CURRAGHINALT 33KV CONNECTION PROJECT

STATEMENT OF CASE TECHNICAL REPORT
FISHERIES & AQUATIC ECOLOGY

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Contents

1 INTRODUCTION

This Technical Report sets out the following summary of the assessment and outcomes:

- The methodology used in the assessment:
- Impacts without mitigation.
- Proposed mitigation measures.
- Residual impacts.
- Cumulative impacts/interactions/transboundary impacts.
- Consideration of consultation replies from statutory agencies and relevant third-party representations.
- Consideration of any changes to the baseline data, relevant policy, guidance and legislation since the completion of the EIA in May 2021
- Conclusions.

This Technical Report has been prepared by Dr David Kelly of Paul Johnston Associates Ltd. David is a Director of Paul Johnston Associates, Fisheries and Environmental Consultants, and was responsible for the drafting and delivery of the fisheries and aquatic ecology impact assessment chapter (Chapter 8) contained within the ES associated with the proposed Curraghinalt 33kV Connection Project.

David holds a BSc. In Zoology and a Ph.D. in Aquatic Ecology and Fisheries Ecology. He is a full member of the Chartered Institute of Ecology and Environmental Management (CIEEM). David has over 20 years' experience in environmental impact assessment, fisheries surveys, protected aquatic species surveys, water quality assessment, and has been involved in a number of infrastructure developments.

This Technical Report should be read alongside Chapter 8.0 Fisheries and Aquatic Ecology and associated Appendices of the ES.

Where the review of baseline data or any relevant change in legislation, policy or guidance results in a need to update environmental information this is clearly identified in this technical report.

2 METHODOLOGY

All fisheries and aquatic ecological survey methods employed to inform this chapter are set out in full in Section 8.2 of Chapter 8.0 of the ES, and are summarised below;salmonid habitat quality, juvenile fish stock status, and benthic macroinvertebrate-based ecological quality.

3 SUMMARY OF ASSESSMENT[1]

3.1 Construction Phase

For the installation of the underground cable (UGC), as set out in Section 8.4.3 of Chapter 8 of the ES, impacts on watercourses during construction, and prior to the application of mitigation measures, depended on the method employed to install the cable and associated duct system at a watercourse crossing; for example, UGC crossings of watercourses formerly included open cut trench crossing, Horizontal Directional Drilling (HDD), excavation around and below a watercourse culvert, and installation within the public road above a watercourse culvert.

However, as of October 2024, following further assessment of the existing culverts, it has been determined that:

- HDD is not required (Chapter 2, Project Description and Need) and that all sites formerly proposed as using HDD for underground cable installation, will now occur by replacement of the existing culvert or excavation around and below the culvert (further detailed in Vol. III, Appendix 2.2 OCEMP, Appendix D; see Table 1 below).
- All watercourse crossing sites formerly indicated as requiring open cut cable installation will now also occur by replacement of the existing culvert or excavation around and below the culvert (Table 1).
- The installation method for sites ST1, ST12 and ST13 (i.e. above the structure within the road) is unchanged from that assessed in the original EIAR Chapter 8.
- Site ST4, which was formerly assessed in Chapter 8, has now been omitted from the assessment by NIE.
- Site 10b (Meenadoo Road) was formerly either open cut or HDD and will now be the only watercourse crossing that uses an open cut installation (Table 1).

The revised proposed installation methods, together with those originally assessed in Chapter 8 of the ES, are summarised in Table 1 below:

Based on the updated proposed installation methods, the following potential impacts are predicted:

Location Reference	Former proposed methodology as assessed in Chapter 8 EIAR	New proposed methodology for Underground Cable Installation
ST1	Standard above structure within road	unchanged
ST2	Excavation around and below structure – alternative HDD	Alternate Methodology B: Culvert Replacement.
ST3	Open cut	Alternate Methodology A: Excavation and Installation around and below a structure or; Alternate Methodology B: Culvert Replacement
ST5 (ch450m)	HDD	Alternate Methodology A: Excavation and Installation around and below a structure or; Alternate Methodology B: Culvert Replacement.
ST6 (ch695m)	HDD	Alternate Methodology B: Culvert Replacement.

[1] This section summarises the assessment undertaken in respect of the baseline as existing in May 2021 when the EIA was completed. Section 5 contains a review of any changes in the baseline data, cumulative/in-combination & transboundary considerations, legislation, policy and guidelines and/or any other consideration that would trigger the need for Additional Environmental Information (AEI).

ST7 (ch895m)	above structure within road – alternative HDD	Alternate Methodology A: Excavation and Installation around and below a structure or; Alternate Methodology B: Culvert Replacement..
ST8 (ch980m)	above structure within road – alternative HDD	Alternate Methodology B: Culvert Replacement.
ST9 (ch1100m)	above structure within road – alternative HDD	Alternate Methodology A: Excavation and Installation around and below a structure or; Alternate Methodology B: Culvert Replacement.
ST10 (ch1230m)	above structure within road – alternative HDD	Alternate Methodology A: Excavation and Installation around and below a structure or; Alternate Methodology B: Culvert Replacement.
ST10b (offline; Meenadoo Road)	Open cut – alternative HDD	Open cut
ST11 (790m)	Open cut – alternative HDD	Alternate Methodology A: Excavation and Installation around and below a structure or; Alternate Methodology B: Culvert Replacement.
ST12	Standard above structure within road	unchanged
ST13	Standard above structure within road	unchanged

3.1.1 Types of potential impact on fisheries and aquatic ecology in the absence of mitigation

Sediment release and entrainment

Fine sediment (grain size <2mm) is a major cause of negative environmental impacts during the construction phase associated with infrastructure installation at watercourse crossings. Fish species such as Brown trout and Atlantic salmon are highly vulnerable to suspended and deposited sediment in spawning and nursery habitats. Suspended sediment can lower water clarity, reduce prey capture efficiency and affect respiration rates by clogging fish gills. Sediment deposited on the riverbed can reduce the quality of riverbed physical habitat by infilling of cobbles and pebbles and have indirect negative effects on fish growth and survival by reducing habitat quality of the invertebrate species that fish prey upon.

Potential sources of fine sediment during the construction phase:

- trench excavation and backfilling (open-cut only);
- soil and vegetation clearance;
- bank disturbance caused by plant equipment;
- run-off from spoil storage and overlying road;
- construction of dams to divert flow when soil or sandbags are used to block flow;
- water over-pumping and discharge of sediment laden water back to the watercourse;
- removal of dams;
- reinstatement of bank soils/ vegetation.

These potential sources are more relevant both to open-cut and culvert replacement methods because they have the potential to cause sediment release into the nearby watercourse by direct disturbance of the river bed and due to the close proximity of plant machinery to the watercourse. The degree of potential impact is expected to be lower for installation around and below a structure and for above structure installations (i.e. above culverts of bridges) within the road, because direct contact and disturbance of a watercourse is avoided, with surface run-off the most likely pathway of sediment entry to a watercourse.

Release of other pollutants

All crossing methods adjacent to or within watercourses pose a risk of spillage of diesel, petrol, oils and lubricants associated with plant use and liquid storage. Oils and petroleum in particular can have large impacts on aquatic species, ranging from altering oxygen exchange at the water-air interface or cause complete elimination of invertebrates and fish through toxicity.

Removal of sensitive species

This potential impact is relevant at open-cut crossings only because these involve excavation of the riverbed. Excavation of the riverbed can remove habitat and *in-situ* life-stages within the substrate. Methods such as culvert replacement and excavation around and under the structure will not remove the habitat or species as they will not occur within the natural riverbed.

Fish passage: temporary obstruction

Poor management of works adjacent to stream banks or at crossing points is likely to obstruct the channel and affect the movement of migratory fish species such as salmon and trout. This could occur through temporary damming and channel blocking associated with open-cut crossings or when installation is associated with replacement of the culvert because damming and over-pumping or diversion of the watercourse will be required; this type of impact could occur during the major period of upstream migration for adult salmonids in autumn or in spring during downstream migration of smolts.

3.1.2 Potential impacts without mitigation

This section first outlines each of the different types of potential impact that could occur on fisheries and aquatic ecology at each of the revised proposed watercourse crossing locations. It is then followed by the predicted magnitude of impact and significance of effect if **no** mitigation is employed. Note that Section 3.3 then summarises the predicted magnitude of impact and significance of effect after the various actions and project design features have been implemented that will mitigate adverse effects.

Sediment release and entrainment

Where open cut crossing or culvert replacement is proposed, fine sediment would have a greater impact at sites of at least Medium local sensitivity (Moderate WFD status; see Table 2 below). Suspended sediment pulses associated with open-cut crossings have the potential to alter feeding efficiency and respiration, and cause behavioural avoidance; open-cut crossings in wet channels will typically have more severe effects, such as marked reductions in fish densities in reaches downstream of works; as per DMRB guidance, this would equate to Moderate magnitude of impact (refer to Table 8.18 of the EIAR Chapter for detail on all potential watercourse crossing sites).

The magnitude of fine sediment impact for sites with low local sensitivity (fish locally absent; poor fisheries potential; pollution-tolerant invertebrate taxa), which include many small streams/ drains (e,g. see Table 2 below) would be much lower. The impact on benthic macroinvertebrates of short-term sediment pulses associated with open-cut crossings may include marked changes in invertebrate density followed by a return to baseline levels within several weeks; as per DMRB guidance, this would equate to Negligible magnitude of impact. However, where brown trout or Atlantic salmon are located much further downstream (e.g. Owenkillew tributary 2 (site ST5) and most likely the lower reaches of all other streams, the impact of far-reaching sediment transport could be at least of Moderate magnitude and Moderate to Large significance.

The impact on watercourses of at least Medium local sensitivity (presence of salmonid fish; at least Moderate WFD-based ecological quality) is predicted to be at least of Moderate adverse magnitude and Moderate significance of effect (Table 2). The impact on watercourses of at Low local sensitivity (fish locally absent; poor fisheries habitat / Poor WFD-based ecological status) is predicted to be of Negligible adverse magnitude and Neutral significance (Table 2).

Table 2. Construction Phase UGC - Magnitude and Significance of Effects without Mitigation. Note that the assessment takes into account the revised proposed crossing method (updated from Table 8.18 in Chapter 8 in lieu of proposed changes in installation methods as described above, and omission of site ST4).

Site ID & crossing method	Key Species /WFD status	Local Sensitivity	Likely Effect	Magnitude of Effect	Significance without Mitigation
ST1; standard above structure	Fish locally absent; WFD status Moderate	Medium	Sediment release	Minor	Slight
			Release of other pollutants	Major	Large
ST2; culvert replacement	Fish locally absent; WFD status Moderate	Medium	Sediment release	Moderate	Moderate
			Release of other pollutants	Major	Large
ST3; Excavation & Installation around & below structure or culvert replacement	Fish locally absent; WFD status Moderate	Medium	Sediment release	Moderate	Moderate
			Release of other pollutants	Major	Large
ST5-ST9; Excavation & Installation around & below structure and/ or culvert replacement	Habitat of poor local fisheries value; WFD status Poor	Low	Sediment release	Negligible	Neutral
			Release of other pollutants	Moderate	Slight
ST10; Installation around & below structure or culvert replacement	Fish locally absent; WFD status Good	High	Sediment release	Moderate	Moderate
			Release of other pollutants	Major	Very Large
ST10b (offline Meenadoo rd.); Open cut	Fish locally absent; WFD status Moderate at best	Medium at best	Sediment release	Moderate	Moderate
			Release of other pollutants	Major	Large
			Removal of sensitive species	Negligible	Neutral
ST11; Excavation & Installation around & below structure and/ or culvert replacement	Trout present; WFD status Moderate	High	Sediment release	Moderate	Moderate
			Release of other pollutants	Major	Large
			Fish passage obstruction (culvert replacement only)	Moderate	Moderate
ST12 & St13; Standard above structure	Habitat of poor local fisheries value; WFD status Poor	Low	Sediment release	Negligible	Neutral
			Release of other pollutants	Moderate	Slight

Release of other pollutants

Chemical spills could potentially cause impacts of Major magnitude at all sites of at least Medium local sensitivity and additionally because of effects on sensitive downstream watercourses. At sites of Low local sensitivity (fish locally absent), impacts of Moderate magnitude are expected; however, where sensitive salmonids are confirmed present in the lower reaches of these tributaries at greater distances downstream of the intersection with the UGC (e.g. ST5 & ST10, and most likely the lower reaches of all other streams), the impacts could be of Major magnitude; these effects are greater than would be expected from sediment pulses because of direct toxicity and environmental persistence.

The impact on watercourses of at Medium to High local sensitivity is therefore predicted to be of Major adverse magnitude and Large to Very Large significance.

The impact on watercourses and watercourse sections at greater distances downstream of the location of cable installation, where sensitivity was assessed as High or Very High is predicted to be of Major adverse magnitude and Very Large significance.

The impact on watercourses of Low local sensitivity is predicted to be of Moderate adverse magnitude and Slight significance.

Removal of sensitive species – open cut crossing

For the single proposed open cut crossing site (ST10b, Meenadoo Road), where fish were locally absent but WFD-based ecological status was assessed at Moderate (moderately sensitive and diverse benthic macroinvertebrate community), the impacts are likely to be very localised and of Negligible magnitude because of the restricted area of excavation coupled with the likelihood of rapid recolonization of invertebrates from upstream.

Fish passage – temporary obstruction

Apart from site ST11, none of the other proposed stream crossing sites were found to have fish present locally and thus no impact on fish passage is expected. However, at ST11, short term obstruction of trout movement could occur should culvert replacement be the chosen method of UGC installation. For example, temporary damming and over-pumping or diversion of the watercourse will be required for the culvert replacement method (see Appendix D, Alternative Underground Cable Construction Methodologies). This has the potential to temporarily block trout movement and cause localised population effects; if the timing of installation works coincides with adult brown trout spawning then it would have effects of Moderate adverse magnitude and Moderate significance (see Table 2). For example, without mitigation, if adult brown trout were unable to access part of the stream upstream of the works, there would be no salmonid spawning in that section and this would result in a partial loss in the overall trout population productivity of the stream.

For the installation of the Overhead Line (OHL), as set out in Chapter 8 of the ES, impacts on watercourses during construction, and **prior to the application of mitigation measures**, are predicted as follows:

Sediment release and entrainment & the Release of Other Pollutants

The impact is specific to the Owenkillew and Glenelly Rivers; both rivers will be crossed by a single OHL crossing of the main channel. For both rivers, a drone will be used to pass the OHL line over the watercourse with tensioners used to ensure that the line does not come into contact with the river. However, there will be a requirement for machinery adjacent to the river and the main potential sources of impact would be sediment release (via bank disturbance) and the release of pollutants such as oils and fuels associated with plant. Given the Very High sensitivity of both watercourses (Owenkillew SAC/ ASSI; presence of Annex II-listed Atlantic salmon, lamprey), in the absence of mitigation, the magnitude of impact is likely to range from Moderate (sediment release) to Major (release of other pollutants) and of Large to Very Large significance (Table 3).

Table 3 (reproduced from Table 8.19; Chapter 8). Construction Phase OHL downstream sensitive watercourses - Magnitude and Significance of Effects without Mitigation. Note that the assessment takes into account the crossing method.

Site ID	Key Species	Sensitivity	Potential Effect	Magnitude of Effect	Significance without Mitigation
ST14	SAC/ ASSI; Annex II Salmon & Lamprey spp. present; Trout present.	Very High	Sediment release	Moderate	Large
			Release of other pollutants	Major	Very Large
ST15	Annex II Salmon & Lamprey spp. present; Trout present.	Very High	Sediment release	Moderate	Large
			Release of other pollutants	Major	Very Large

3.2 Operational Phase

For the installation of the UGC and OHL, as set out in Section 8.4.4 of Chapter 8.0 the ES, post-construction (operational) impacts were assessed as not likely to arise because the UGC installation will be complete.

Where culvert installation will occur by direct replacement of the existing culvert, no habitat loss will arise. However, the revision of the proposed installation method to include culvert replacement as an alternative UGC installation method means that there is now potential for an impact of permanent obstruction of fish passage unless mitigation is applied.

3.2.1 Types of potential impact on fisheries and aquatic ecology in the absence of mitigation

Fish passage: Permanent obstruction

The installation of culverts can create obstructions and restrictions to fish passage if the movements of fish are not taken into account at the detailed design stage. Given the revised proposal to use culvert replacement as an alternative installation method at site ST11 (trout presence), there would now be potential for an impact on fish passage during the operational phase. The main causes of impaired passage could include;

- Insufficient embedding of culvert invert leading to low water depth
- Smooth culvert invert and lack of flow refugia
- Inadequate water depth at apron
- Excessive perching of pipe outlet/ apron
- Flow velocity exceeding swimming ability of fish
- Lack of available resting pools at inlets/ outlets

3.2.2 Potential impacts without mitigation

This section first outlines the type of potential impact that could occur on fisheries and aquatic ecology at each of the revised proposed watercourse crossing locations. It is then followed by the predicted magnitude of impact and significance of effect if **no** mitigation is employed. Note that Section 3.4 then summarises the predicted magnitude of impact and significance of effect after the various actions and project design features have been implemented that will mitigate adverse effects.

Fish passage: Permanent obstruction

At ST11, permanent obstruction of trout movement could occur should the culvert be designed or installed in a way that obstructs trout passage. Permanent obstruction of fish passage could prevent re-population of the upper reaches of the stream leading to a reduction or lack of juvenile trout recruitment; where juvenile recruitment in particular sections is dependent on access from downstream by mature resident and migratory trout from the Owenkillew River, the consequences may be severe, leading to a loss or extensive change to a fishery; for a Medium sensitivity location such as ST11, this equates to Major magnitude of impact and Moderate to Large significance.

The decommissioning of the UGC will not result in any impacts as the cable and associated duct system will remain *in-situ*.

3.3 Construction phase: Mitigation

As set out in Section 8.5 of Chapter 8.0 of the ES, the following actions or project design features are proposed to mitigate potential significant effects.;

Sediment release and entrainment

Timing of Works

For sites where sensitive fish are locally present (ST11; brown trout) the alternative UGC installation method of culvert replacement will not be undertaken during key migration periods (e.g. adult salmonids/ lamprey, elvers; downstream migrations of silver eels, salmonid smolts) or when sensitive life-stages are present (incubating eggs/ fry). The Loughs Agency require that in-stream works are conducted between 1st May and 30th September to avoid the more critical salmonid spawning season and egg incubation phases, 1 October – 30 April; works during this sensitive period will be avoided.

Temporary Dams and Flow diversion flumes

The proposed use of temporary dams or flow diversion pipes at open-cut crossings will result in a very low likelihood of sediment entrainment and the associated environmental impacts because excavation will be in non-flowing conditions. However, when water over-pumping occurs from upstream of coffer dams to downstream of the open cut, the water will be silt-free as it will be allowed to flow through settlement dams/ filters to remove entrainment silt drawn from the stream bed.

Buffers, settlement pits and filters

Buffer strips will be maintained at all watercourse crossings except while undertaking the crossing when the riparian material will be removed and the cable installed. After this short-term construction has been completed, the bank and riparian zone will be reinstated. Settlement pits and filters will be used to trap any sediment removed from de-watered areas, and appropriate filters (e.g. straw bales) will be placed downstream of areas of excavation.

Reinstatement of riparian vegetation and reduction in erosion risk.

To stabilise the riparian zone and reduce the risk of bank erosion and sediment input, a biodegradable membrane will be deployed (e.g. Geojute; Terram) followed by reinstatement of the bank and riparian zone (open-cut). For trenchless crossings where launch and exit pits have been excavated, all soils and vegetation will be reinstated and replanted.

Release of other pollutants

Site management

The OCEMP specifies mitigations to prevent spillages of diesel, oil or other polluting substances during the construction phase and good site practices as described in the Good Practice Guidance notes proposed by EA/SEPA/NIEA (e.g. Pollution Prevention Guidelines (PPGs), Guidance to Pollution Prevention (GPP), 2018; https://www.netregs.org.uk/environmental-topics/guidance-for-pollution-prevention-gpp documents/guidanceforpollution-prevention-gpps-full-list/), including:

- GPP1: Understanding your environmental responsibilities – good environmental practices;
- GPP2: Above ground oil storage tanks
- GPP5: Works in or near to Watercourses;
- PPG7: Safe Storage – The safe operation of refuelling facilities
- PPG6: Working at Construction and Demolition Sites.
- PPG18: Managing fire water and major spillages;
- GPP21: Pollution incident response planning;

- GPP: Dealing with spills;
- GPP26: Storage and handling of drums and intermediate bulk containers.

An Outline Emergency Clean Up Plan has been prepared as part of the OCEMP and includes an Outline Environmental Emergency Plan, which will frame the contents of the detailed environmental emergency plan in the final CEMP that will further detail the procedure to be followed in the event of a significant spillage occurring, including:

- Necessary containment measures
- Contact/ inform Environmental Officer
- Consider requirement for specialist clean-up
- Report incident to NIEA
- Conduct follow-up investigation.

Removal of in-situ sensitive species and Temporary obstruction of fish passage

Timing of works
Based on Loughs Agency guidelines, in the event of the need for culvert replacement, works at site ST11 (brown trout local presence) will be conducted between 1st May and 30th September to avoid the salmonid spawning, migration and egg incubation phases (Loughs Agency, 2011). Outside of this period, any works also will be undertaken within 1 day, so that the period of obstruction will be negligible.

Following the application of mitigation as set out in Section 8.5 of the ES, and as detailed above, **no significant impact on any sensitive fish, fish habitat, invertebrate community or priority habitat types or species is predicted for the construction phase.**

3.4 Operational phase: Mitigation

Chapter 8.0 of the ES did not set out any mitigations for this phase as none were predicted. However, given the revised proposed installation methods (as of October 2024), the following actions are proposed to mitigate potential significant effects;

Fish passage: Permanent obstruction

At ST11, should culvert replacement be the chosen alternative method of UGC installation, the installation of an open bottom (clear span) culvert is recommended as it will enable free movement of trout. If engineering requirements dictate the need for closed invert culverts, these should be designed to ensure that fish passage will not be inhibited and should follow the guidelines produced by CIRIA (Balkham et al. 2010); the following key points are relevant to maintaining fish passage;

- The avoidance of a significant drop in water level at the inlet or outlet;
- Provision of adequate flow depth for fish passage
- Provision of a natural bed
- The avoidance of a local increase in flow velocities

Following the application of mitigation as set out above, **no significant impact on permanent obstruction of fish passage is predicted for the operational phase.**

4 CONSULTATION RESPONSES AND SUBMISSIONS

4.1 Relevant Statutory Body Consultation Responses

In a response dated July 9th 2021, Loughs Agency, provided a consultation response to DfI Strategic Planning Division regarding the applications LA10/2019/1386/F and LA11/2019/1000/F to construct the overhead line (OHL) and underground cable (UGC). Having reviewed the Fisheries and Aquatic Ecology Chapter 8 of the ES and associated drawings, the Loughs Agency stated "*Loughs Agency is content with the proposals provided the mitigation as detailed is adhered to. Loughs Agency welcomes the consideration of the downstream sensitivities of the watercourses intersecting the UGC route (including highly sensitive watercourse intersecting the OHL route). Mitigation measures proposed seem appropriate to the nature and scale of the development*".

Environment, Marine and Fisheries Group & NIEA of DAERA, in their separate response letters dated September 2nd 2021 to Planning Refs: LA11/2019/1000F and LA10/2019/1386/F, noted comments by Natural Environment Divisions (NED) to Chapter 8.0 of the ES. '*These comments noted reference to Atlantic salmon as a component of the designated sites downstream of the proposed cable installations and made reference to the potential impacts assessed mitigations including Noise and vibration, the Removal of sensitive species, and temporary obstruction of fish passage, and the associated and recommended mitigations specified. NED recommended that HDD be used in preference to open-cut crossing techniques except where there is a risk of drilling mud escape by HDD. NED acknowledged receipt of the shadow Habitats Regulations Assessment (sHRA) and its conclusions that, together with mitigations described in Chapter 8 and other chapters of the ES, construction and operation of the proposed development will not adversely affect the conservation objectives for River Finn SAC, River Foyle and Tributaries SAC, Owenkillew River SAC or Lough Foyle SPA/Ramsar.'*. However, HDD has now been omitted as a n optional installation method (as of Oct. 2024).

In their letters dated October 14th 2021 ref: Planning Application LA10/2019/1386/F and LA11/2019/1000/F, Shared Environmental Services (SES) noted the response made by NED to Chapter 8.0 (outlined above) and the sHRA conclusions and after Appropriate Assessment, and stated that their (draft) conclusion is that the project would not have an adverse effect on the integrity of any European site.

4.2 Relevant Third-Party Representations

In the summary Table of third party representations, there are none that state specific objections to aspects related to fisheries or aquatic ecology.

5 REVIEW OF NEED FOR AEI IN RESPECT OF CHANGES IN BASELINE DATA, CUMULATIVE/IN COMBINATION IMPACTS, TRANSBOUNDARY, LEGISLATION/GUIDELINES/POLICY, OTHER

5.1 Additional Environmental Information - Baseline Data

Paul Johnston Associates Ltd were engaged by RPS to provide updated field baseline information in 2022 to assess the baseline assessment then subsisting for fisheries and aquatic ecology used to underpin the EIAR Chapter 8 submitted as part of the ES. The baseline field component as informed by fish, fish habitat, and invertebrate-based ecological quality sampling conducted mainly in 2019, with a small proportion of additional sites sampled in 2020.

While physical habitat surveys and invertebrate-based ecological surveys were completed prior to summer 2022, and the data collated for potential later use, the planned summer fish surveys were interrupted and could not be completed due to safety concerns in respect of field surveyors accessing the relevant locations.

In the Assessment of Effects (Section 8.2.3 of Chapter 8.0), the method for assessing potential impacts was based on the approach outlined in the Design Manual for Roads and Bridges (DMRB), specifically with regard to Road Drainage and the Water Environment, Volume 11, Section 3, Part 10 LA 113 (DMRB, 2019). Based on DMRB, estimating the significance of potential effects was based on guidance in:

- Design Manual for Roads and Bridges (DMRB, 2019b). Sustainability and Environmental Appraisal: LA08 Biodiversity; and
- Design Manual for Roads and Bridges (DMRB, 2019c). Sustainability and Environmental Appraisal: Environmental Assessment and Monitoring, Section 2, Part 4, LA104.

A revision to the DMRB 2019b was produced in March 2022 to update the references list in the document. A revision to DMRB 2019c was produced in August 2020 to correct an error on the DMRB website. The latter document was incorrectly published as revision 1 in July 2019 instead of revision 0 due to a typographical error. The DMRB website showed the document as revision 0 and so it was updated to ensure the website matched the version of the document (revision 1). No changes have been made between first publication in July 2019 and this administrative amendment to the DMRB website. We confirm that none of the aforementioned revisions to DMRB document guidelines change how the significance of potential effects for fisheries and aquatic ecology features was assessed.

5.2 Cumulative Impacts

Based on advice by the UK Planning Inspectorate for nationally significant infrastructure projects, a staged approach was used to identify the potential for significant cumulative effects by which a zone of influence which was identified for fisheries and aquatic ecology based on each of the different sub-basins draining to the watercourses traversed by the UGC and OHL project. All developments within the zone of influence were categorised and reduced from a long list to a short list by screening out those developments where no potential for likely significant effects on fisheries and aquatic ecology was likely (see Section 8.6.2 of Chapter 8 of the ES).

A list of developments with potential to have effects on fisheries and aquatic ecology was then produced to help inform identification of potential significant cumulative effects. The proposed Curraghinalt Mine Project was one of these developments. To inform the potential for cumulative effects with the current UGC and OHL development, information within case officer reports, relevant ES's, and Chapters accessed through the NI Planning Portal for each screened-in development, was used. For example, these reports referred to various specified mitigations that, if implemented, informed conclusions of no significant impacts on watercourse water quality and ecology. As Chapter 8 concluded that, with the mitigation measures being implemented as proposed, construction of the proposed UGC and OHL will have a negligible impact on the fish stocks and aquatic biology of the Glenmornan and Owenkillew catchments, the potential for significant cumulative effects on the same catchments, or on watercourses downstream such as the River Mourne and the River Foyle and Tributaries SAC, was ruled out.

6 CONCLUSIONS

With the implementation of the mitigations specified in Chapter 8 of the ES, the oCEMP, and those in Chapter 9 Water Quality, it was concluded that construction of the proposed UGC and OHL would have a negligible residual impact on fish stocks and aquatic biology within the Glenmornan and Owenkillew sub-catchments for watercourses downstream.