefit – 2.5	No– see Section 2.3.2.2 of this Report	No
				Census data	Yes RTS – Population Growth Forecast – Section 2.2	Yes – see Section 2.2.2.1 of this Report	No
				Documents not on Public File	No	N/A	See section 2.4.2.3
			Planning	Challenging the Need for the Project	Yes RTS - Challenging the Need for the Project - Section 3.2.2	Yes – see Section 3.2.2.2	No
				Community benefit scheme isn't sufficient in scale, persons over 5km from pipeline could still be affected.	Yes RTS – Community Benefit Scheme – Section 3.4.5	No – see Section 3.3.2.4 of this Report	No

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				Notification of Planning	Yes RTS - Notification of Planning - Section 3.3.3	No – see Section 3.3.2.1 of this Report	No
				Balanced regional development	Yes RTS – Balanced Regional Development – Section 3.2.3	Yes – see Section 3.2.2.3 of this Report	No
			Consideration of Reasonable Alternatives	Not sufficient - Leakage reduction, Single water treatment plan, desalinisation options to be reviewed.	Yes RTS – Leakage Reduction – Section 5.2.1	Yes – see Section 5.2.2.1 of this Report	No
				Alternative sources	Yes RTS – Alternative Source – Section 5.2.2 RTS – Alternative Regional Development– Section 5.4.2	Yes – see Section 5.2.2.4 of this Report	No
				Desalination	Yes RTS – Desalination – Section 5.2.4 RTS – Alternative Assessment – Section 5.2.9	Yes - see Section 5.2.2.5 of this report	No

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				Leakage Reduction 'Not an Alternative'	No	N/A	Yes – see Section 5.4.2.2
			Project Description	Capacity of the Proposed Pipeline - The full capacity of the pipe needs to be divulged.	Yes RTS - Capacity of the Proposed Pipeline – Section 6.2.2	Yes – see Section 6.2.2.1 of this Report	No
				Adequacy of Designed Storage Capacity - Increased storage capacity.	RTS - Adequacy of Designed Storage Capacity – Section 6.2.5	Yes – see Section 6.2.2.3 of this Report	No
			Biodiversity	Ecological impacts	Yes RTS – Potential Biodiversity Impacts to the River Shannon – Section 10.2.2 RTS – Potential Impact of the Proposed Abstraction on Habitats and Species – Section 10.2.3 RTS – Potential Impact on Restoring Fish Passage – Section 10.4.26 RTS – Potential Impact of the Proposed Project on Fish – Section 10.4.27 RTS – Potential Impact on Special Conservation Areas and Special Protection Areas in Limerick – Section 25.4.13	Yes – see Section 10.2.2.13 of this Report	No

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			Water (Modelling)	Monitoring of flows - Conflict between adaptive approach and peak of 300Mld.	RTS - Additional Water-Related Mitigation and Monitoring Measures – Section 11.2.11. RTS - Recommended Planning Conditions – Section 11.4.4	No- see Section 11.3.2.12 of this Report	No
				Delivery of measures for Environmental Recovery – Fish Pass Project	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.10 of this Report	No
				Downstream effects on the River Shannon – Fish Pass	RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.7 of this Report	No
				Cumulative modelling – Fish Pass	RTS - Potential Cumulative Hydrology Impacts and Modelling – Section 11.3.12 RTS - Cumulative Effects in the Hydrological Model – Section 11.4.6 RTS - Whether Environmental Recovery may be Constrained – Section 11.2.6	No – see Section 11.3.2.11 of this report	No
				Whether Environmental Recovery may be Constrained - A higher eflow and / freshets should apply during a drought	No	N/A	Yes – see Section 11.4.2.1

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				Security of supply for Limerick	Yes RTS – Security of Supply – 3.4.2	No – see Section 11.3.2.13 of this Report	No
			Climate	Climate change induced drought conditions and the impact on water abstraction	Yes RTS – Climate Adaptation - Section 16.2.4	Yes – see Section 16.2.2.1 of this Report	No
			Cumulative Effects and Interactions	Cumulative impact with the Shannon Fish Passage Study	Yes RTS – Whether Environmental Recovery may be Constrained – Section 11.2.6 RTS – Potential Cumulative Impact with the Shannon Fish Passage Study – Section 24.3.1 RTS – In-Combination Assessment with the Fish Passage Project – Section 25.3.2	Yes – see Section 24.2.2.1 of this Report	No
			Water Status Impact Assessment Report (Water Framework Directive)	Compliance with the Water Framework Directive	Yes RTS – Compliance with the Water Framework Directive – Section 26.2.1	Yes – see Section 26.2.2.1 of this Report	No

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				Projected future water demand, cumulative impacts with the Shannon Fish Passage Project, ecological flow requirements, hydrological modelling assumptions and compliance with obligations under the Water Framework Directive	Yes RTS - Whether Environmental Recovery may be Constrained - Section 11.2.6 RTS - In-Combination Assessment with the Fish Passage Project - Section 25.3.2 RTS - Compliance of the Flow with the Water Framework Directive - Section 26.4.5	Yes – see Section 26.3.2.4 of this Report	No
Additional Sub: Offaly County Council Previous: WSP_SUB_113	87	Offaly County Council*	Overarching Matters	Compliance framework	Yes RTS – Consent Condition - 2.9	Yes – see Section 2.2.2.4 of this Report	No
			Planning	Councils Development Contribution Scheme.	Section 3.4.4 (Development Contributions and Bonds)	No – see Section 3.3.2.4 of this Report	No
				Community fund duration.	Section 3.4.5 (Community Benefit Scheme)	No – see Section 3.3.2.4 of this Report	No
			Consultation and Communication	N/A			

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			Construction and Commissioning	N/A			
			Water (Modelling)	N/A			
			Soils, Geology and Hydrogeology	N/A			
			Agriculture	N/A			
Additional Sub: Tipperary County Council Previous: WSP_SUB_114	108	Tipperary County Council	Overarching Matters	Water Supply Project and ESB Licencing requirement at Ardnacrusha/Parteen Basin Need a "whole project" assessment including ESB licensing requirements.	Yes RTS – Abstraction Licensing – Section 2.3	Yes – see Section 2.2.2.2 of this Report	No
				Clarity, Transparency and Efficacy of Mitigation in the EIAR & NIS	Yes RTS – Mitigation Measures in EIAR and NIS – Section 2.8	Yes – see Section 2.2.2.3 of this Report	No
			Planning	Challenging the need for the project	Yes RTS - Challenging the Need for the Project - Section 3.2.2	Yes – see Section 3.2.2.2	No

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				Regional Balance - The Midwest region will not benefit from the project.	Yes RTS – Balanced Regional Development – Section 3.2.3	Yes – see Section 3.2.2.3 of this Report	No
				Community Benefitting Scheme	Yes RTS – Development Contributions and Bonds – Section 3.4.4 RTS – Community Benefit Scheme – Section 3.4.5	No – see Section 3.3.2.4 of this Report	No
			Consideration of Reasonable Alternatives	N/A			
			Project Description	Access Design and Sightlines	Yes RTS - Access Design and Sightlines – Section 6.4.9	Yes – see Section 6.2.2.9 of this Report	No
				Infrastructure Failure	RTS - Risk of Infrastructure Failures – Section 23.4.1 RTS – Systemic Vulnerability of the Proposed Project – Section 6.3.10 RTS - clarification on Response Plan for Leakages – Section 7.4.6	Yes – see Section 6.2.2.10 of this Report	No
			Construction and Commissioning	N/A			

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			Traffic and Transport	Concerns regarding the proposed temporary construction compound access onto the N52 at Lisgarriff and sightlines at accesses onto the public road network.	Yes RTS – General Construction Traffic Impacts – Section 9.2.1 RTS – Potential Traffic Impacts in the Tipperary Country Council Area – Section 9.4.6 RTS – Planning Conditions Specific to the Tipperary Country Council Area – Section 9.4.7 RTS - Alternative Access to the Construction Compound at Lisgarriff – 5.4.3	Yes – see Section 9.2.1 of this Report	No
			Water (Modelling)	N/A – See Biodiversity			
			Soils, Geology and Hydrogeology	N/A			
			Agriculture	2.7 Agriculture / Land / Spread of Disease Concerns of badger sets, spread of disease and impact on agriculture.	Yes RTS - Risk of Spread of Disease Across Agricultural Land - Section 14.2.4 RTS - Disruption to Agriculture and Farmlands - Section 14.2.1	Yes – see Section 14.2.2.1 of this Report	No
			Climate	Climate change induced drought conditions and the impact on water abstraction	Yes RTS – Climate Adaptation - Section 16.2.4	Yes – see Section 16.2.2.1 of this Report	No

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				Compliance with carbon budgets	Yes RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3	Yes – see Section 16.2.2.2 of this Report	No
				Carbon costs associated with current leakage rates in the water distribution system	Yes RTS – Carbon Emissions Assessment - Section 16.4.2 RTS - Carbon from Water Leakage – Section 27.6	Yes – see Section 16.2.2.3 of this Report	No
				GHG emissions and whether the State has headroom in its sectoral ceilings for this and all other major infrastructure projects competing for the same shrinking carbon budget	Yes RTS – Lifecycle Carbon Assessment and Carbon Budgets - Section 16.2.3	No – see Section 16.3.2.3 of this Report	No
			Population	Landscape and tourism impacts from abstraction of water from the Lower River Shannon (See Chapter 19 – Landscape and Visual of this Report regarding landscape matters)	Yes RTS - Potential Impact on Local Tourism and Amenity Impacts of the Proposed Project on Lough Derg and the Lower River Shannon - 17.2.2 RTS - Potential Economic Impact on Mountshannon - 17.3.1 RTS - Potential Recreation and Tourism Impacts of Reduction in Fish Stock - 17.3.2 RTS - Considerations for Tourism Assessment - 17.4.2	Yes – see Section 17.2.2.1 of this Report	No

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			Landscape and Visual	Landscape and tourism impacts from abstraction of water from the Lower River Shannon (See Chapter 17 – Population of this Report regarding tourism)	Yes RTS - Potential Visual Impacts from the RWI&PS – 19.4.4	Yes – See Section 19.2.2.1 of this Report	No
			Resource and Waste Management	Sludge management	Yes RTS - Management of Waste at the Proposed Water Treatment Plant - 22.2.1 RTS - Wastewater Infrastructure - 6.4.11	Yes – See Section 22.2.2.1 of this Report	No
Additional Sub: South Dublin County Council Previous: WSP_SUB_115	N/A	South Dublin City Council	Planning	N/A			
			Project Description	N/A			
			Construction and Commissioning	N/A			
			Noise and Vibration	Control of Noise Levels and Proposed Conditions	Yes SRTS - Recommended Planning Conditions for Noise and Vibration - Section 2.2.4.1	No – see Section 8.3.2.4 of this Report	No
			Biodiversity	Hedgerow loss and the biodiversity methodology focused on Annex I habitats.	Yes SRTS – Potential Impact of Hedgerow Removal – Section 2.2.6.3 SRTS – Biodiversity Methodology Focused on Annex I Habitats – Section 2.2.6.4	Yes – see Section 10.2.2.14 of this Report	No

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				Green infrastructure – Hedgerows, watercourse crossings and riparian vegetation	Yes SRTS – Potential Impact of Hedgerow Removal – Section 2.2.6.3	No – see Section 10.3.2.15 of this Report	No