Regional Planning Policy & Casework

Department for Infrastructure
An Roinn Bonneagair
www.infrastructure-ni.gov.uk

Comhairle Contae Dhún na nGall
Donegal County Council

Planning Services

RECEIVED DATE: 29/04/2024

Mr. Frank Sweeney
Senior Executive Planner
Donegal County Council
County house
Lifford
Co. Donegal

By email: frank.sweeney@donegalcoco.ie

James House
Gasworks Site
2-4 Cromac Avenue
Belfast
BT7 2JA

Your reference:
Our references:
LA10/2017/1249/F
LA10/2019/1386/F
LA11/2019/1000/F

Date: 29 April 2024

Dear Frank

Planning Application No. 1 **Planning Reference:** LA10/2017/1249/F

Proposal: Underground valuable minerals mining and exploration, surface level development including processing plant and other associated development and ancillary works, Greencastle, County Tyrone. Please see application form P1, sheet 1 for full project description.

Location: Lands NW Of Greencastle, E Of Rouskey, N Of Crockanboy Rd, W Of Mullydoo Road, N And S Of Camcosy Rd, Including Lands 165m W Of No. 45 Camcosy Road To The Junction Of Camcosy Rd And Crockanboy Rd, And Lands 47m To The SE Of 73 Crockanboy Rd.

Planning Application No. 2 **Planning Reference:** LA10/2019/1386/F

Proposal: 33kV power line involving both construction of above ground 33kV overhead line supported by wooden poles and underground 33kV cable laid below ground level in ducts, to serve Curraghinalt mine (currently under consideration planning application LA10/2017/1249/F).
33kV connection is c37.9 km in length, comprising of c26.9 km of overhead line supported by single and double wooden pole sets and c11 km of underground cabling.
c 15.1 km of the powerline is within the Fermanagh & Omagh District Council area comprising of c 8.2 km of overhead line supported by single and double wooden pole sets and c 6.9 km of underground cabling.

Location: 737m NW of 56 Mullydoo Road Greencastle, through townlands of Crockanboy, Teebane West, Casorna, Rousky, Drumlea, Garvagh, Meenadoo, Trinamadan and Culvacullion ending at 785m NW of 24 Meenadoo Road Culvacullion Gortin.

Planning Application No. 3 **Planning Reference:** LA11/2019/1000/F

Proposal: 33kV power line involving both construction of above ground 33kV overhead line supported by wooden poles and underground 33kV cable laid below ground level in ducts, to serve Curraghinalt mine (currently under consideration planning application LA10/2017/1249/F).
33kV connection is c37.9 km in length, comprising of c26.9 km of overhead line supported by single and double wooden pole sets and c11 km of underground cabling.
c 22.8 km of the powerline is within the Derry City & Strabane District Council area comprising of c 18.7km of overhead line supported by single and double wooden pole sets and c 4.1 km of underground cabling.

Location: Adjoining 89 Woodend Road Ballymagorry, through townlands of Ballymagorry, Woodend, Milltown, Ballee, Holly-hill, Kennaghan, Owenreagh, Knockanbrack, Lagvittal, Knocklnarvoer, Craignagapple, Lagavadder, Ballykeery, Craigatuke, Meendamph, Balix Upper, Letterbrat, Glencoppogagh (Main Portion), Aghalane and Lisnacreaght ending at 681m NW of 24 Meenadoo Road Culvacullion Gortin.

The Department has requested that the Planning Appeals Commission convene a public local inquiry into the three applications detailed above. These proposed developments in Northern Ireland are the subject of EIA applications and may have likely significant effects on the environment in the Republic of Ireland (Co. Donegal).

In accordance with Regulation 29 of the Planning (Environmental Impact Assessment) Regulations (NI) 2017 please be advised that:

(a) The descriptions of the proposals are as per the titles above – with fuller details available on the planning portal.

(b) All information in relation to the applications, including the Environmental Statements and addendums is available to view on the planning portal using the planning reference numbers cited above.
https://planningregister.planningsystemni.gov.uk/simple-search

(c) Following receipt of a report from the Planning Appeals Commission, the applications will be determined by the Department and can either be approved (with conditions) or refused.

I have also attached some relevant figures and chapters from the ES to assist you and would be grateful if you could advise the Department within 30 days of this letter if Donegal County Council wishes to participate in these procedures.

Please do not hesitate to contact the Department should you wish to discuss further.

Yours sincerely

Regional Planning Policy & Casework Team

KEY

PLANNING BOUNDARY

LAND OWNERSHIP BOUNDARY

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PLOT DATE AND TIME: 29 September 2017 09:01:24
AUTOCAD FILE NAME: 2016021-P-CIV-001A Regional Site Location Plan.dwg
ORIGINAL PLOT SIZE: ISO full bleed A0 (841.00 x 1189.00 MM)

CLIENT		JOB TITLE	DRAWING TITLE
DALRADIAN GOLD LIMITED	HoyDorman www.hoy-dorman.com — BELFAST: SUITE 5D STIRLING HOUSE, 478 CASTLEREAGH ROAD, BELFAST BT5 6BQ, t. +44 (0) 28 9018 3500, e. info@hoy-dorman.com — LONDON: 86-90 PAUL STREET, LONDON, EC2A 4NE, t. +44 (0) 20 7477 2188, e. info@hoy-dorman.com	CURRAGHINALT GOLD PROJECT COUNTY TYRONE, NORTHERN IRELAND	REGIONAL SITE LOCATION PLAN

REVISION DETAILS	BY / CHK	DATE	REV	REVISION DETAILS	BY / CHK	DATE	REV

DRAWN BY	CHECKED BY	APPROVED BY	DATE DRAWN	SCALE @ A0	DRAWING NUMBER	REVISION
AM	MH	MH	28/09/2017	1 :50000	2016021-P-CIV-001A	0

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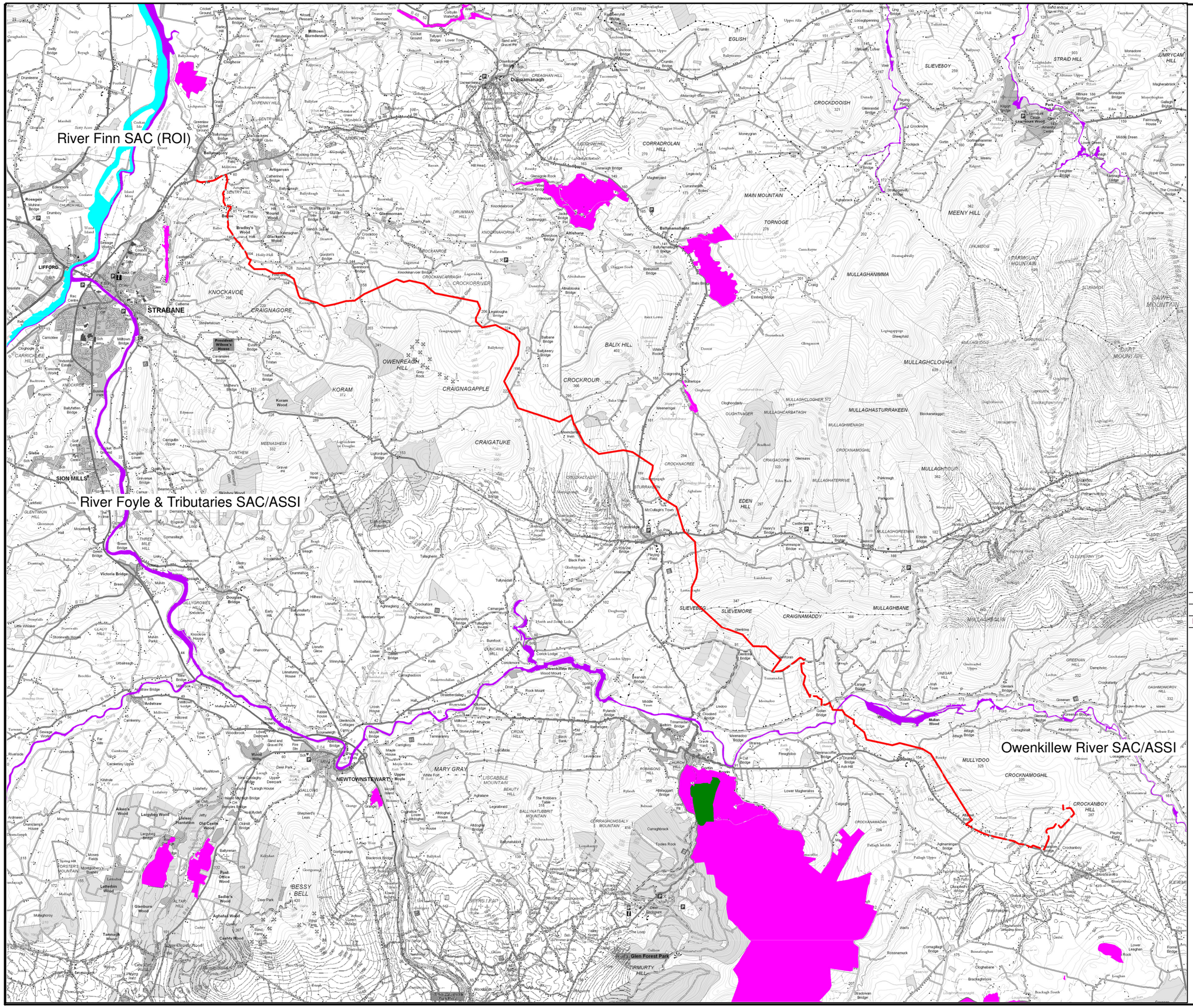

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Legend

- Proposed Overhead Line
- Proposed Cable
- SAC (NI)
- River Finn SAC (ROI)
- ASSI
- National Nature Reserve

Rev	Description	By	Ckd	Date

Elmwood House, 74 Boucher Road,
BELFAST, BT12 6RZ
T: 028 9066 7914

Client: NIE Networks

Project: Curraghinalt 33KV Connection Project

Title: Statutory Designated Sites

Figure Number 7.1

Status	Scale @ A3	Date
Preliminary	**NTS**	**19.03.21**

RPS Project Number
NI1851

Revision
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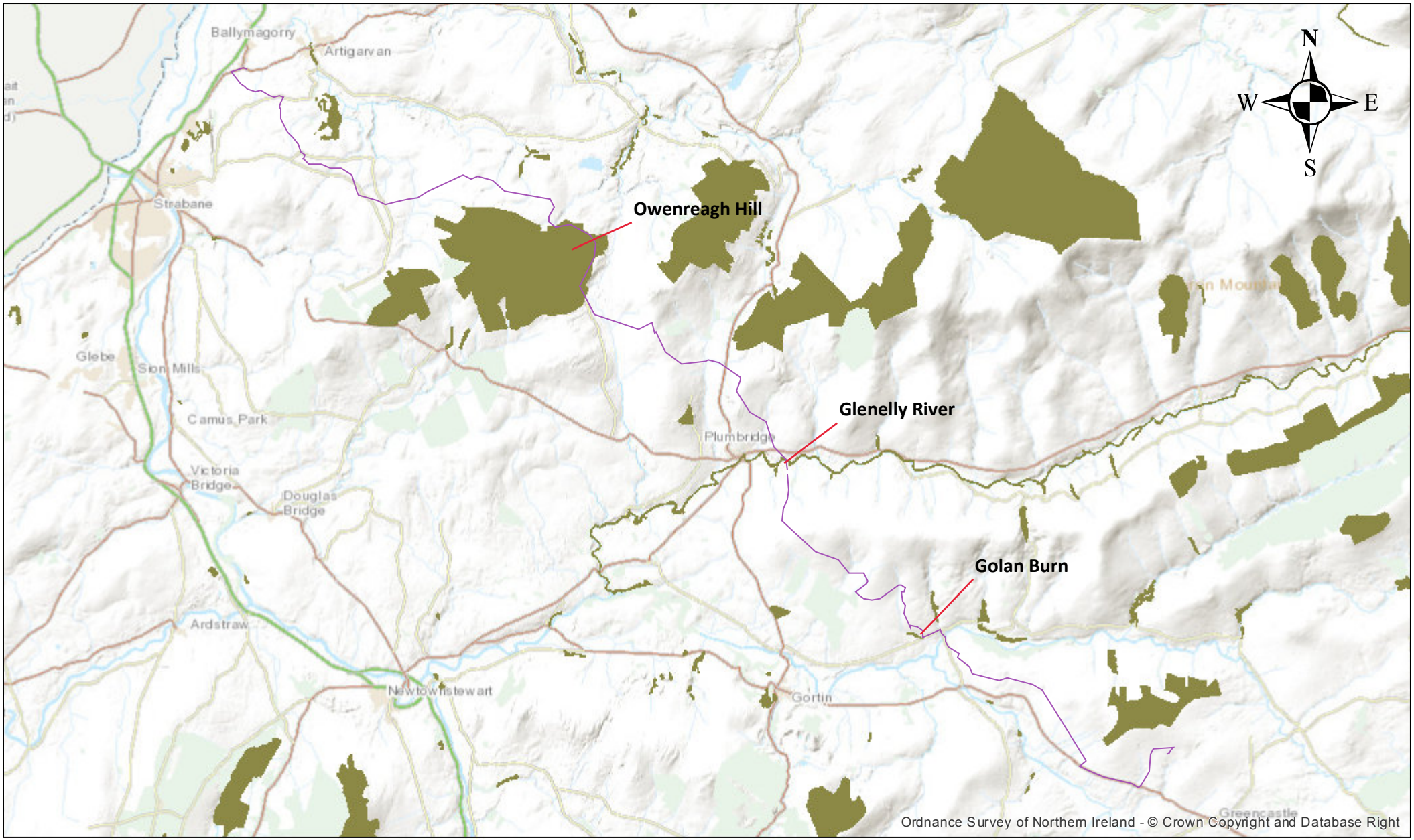
rpsgroup.com

Coordinates: 247,542 , 392,234



Title: **Figure 7.2 Non-Statutory Designated Sites**

Scale: **1:120,000**

Drawn by: **DMC**

Date: **19/11/2018**

Description:

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NIEA Northern Ireland Environment Agency
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Figure 8.2 - Location of UGC watercourse intersections within the Glenmornan catchment

9 WATER QUALITY

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9 WATER QUALITY

9.1 Introduction

The purpose of this report is to provide an assessment of the likely significant effects of the proposed project, henceforth referred to as the Proposed Development, a 33kV connection associated with the proposed Curraghinalt mine, currently under consideration under planning application LA10/2017/1249/F on water quality within the study area, particularly in the context of the water bodies affected in the North Western River Basin Management Plan 2015 -2021. This report sets out the baseline water quality as defined through desk based assessment, field surveys and consultation with DfI (Department for Infrastructure) Rivers Agency and DAERA (Department of Agriculture, Environment and Rural Affairs) Northern Ireland Environment Agency (NIEA).

This Report contains the following sub-sections:

- Project Description (section 9.3);
- Legislative and policy context (section 9.4);
- assessment methodology – describes the process used to produce this assessment (section 9.5);
- Baseline Description - a description of the existing environmental conditions of the assessment area (water quality) based on published information and consultations (section 9.6);
- Assessment of Impacts - identifying the ways in which the water quality of the assessment area could be affected (section 9.7);
- Mitigation - a description of measures that will be implemented to mitigate the identified potential effects (section 9.8);
- Residual Impacts - an assessment of the significance of the impacts of the development, after mitigation measures have been implemented (section 9.9);
- Cumulative, Transboundary Effects and interactions (section 9.10); and
- Conclusions (section 9.11).

9.2 Project Description

The Proposed Development seeks to develop a 33kV connection associated with the proposed Curraghinalt mine, currently under consideration under planning application LA10/2017/1249/F. The detailed project description is included in Chapter 2.

The Proposed Development connects the existing NIE Networks Strabane substation to a proposed substation building at the mine site; the substation at the mine site is proposed as part of planning application LA10/2017/1249/F.

The proposed 33kV connection is 37.9 km in length, comprising of 26.9 km of overhead line supported by single and double wooden pole sets and 11 km of underground cabling.

The route of the Proposed Development is shown in **Figure 9-1** below.

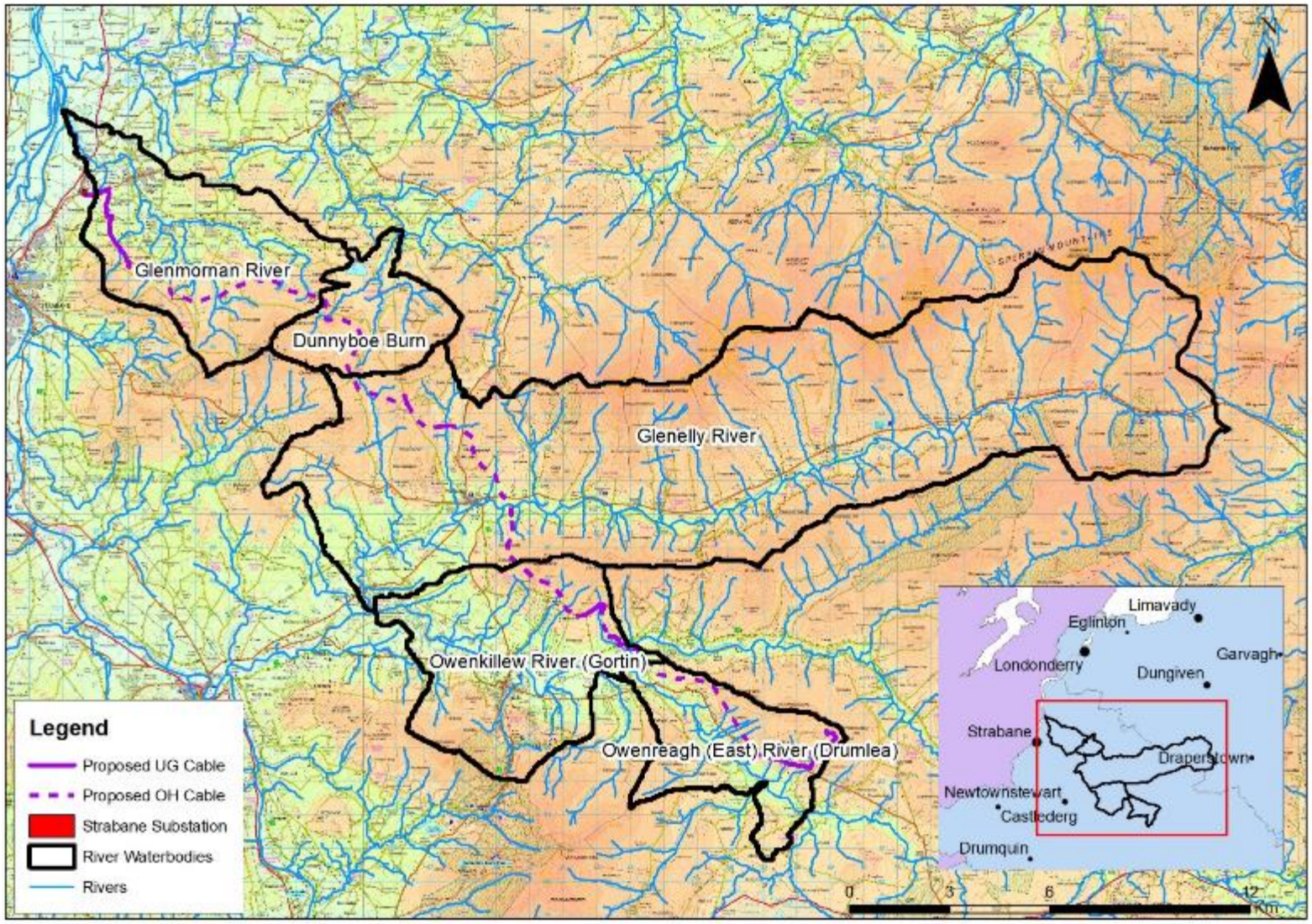

Figure 9-1: Location within the Context of the Water Environment

9.2.1.1 Watercourse Overhead Line crossings

The routing of the overhead line has sought to ensure pole sets are as far set back from water courses and field drains as possible, however in a limited number of locations it has been necessary to site the structures (either single or twin poles) within 10 metres of such features. The location of the pole sets that are in close proximity to water courses or field drains are provided in **Table 9-1**.

Table 9-1 Pole sets on the overhead line within 10 metres of a water course

Structure Reference	Type of Structure	Watercourse	X	Y	Distance from Project (m)	Adjacent Field drain (F) or water course (WB)
Pole 2010	Single Pole	Fowl Glen Burn (a tributary of Glenmornan River)	238674	398208	5.5	F
Pole 2036A	Single Pole	Unnamed tributary of the Owenreagh Burn (a tributary of Glenmornan River)	240584.8	397514.6	7	F
Pole 2037	H Pole	Glenawanda Burn (a tributary of Glenmornan River)	240697.2	397480.7	2	WB
Pole 2075A	Single Pole	Legnavadder Burn (a tributary of Glenmornan River)	243319.7	397536.6	9.5	F
Pole 2156	H Pole	Tributary of the Letterbrat Burn	247582.1	393665.5	8	F
Pole 2183	H Pole	Unnamed	248928.8	392209.6	8	F
Pole 2184	Single Pole	Unnamed (a tributary of Glenelly River)	248962.6	392154.5	8	F
Pole 2197	H Pole	Glenelly River	249437.2	391314.1	10	F
Pole 2239	H Pole	Trinamadan Burn (a tributary of Owenkillew River)	250917.8	388596.2	10	F
Pole 2263	Single Pole	Owenkillew River SAC and ASSI	253012.6	386949.5	5	F
Pole 2308	Single Pole	Unnamed (a tributary of Owenkillew River)	255890	385106.7	6	F
Pole 2314	Single Pole	Unnamed (a tributary of Owenkillew River)	256160.5	384677.8	5	WB
Pole 2086	H Pole	Legolougha Burn	243758.5	396929.2	8	WB
Pole 2125	Single Pole	Glashygolgan Burn	245106.3	394661.5	4	WB
Pole 2128	H Pole	Glashygolgan Burn	245441.7	394550.7	9	WB
Pole 2249	Single Pole	Trimamdan Burn	251126.1	388228.1	2	WB
Pole 2157	H Pole	Golan Burn	247650.1	393644.2	1	WB
Pole 2250	Single Pole	Trimamdan Burn	251081	388192.6	9	WB

9.2.1.2 Watercourse cable crossings

The construction method for the watercourse crossings on the cabled section of the route are listed in **Table 9-2** (the location reference refers to the watercourse crossings shown in **Figure 9-2** to **Figure 9-4**. Where the methodology differs from the standard technique outlined in Section 2.2.3 the detailed methodology can be found in Volume II, Appendix 2.2 OCEMP Appendix D: Alternate Underground Cable Construction Methodologies.

Table 9-2: Location of Specific Underground Cable Construction Methodologies (methodologies listed in the table can be found in Volume III, Appendix 2.2 OCEMP, Appendix D)

Location Reference	Grid Reference	Watercourse	Feature	Methodology of Underground Cable Installation
ST1 (ch550m)	**237078 400566**	Glenmornan Tributary 1 at Berryhill Road	Culvert (Concrete pipe)	Install as per normal technique above the culvert as per Section 2.5.5 of Chapter 2 Project Description
ST2 (ch2790m)	**237689 398985**	Glenmornan Tributary 2 at Hollyhill Road	Culvert (Concrete pipe)	Excavation and Installation around and below a structure (Methodology A) or; Directional drilling (Methodology B)
ST3 (ch3370m)	**238013 398528**	Glenmornan Tributary 3 at Hollyhill Road	Culvert (Mixture of concrete and masonry)	Dam watercourse and install open trench through watercourse (Methodology C)
ST4 (ch50m)	**251087 388156**	Owenkillew Tributary 1 at Meenadoo Road	Large masonry culvert	Install as per normal technique above the structure as per Section 2.2.3
ST5 (ch450m)	**251441 387959**	Owenkillew Tributary 2 at Meenadoo Road	Masonry culvert (suspected to have collapsed and in poor condition)	Directional drilling (Methodology B)
ST6 (ch695m)	**251689 388006**	Owenkillew Tributary 3 at Meenadoo Road	Masonry culvert	Directional drilling (Methodology B)
ST7 (ch895m)	**251841 388113**	Owenkillew Tributary 4 at Meenadoo Road	Culvert (Concrete pipe)	Install as per normal technique above the structure subject to condition of the road, or Directional drilling (Methodology B)
ST8 (ch980m)	**251910 388153**	Owenkillew Tributary 5 at Meenadoo Road	Culvert (Concrete pipe)	Install as per normal technique above the structure subject to condition of the road, or Directional drilling (Methodology B)
ST9 (ch1100m)	**252013 388241**	Owenkillew Tributary 6 at Meenadoo Road	Culvert (Concrete pipe)	Install as per normal technique above the structure subject to condition of the road, or Directional drilling (Methodology B)
ST10 (ch1230m)	**252096 388304**	Golan Burn at Meenadoo Road	Culvert (Concrete pipe)	Install as per normal technique above the structure subject to condition of the road, or Directional drilling (Methodology B)
ST10b (ch1450m)	**252207 388164**	Tributary of the Golan Burn	Open Water Course	Alternate Methodology C: Dam watercourse and install open trench through watercourse or; Alternate Methodology B: Directional drilling.
ST 11	**252949 386970**	Owenkillew Tributary 7 at Gortacashill Road	Culvert (Mixture of concrete and masonry)	Dam watercourse and install open trench through watercourse (Methodology C)., or Directional drilling (Methodology B)
ST12 (ch500m)	**256758 383849**	Owenreagh Tributary 1 at Crocknaboy Road	Culvert (Concrete pipe)	Install as per normal technique above the structure as per Section 2.2.3
ST13 (ch1500m)	**257700 383556**	Owenreagh Tributary 2 at Crocknaboy Road	Masonry Arch	Install as per normal technique above the structure as per Section 2.2.3

9.3 Legislative Context

The European Water Framework Directive (2000/60/EC) has been transposed into Northern Ireland regulations through The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017. The Water (Amendment) (Northern Ireland) (EU Exit) Regulations 2019 ensures that the Water Framework Directive (as transposed) and the various supporting pieces of water legislation continue to operate here after 1 January 2021 and are the main mechanism for integrated catchment management and the protection of our water resource. These supporting regulations are listed at Schedule 2 of The Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017. The Water Framework Directive (2000/60/EC), as amended by Directives 2008/105/EC, 2013/39/EU and 2014/101/EU, established a new integrated approach to the protection of the water environment. The Directive was transposed in Northern Ireland through the Water Environment (Water Framework Directive) Regulations (Northern Ireland) 2017.

The Northern Ireland Environment Agency (NIEA) is the competent authority tasked with implementation of the WFD in Northern Ireland. A key requirement of the WFD is that surface water bodies attain at least good surface water status, requiring both ecological status and chemical status to be at least good, and that there should be no deterioration in existing status.

For groundwater the objective is to achieve good groundwater status, requiring both quantitative status and chemical status to be at least good. Therefore an assessment must be carried out to ensure that the Proposed Development does not compromise these fundamental requirements of the WFD. The aim of this assessment is to determine if specific components or activities related to the planned development will compromise the attainment of an environmental objective as per Article 4 of the WFD or result in the deterioration in the overall status of any water body. This will determine whether it is possible to proceed with the project or whether amendments or mitigation measures are necessary.

To facilitate implementation of the WFD, Northern Ireland was divided into four River Basin Districts (RBDs). Three of the four RBDs are cross-border river basin districts and as such are designated as International River Basin Districts (IRBDs). Each RBD contains several water bodies which must be assessed and managed to meet WFD objectives. The WFD requires the preparation of a Programme of Measures (POMs) outlining the steps that will be taken to meet WFD objectives as applicable to each water body. This Programme is contained within an overarching River Basin Management Plan (RBMP). One RBMP is prepared for each RBD and also contains information on water body status, objectives and timescales. In the case of IRBDs, a separate RBMP has been published by each jurisdiction (Ireland and Northern Ireland) but with harmonised status, objectives, and programmes of measures for cross border water bodies. The final RBMPs for the second river basin management cycle for the portion of the IRBDs within Northern Ireland were published in December 2015 and, along with the associated programme of measures, are the main mechanism for catchment management and an integrated approach to the improvement of our water bodies. The NIEA are currently preparing the third River Basin Management Plan and the draft plan is currently published for public consultation. The third river basin management plan will run from December 2021 to 2027.

RBMPs are being implemented through Local Management Area (LMA) Action Plans during the current planning cycle 2015 to 2021. These LMA Action Plans detail the status, objectives and measures required to manage a specific group of water bodies within each RBD. The LMAs are kept 'live' during the planning cycle and will be updated as more measures are developed and implemented.

The environmental baseline is set out within this Report along with an assessment of how the existing environment may be affected by the proposal. Where impacts are expected suitable mitigation measures are detailed.

For the purposes of this assessment and to be consistent with the NIEA Water Management Unit 'EIA Scoping Guidance for Developments likely to Impact upon the Water Environment (NIEA, 2012)' potential impacts on specific waterways are identified. The definition of a waterway is as defined in the Water (Northern Ireland) Order 1999:

"waterway includes any river, stream, watercourse, inland water (whether natural or artificial) or tidal waters and any channel or passage of whatever kind (whether natural or artificial) through which water flows…"

9.4 Assessment Methodology

A qualitative (desk-based) assessment of potential impacts on local surface water quality and groundwater quality has been undertaken. The potential impacts of soil contaminants and drainage on local watercourses are considered in the assessment.

The following tasks were implemented to complete the desk based assessment:

- Existing Environment (Section 9.7)
    - Identification of location of watercourses along proposed route and in the vicinity of the substation;
    - Initial consultation with NIEA Water Management Unit (WMU) to obtain any relevant information; and
    - Assessment of baseline conditions and areas protected under the WFD.
- Impact Assessment (Section 9.8)
    - Identify potential impacts (including cumulative impacts) from the Proposed Development (and other relevant developments) on the achievement of WFD objectives;
    - Assessment of the significance of potential impacts using a method adopted from the Design Manual for Roads and Bridges (2011); and
    - assessment to determine whether specific components or activities related to the Proposed Development will compromise the attainment of WFD objectives or result in the deterioration in the ecological status of any water body.
- Mitigation (Section 9.9)
- Residual Impacts (Section 9.10)
- Cumulative impacts and transboundary issues (Section 9.11)
- Conclusions (Section 9.12)

9.4.1 Assessment of Significance of Potential Impact

The significance of impact on surface water runoff and water quality likely to occur during the construction and operation phases of the development are determined using the predominantly qualitative process described below. It is a combination of the magnitude of the impact and the potential sensitivity of the receptor.

The definitions of potential significance are as listed in **Table 9-3** (adapted from the generic methodology for environmental sensitivity outlined in the Design Manual for Roads and Bridges (DMRB) (2011)). Impacts can be described as either adverse or beneficial.

The magnitude of the impact has also been adapted from the generic methodology for environmental assessment outlined in the DMRB (**Table 9-4)** Impacts may be adverse or beneficial and their magnitude has been assessed.

Table 9-3: Sensitivity Indication (DMRB, 2011)

Value (Sensitivity)	Typical Descriptors
Very High	**Very high importance and rarity, international scale and very limited potential for substitution**. Examples: Water body protected area interests are of international importance and have been designated under the Habitats, Birds, Shellfish, Bathing Water or Freshwater Fish, Drinking Water or Nitrate Directives. High Status Water bodies.
High	**High importance and rarity, national scale, and limited potential for substitution.** Examples: Water body where the current status is good or better and no deterioration is permitted. National designation e.g. Area of Special Scientific Interest (ASSI).
Medium	**High or medium importance and rarity, regional scale, limited potential for substitution.** Examples: Moderate Status with an objective of good status by 2021, regionally important resource in terms of ecology or fisheries interest.
Low	**Low or medium importance and rarity, local scale.**
Negligible	**Very low importance and rarity, local scale.**

Table 9-4: Magnitude of Impact Indicating Type and Scale of Impact (DMRB, 2011)

Magnitude	Type and scale of impact
Major	Major alteration to water body status causing deterioration in either the ecological status including supporting elements, i.e., physico-chemical, specific pollutants and hydromorphology, chemical status or protected area status, including downstream protected area interests within the same water body. Severe damage to key water body characteristics, features or elements (Adverse). Large scale or major improvement to water body status, extensive restoration or enhancement of Water body (Beneficial).
Moderate	Water quality impact but not adversely affecting the integrity or status of the water body, partial loss or damage of certain characteristics or water body attributes (Adverse). Benefit to or addition of key characteristics or features of the water body, improvement in water status (Beneficial).
Minor	Some measureable change in water quality attributes, minor loss or alteration to one (maybe more) key characteristics (Adverse). Minor benefit to one or more key characteristics, features or elements of the water body (Beneficial).
Negligible	Very minor loss to water body characteristics, features or elements (Adverse). Very minor benefit to or positive addition of one or more water body characteristics, features or elements (Beneficial).
No change	No loss or alteration to water quality or water body status.

The greater the environmental sensitivity or value of the receptor or resource, and the greater the magnitude of impact, the more significant the impact. The consequences of a highly valued environmental resource suffering a major detrimental impact would have a very significant adverse effect. The typical impact significance categories used in this assessment are presented in **Table 9-5.**

Table 9-5: Estimating the Significance of Potential Impacts (DMRB, 2011)

Sensitivity of Attribute	Magnitude of Impact			
	Negligible	Minor	Moderate	Major
Very High	Negligible/Neutral	Moderate/Large	Large/Very Large	Very Large
High	Negligible/Neutral	Slight/Moderate	Moderate/Large	Large/Very Large
Medium	Negligible/Neutral	Slight	Moderate	Large
Low	Negligible/Neutral	Negligible/Neutral	Slight	Slight/Moderate

9.5 Consultation Responses

A comprehensive consultation response was received from a number of agencies both in terms of the EIA determination and the scope of the Environmental Impact Assessment. The associated correspondence, including the DfI's screening opinion, is provided in Volume III, Appendix 1.2. The associated correspondence, provided by consultees, in respect of DfI's screening exercise, are provided in Volume III, Appendix 1.3.

The key issues raised in relation to water quality are summarised below. These have been considered in the preparation of this assessment, where relevant, or in related assessments e.g. Fisheries and Aquatic Ecology, and also in the development of the OCEMP (Volume II, Appendix 2.2).

9.5.1 Marine and Fisheries Division:

Section 47 of the Fisheries Act (Northern Ireland) 1966 covers the Applicant's responsibilities relating to penalties for pollution and the consequences of causing or permitting the release of any deleterious material into waters.

The Applicant was advised to consult the following:

- Planning in the Coastal Area
- Standing advice for development that may have an effect on the water environment (including groundwater and fisheries)
- Marine Map Viewer

9.5.2 Drainage and Water

The Water Management Unit are of the opinion that, based on the information presented, the impacts on the surface water environment generated by this proposal are unlikely to be significant subject to best practice and appropriate mitigation being applied during the construction, operation and decommissioning phases. The WMU comments are subject to:

- The Applicant complying with all the environmental authorisations granted.
- The proposal necessitates the crossing of a waterway and the Applicant will be required to liaise with Water Management Unit Pollution Prevention Team to agree a method of works.
- The Applicant noting and acting on the advice contained in this response under further guidance.
- The following standing advice for the aquatic environment was also referred to:
  - DAERA Standing Advice Pollution Prevention Guidance
  - DAERA Standing Advice Discharges to the Water Environment
  - DAERA Standing Advice Abstractions and Impoundments
  - DAERA Standing Advice Sustainable Drainage Systems
- Final CEMP to be agreed with NIEA in advance of construction
- River crossing methods both overhead and underground needs to be fully detailed including method statements for both HDD and the use of open cut employing coffer dams.
- Stockpiles – best practice management must be applied and stockpiles should be at least 10 Metres from any watercourse. (Any mitigation methods used to prevent pollution from suspended solids from surface water runoff must be maintained after drilling until times as there is no longer a threat to the aquatic environment (e.g. re-vegetation has taken place)
- Vegetative buffer zones mentioned as a measure for pollution of prevention of the watercourses on site need to be a minimum of 10Metres. The Applicant will need to take into account conditions on the ground including typography and ensure that any buffer zone is suitable for the task in hand;

9.5.3 Drinking Water Inspectorate

A development must not impact on either the quality or sufficiency of a private water supply, and mitigation measures must be put in place, where required, in the protection of such drinking water supplies. If any private water supplies have the potential to be impacted by the development appropriate mitigations must be in place. The Applicant must consider the use of individual private supplies in the area that have not been registered by DWI, therefore a scoping exercise should be undertaken along the length of the proposed development to ensure no private water supplies will be adversely affected.

Public water supplies: All necessary steps must be taken to ensure that the works do not impact on the water bodies within Drinking Water Protected Areas.

9.5.4 Loughs Agency

- Any crossing must be the subject of an application under Article 46 of the Foyle Fisheries Act (Northern Ireland) 1952 as amended, which allows for disturbance of the bed a watercourse under specified conditions
- In relation to works in sensitive rivers, the Loughs Agency would prefer to see no coffer dams on the river working, similarly to river crossings if these are not avoidable then applications above must be submitted
- If any in river works are required in designated rivers it is likely that these would be strictly time limited to take into account the life cycle of the various fish species and this may be prohibitive due to the volume of species of high conservation value i.e. Salmon, Brook/River/Sea Lamprey, FPM, Sea and brown trout and eel
- The agency would also expect to see a site-specific construction method statement and a site specific invasive species management plan.
- Preference for directional drilling under streams
- Fish passage should not be impaired even by temporary obstruction except where absolutely necessary

9.6 Existing Environment

As shown in **Figure 9-1** this Proposed Development traverses watercourses within five river water bodies and two groundwater bodies, namely:

- Glenmornan River (UKGBNI1NW010101075)
- Dunnyboe Burn (UKGBNI1NW010101072)
- Glenelly River (UKGBNI1NW010104040)
- Owenkillew River (Gortin) (UKGBNI1NW010102027)
- Owenreagh (East) River (Drumlea) (UKGBNI1NW010104041)
- Claudy Groundwater (UKGBNI4NW003)
- Gortin Groundwater (UKGBNI4NW004)

The Glenmornan River and Dunnyboe River water bodies are within the Burn Dennet and Foyle LMA. While the Glenelly River, Owenkillew River (Gortin) and Owenreagh (East) River (Drumlea) water bodies are within the Owenkillew LMA, both of which are part of the North Western RBD.

The Glenmornan River lies within the Claudy Groundwater body, while the remaining water bodies are within the Gortin Groundwater body. Consultations were therefore undertaken with NIEA Water Management Unit in July 2019 and again in July 2020 with respect to the Proposed Development within the context of the WFD Programme of Measures for the water body, the overarching RBMP and general water quality assessment. A desk study was undertaken to determine the current water quality status of each of the aforementioned water bodies in the context of WFD via a request for available information from NIEA Water Management Unit and a review of data available on the NIEA website.

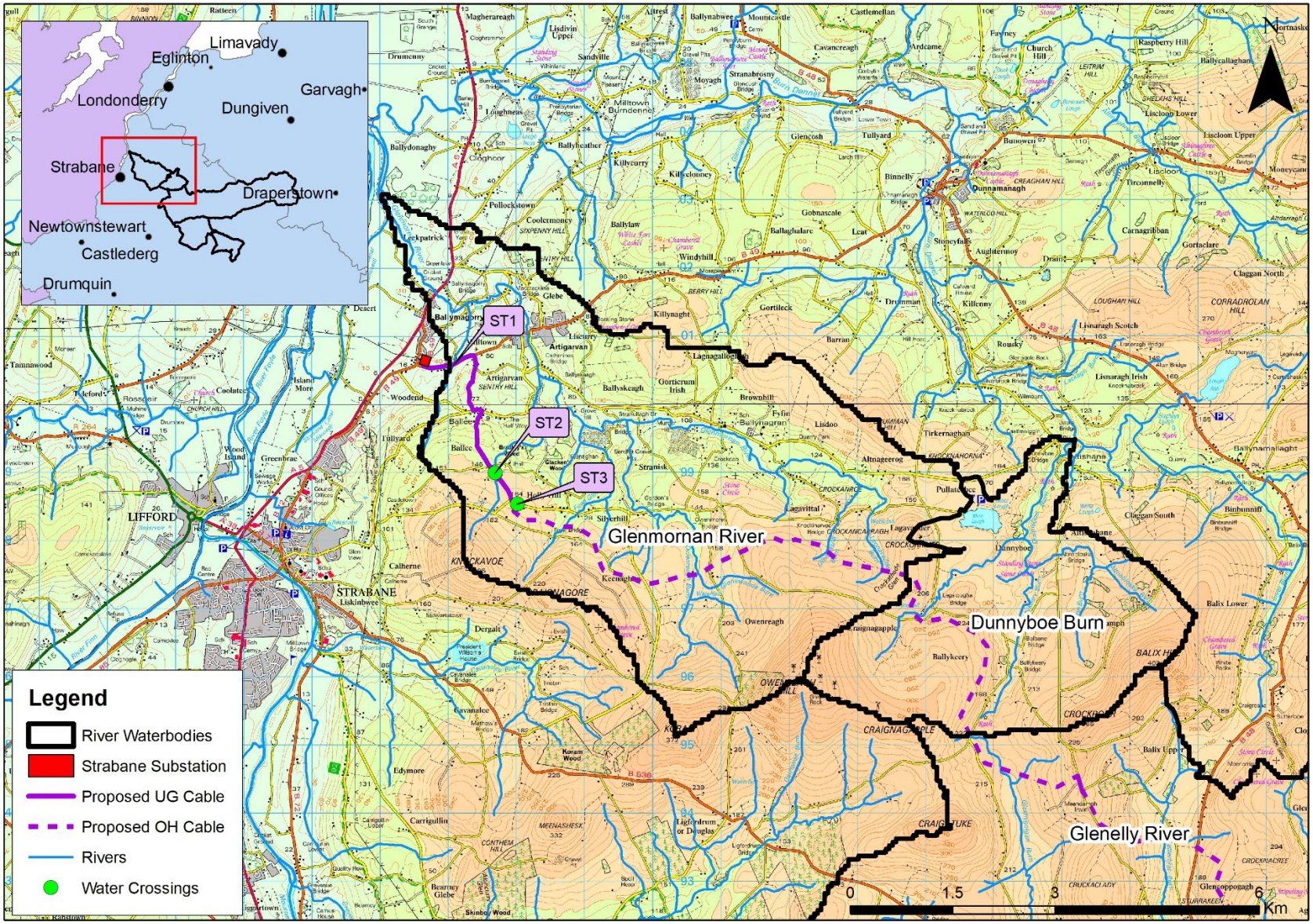

Figure 9-2: Location within the Context of the Water Environment and included water crossings, Section A

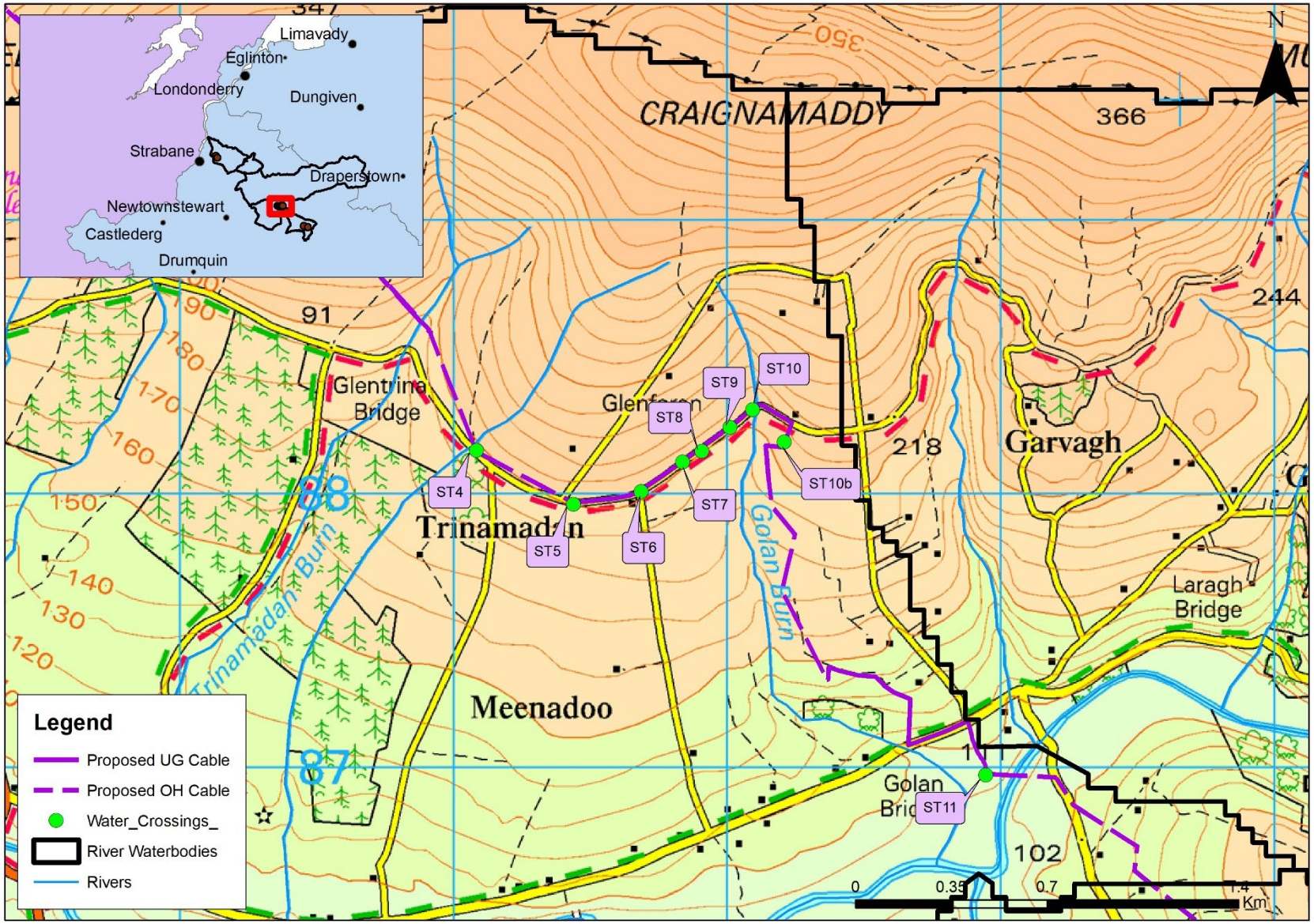

Figure 9-3: Location within the Context of the Water Environment and included water crossings, Section B.

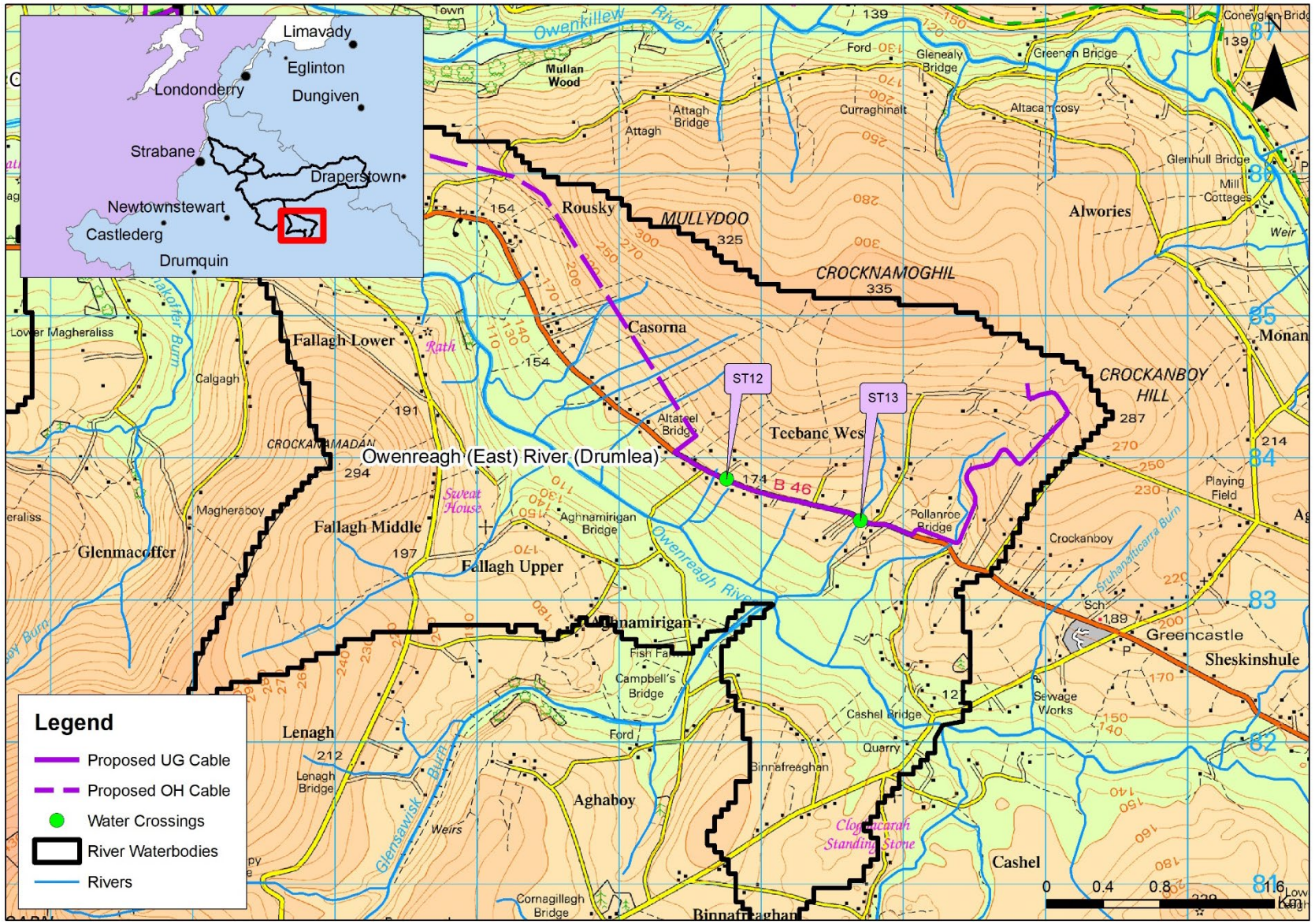

Figure 9-4: Location within the Context of the Water Environment and included water crossings, Section C.

9.6.1 Surface Water Status

Consultation with the NIEA Water Management Unit provided details of surface water status, groundwater status, pollution incidents and industrial consents within the study area of the Proposed Development. The surface water status information provided includes the status attained during the most up-to-date WFD monitoring assessment, which was undertaken in 2018. Detailed information in relation to the components contributing to the status is available from the NIEA website. The most up to date information has been included in **Table 9-6 – Table 9-10 t**o ascertain the individual quality elements contributing to overall status.

Table 9-6: Glenmornan River (UKGBNI1NW010101075) WFD Status Classification

Water body name:	Glenmornan River
Water body identification code:	UKGBNI1NW010101075
River Basin District:	North Western
Local management area:	Burn Dennet and Foyle
2018 Status:	Moderate
2021 Objective:	Good Status
2027 Objective:	Good Status
Confidence in overall status:	-
Biological elements	
Benthic invertebrates	Good
Macrophytes	High
Phytobenthos	Good
Fish	Moderate
Physicochemical elements	
Biochemical Oxygen Demand	-
Dissolved Oxygen	High
pH	High
Soluble Reactive Phosphorus	Good
Specific pollutants	
Ammonia	High
Other Specific Pollutants	High
Hydromorphological elements	
Hydrological regime	High
Morphological conditions	Moderate
Priority substances	
Benzene	High
Brominated diphenylether	High
Cadmium (dissolved)	High
Lead (dissolved)	High
Mercury (dissolved)	High
Nickel (dissolved)	High

Table 9-7: Dunnyboe Burn (UKGBNI1NW010101072) WFD Status Classification

Water body name:	Dunnyboe Burn
Water body identification code:	UKGBNI1NW010101072
River Basin District:	North Western
Local management area:	Burn Dennet and Foyle
2018 Status:	Good
2021 Objective:	Good Status
2027 Objective:	Good Status
Confidence in overall status:	-
Biological elements	
Benthic invertebrates	Good
Macrophytes	High
Phytobenthos	High
Fish	High
Physicochemical elements	
Biochemical Oxygen Demand	-
Temperature	-
Dissolved Oxygen	High
pH	High
Soluble Reactive Phosphorus	High
Specific pollutants	
Ammonia	High
Other Specific Pollutants	High
Hydromorphological elements	
Hydrological regime	High
Morphological conditions	Good
Priority substances	
Atrazine	High
Cadmium (dissolved)	High
Chlorpyriphos	High
Diuron	High
Isoproturon	High
Lead (dissolved)	High
Mercury (dissolved)	High
Nickel (dissolved)	High
Simazine	High

Table 9-8: Glenelly River (UKGBNI1NW010104040) WFD Status Classification

Water body name:	Glenelly River
Water body identification code:	UKGBNI1NW010104040
River Basin District:	North Western
Local management area:	Owenkillew
2018 Status:	Moderate
2021 Objective:	Good Status
2027 Objective:	Good Status
Confidence in overall status:	-
Biological elements	
Benthic invertebrates	Moderate
Macrophytes	High
Phytobenthos	High
Fish	Moderate
Physicochemical elements	
Biochemical Oxygen Demand	-
Temperature	-
Dissolved Oxygen	High
pH	High
Soluble Reactive Phosphorus	Good
Specific pollutants	
Ammonia	High
Other Specific Pollutants	Moderate
Hydromorphological elements	
Hydrological regime	High
Priority substances	
Atrazine	High
Cadmium (dissolved)	High
Chlorpyriphos	High
Diuron	High
Isoproturon	High
Lead (dissolved)	High
Mercury (dissolved)	High
Nickel (dissolved)	High
Simazine	High

Table 9-9: Owenkillew River (UKGBNI1NW010102027) WFD Status Classification

Water body name:	Owenkillew River (Gortin)
Water body identification code:	UKGBNI1NW010102027
River Basin District:	North Western
Local management area:	Owenkillew
2018 Status:	Good
2021 Objective:	Good Status
2027 Objective:	Good Status
Confidence in overall status:	-
Biological elements	
Benthic invertebrates	High
Macrophytes	High
Phytobenthos	High
Physicochemical elements	
Biochemical Oxygen Demand	-
Temperature	-
Dissolved Oxygen	High
pH	High
Soluble Reactive Phosphorus	Good
Specific pollutants	
Ammonia	High
Other Specific Pollutants	High
Hydromorphological elements	
Hydrological regime	High
Priority substances	
Priority Substances	High

Table 9-6 to **Table 9-10** show that Owenkillew River (Gortin), Dunnyboe Burn and Owenreagh (East) River (Drumlea) are at 'Good' overall status, while the Glenelly River and Glenmornan River are at "Moderate" overall status.

The Glenmornan River has declined to Moderate Status in 2018 while the water body was previously at Good status during the 2015 monitoring cycle. The elements responsible for the decline in status are both biological (fish) and hydromorphological (morphological regime), which both decreased from Good to Moderate status.

Morphological conditions and the biological elements (benthic invertebrate) in the Dunnyboe Burn are the elements hindering the waterbody from achieving High status, however it is not preventing the waterbody from achieving its WFD objective.

Biological elements (benthic invertebrates) and the specific pollutant Cypermethrin in the Glenelly River are the elements hindering the waterbody from achieving good status. Both benthic invertebrates and Cypermethrin are preventing the waterbody from achieving its WFD objective.

Physicochemical conditions (dissolved oxygen) in the Owenkillew River (Gortin) was the sole element hindering the waterbody from achieving its WFD objective, "Good" status in 2015. Dissolved oxygen has improved to Good status in 2018. However, soluble reactive phosphorus has declined from High to Good status in the most recent monitoring period.

Hydrological regime, invertebrate status and soluble reactive phosphorus in the Owenreagh (East) River (Drumlea) are all hindering the waterbody from achieving High status, however it they not preventing the waterbody from achieving its WFD objective.

It is important to ensure this development does not introduce new pressures to these water bodies, which would be contrary to the objectives of the WFD including the achievement of the protected area objectives for water dependent protected areas under Article 6 of the WFD.

Table 9-10: Owenreagh (East) River (Drumlea) (UKGBNI1NW010104041) WFD Status Classification

Water body name:	Owenreagh (East) River (Drumlea)
Water body identification code:	UKGBNI1NW010104041
River Basin District:	North Western
Local management area:	Owenkillew
2018 Status:	Good
2021 Objective:	Good Status
2027 Objective:	Good Status
Confidence in overall status:	High
Biological elements	
Benthic invertebrates	Good
Macrophytes	High
Phytobenthos	High
Physicochemical elements	
Biochemical Oxygen Demand	-
Temperature	-
Dissolved Oxygen	High
pH	High
Soluble Reactive Phosphorus	Good
Specific pollutants	
Ammonia	High
Other Specific Pollutants	High
Hydromorphological elements	
Hydrological regime	Good
Priority substances	
Priority substances	High

9.6.2 WFD Objectives

The core objectives of the WFD is for all water bodies to achieve 'good status' where they are currently at less than good status and to prevent the deterioration in status. In addition WFD objectives requires that the water dependent protected areas linked to the water bodies must not be compromised and pollution from priority substances should be progressively reduced and emissions, discharges and losses of priority hazardous substances into surface waters ceased or phased out. However, Member States are permitted to apply for an extended deadline in achieving good status for water bodies where the necessary improvements in the status cannot reasonably be achieved within the required timescales. This may be for reasons such as technical feasibility, disproportionate cost or natural conditions within the water body. It is evident from **Tables 9.6** through to **9.10** that two of the water bodies associated with this development are subject to extended deadlines as they are not achieving their objectives.

It will be a requirement that this project does not result in any deterioration of the current status of the relevant water bodies and does not prevent the improvement in status where this is required under the WFD.

9.6.3 Protected Areas

A significant proportion of waters in the North Western RBD are protected under existing European Union (EU) legislation requiring special protection due to their sensitivity to pollution or their particular economic, social or environmental importance. The WFD requires competent authorities to establish a register of these protected

areas and ensure that they are adequately protected. A water body which otherwise meets the requirements of the WFD, may have the status reduced to “less than good” if it does not meet the protected area objectives. All of the areas requiring special protection in the North Western RBD have been identified by the NIEA, mapped and listed in a Register of Protected Areas (required under Article 6 of the WFD). The Register of Protected Areas includes:

- Drinking water protected areas;
- Economically significant waters;
- Recreational waters;
- Nutrient sensitive areas;
- Water dependent Natura 2000 sites.
- Within the Burn Dennet and Foyle LMA and Owenkillew LMA there are several protected areas as outlined in **Table 9-11. Figure 9-5** and **Figure 9.6** illustrate the protected areas in close proximity to the Proposed Development.

Table 9-11: Protected Areas within the Burn Dennet and Foyle LMA.

Protected Area Type	Details
Waters used for the abstraction of drinking water (drinking water protected areas)	There are only Groundwater Protected Areas within this catchment.
Areas designed to protect economically significant aquatic species Freshwater Fish Directive (78/659/EEC) Shellfish Waters Directive (79/923/EC)	 There are approximately 71km of rivers identified under the Freshwater Fish Directive, all designated as salmonid. There are 2 designated shellfish waters; Balls Point and Longfield Bank.
Recreational waters (Bathing waters) These are bathing waters identified under the Bathing Waters Directives (76/106/EEC)	There are no identified bathing waters.
Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/676/EEC) And the Nitrates Directive (91/676/EEC)	There are no Urban Waste Water Treatment Directive sensitive areas. A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.
Areas designated for the protection of habitats or species (Natura 2000 sites) These are 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. Habitats Directive (92/43/EEC) Birds Directive (79/409/EEC)	 There is 1 water dependent Special Area of Conservation (SAC); River Foyle and Tributaries. There is 1 water dependent Special Protection Area (SPA); Lough Foyle.

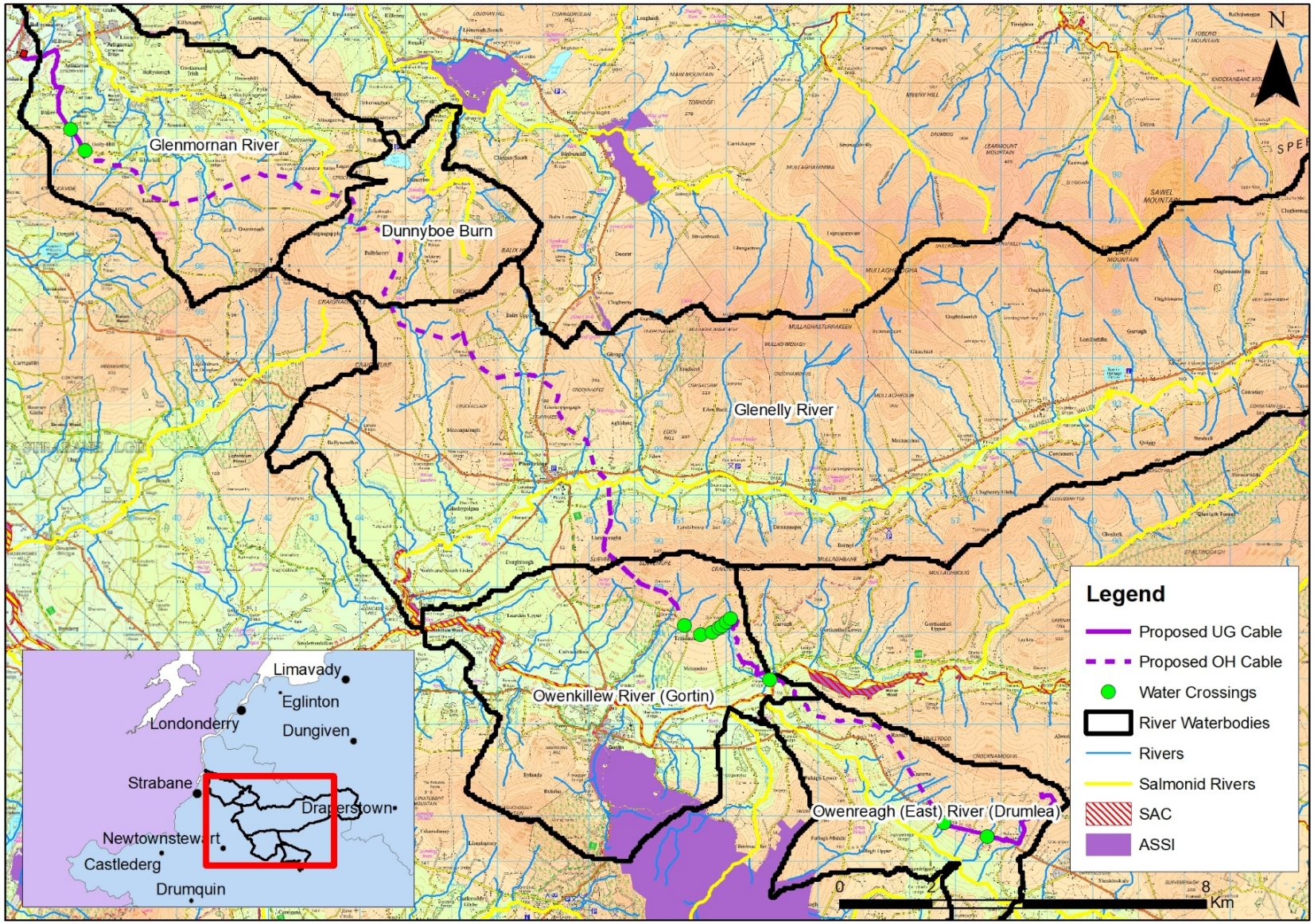

Figure 9-5: Protected Areas within the Vicinity of the Proposed Development

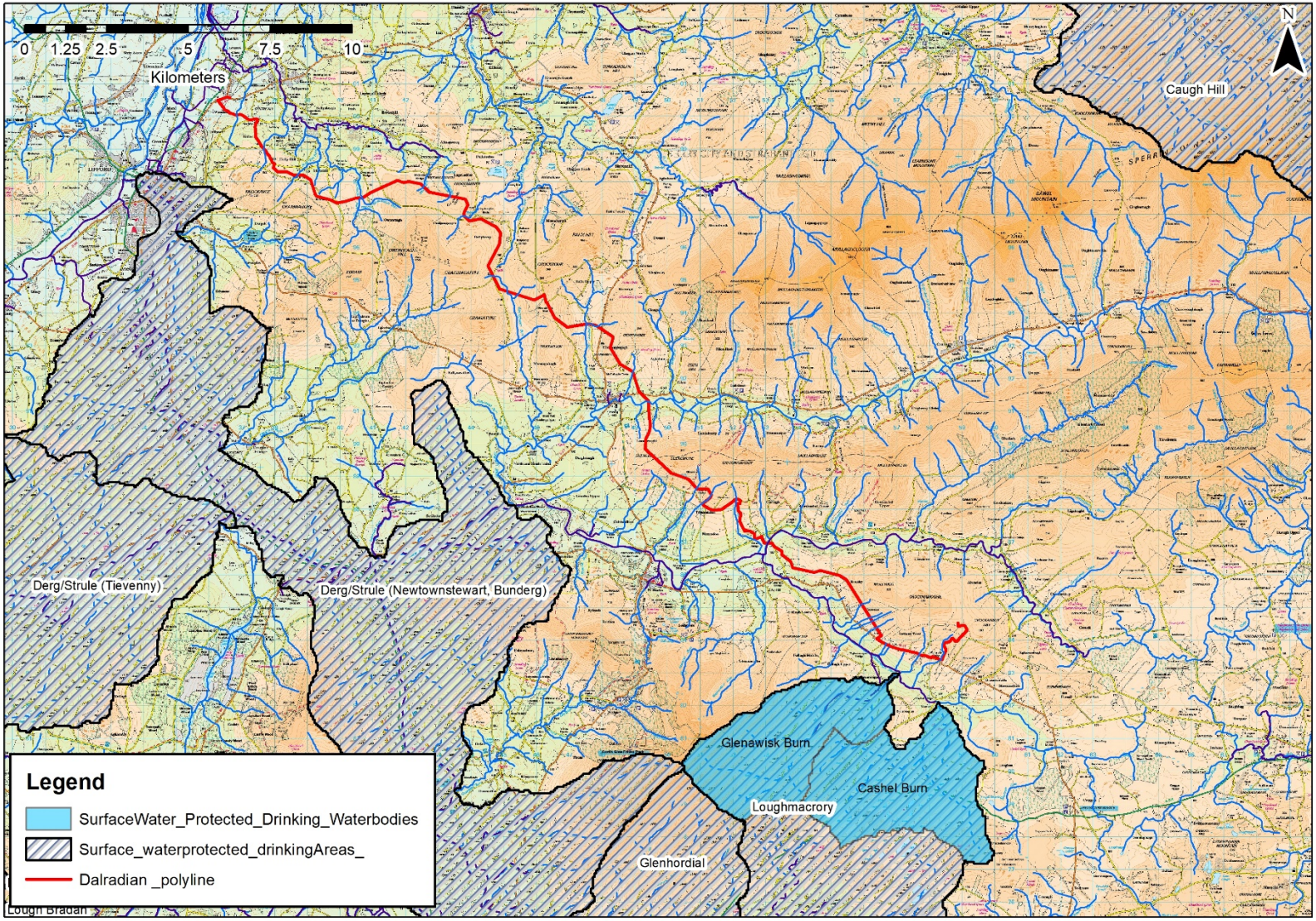

Figure 9.6: Location of drinking water protected surface waterbodies

Table 9-12: Protected Areas within the Owenkillew LMA.

Protected Area Type	Details
Waters used for the abstraction of drinking water (drinking water protected areas)	There are 2 drinking water protected rivers (Glenawisk Burn and Cashel Burn, both tributaries of the Owenreagh (East) River (Drumlea). Both of these rivers are upstream of the Proposed Development. There is 1 drinking water protected groundwater (Gortin groundwater body).
Areas designed to protect economically significant aquatic species Freshwater Fish Directive (78/659/EEC)	There are 152km of rivers identified under the Freshwater Fish Directive, all designated as salmonid.
Shellfish Waters Directive (79/923/EC)	There are no designated shellfish waters.
Recreational waters (Bathing waters) These are bathing waters identified under the Bathing Waters Directives (76/106/EEC)	There are no identified bathing waters.
Areas designated as sensitive under the Urban Waste Water Treatment Directive (91/676/EEC)	There is 1 Urban Waste Water Treatment Directive sensitive area; River Foyle.
And the Nitrates Directive (91/676/EEC)	A total territory approach has been adopted in Northern Ireland for the Nitrates Directive.
Areas designated for the protection of habitats or species (Natura 2000 sites) These are 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.	
Habitats Directive (92/43/EEC)	There are 4 water dependent Special Areas of Conservation (SAC); Owenkillew River, River Foyle and Tributaries; Teal Lough and Black Bog.
Birds Directive (79/409/EEC)	There are no water dependent Special Protection Areas (SPA).

Waters designated under the Freshwater Fish Directive (FFD) are required to comply with imperative quality standards and should aim to achieve ‘guide’ standards. Compliance was assessed annually by NIEA using the monitoring results for the calendar year (typically quarterly monitoring). The FFD was repealed by the WFD at the end of 2013. However, waters designated under the FFD have been afforded similar protection under the WFD. The UK Technical Advisory Group (UKTAG) has ensured that WFD standards provide at least the protection afforded under the FFD. A detailed assessment on fisheries and aquatic ecology has been completed and is included in chapter 8.

9.6.4 Industrial Consents, Pollution Incidents and Abstractions

Information regarding industrial consents, abstractions and pollution incidents in relation to the proposed development study area was downloaded from the NIEA Water Information Request viewer in March 2021. **Figure 9-6** shows the locations of all known industrial consents and pollution events within a 3km radius of the centre of the Proposed Development to ensure that the information within the relevant water bodies traversed by the Proposed Development is captured.

There are 68 records of industrial consents within the five river water bodies associated with the Proposed Development. In terms of Industry type, the majority of the consents were described as Private Sewage (Domestic) suggesting that due to the rural nature of the area that the key discharges to water bodies (surface and ground) are from privately owned septic tanks licensed under the Water (Northern Ireland) Order 1999. The remaining consents relate to site drainage from quarrying activities.

In addition there have been 13 pollution incidents investigated by NIEA within the same area between 2012 and 2016. NIEA's records show that 1 of the incidents was from an unknown source, 10 from a farming source and 2 incidents were from an industrial source. Eight out of the thirteen incidents were of low severity, with four being classed as medium and one as high severity.

Information in relation to abstraction sites was compiled as part of a Northern Ireland water body characterisation study undertaken under Article 5 of the WFD. The study report was published by the Environment and Heritage Service (now NIEA) in 2005. Prior to the advent of the Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006, which came into effect in February 2007, there was no formal register of abstractions within Northern Ireland, as a result the information in this dataset was sourced from a number of historical datasets held by Government Departments and external agencies including; Northern Ireland Water, Drinking Water Inspectorate and Geological Survey Northern Ireland. It should therefore be noted that there may have been more historical abstractions within the area which have not been identified.

There are 20 known current abstractions or abstraction licence applications (all surface water abstractions) under the Water Abstraction and Impoundment (Licensing) Regulations (Northern Ireland) 2006 within the river water body sub basins. However, small scale abstractions of less than 10m³ per day do not require notification to NIEA and may therefore be present.

The Drinking Water Inspectorate only holds information on private water supplies registered with DWI under The Private Water Supplies Regulations (Northern Ireland) 2017. This includes supplies to public or commercial premises or two or more private dwellings where the water is used for drinking, cooking, food preparation or other domestic purposes. The database of private water supplies across Northern Ireland which have been registered with the Drinking Water Inspectorate (DWI) under The Private Water Supplies Regulations (Northern Ireland) 2017 was consulted through the Spatial NI web portal in April 2021 and there are no private water supplies registered within the study area.

9.6.5 Groundwater Status

The Proposed Development is located over the Claudy and Gortin groundwater body, which are currently classified as 'Good' status in the North Western River Basin Management Plan. These groundwater bodies are defined by surface water catchments and the coastline along the north of the Claudy water body. It is important to ensure that the Proposed Development does not introduce new pressures to this ground water body, which would be contrary to the objectives of the WFD (achieving good status). A groundwater vulnerability map is also available for Northern Ireland, where vulnerability is classified into 5 categories, with Class 1 areas having the least risk of groundwater pollution and Class 5 having the highest risk. As shown in **Figure 9-7** the groundwater vulnerability map indicates that the Proposed Development is quite vulnerable to groundwater pollution with a vulnerability class of '4' underlying the site.

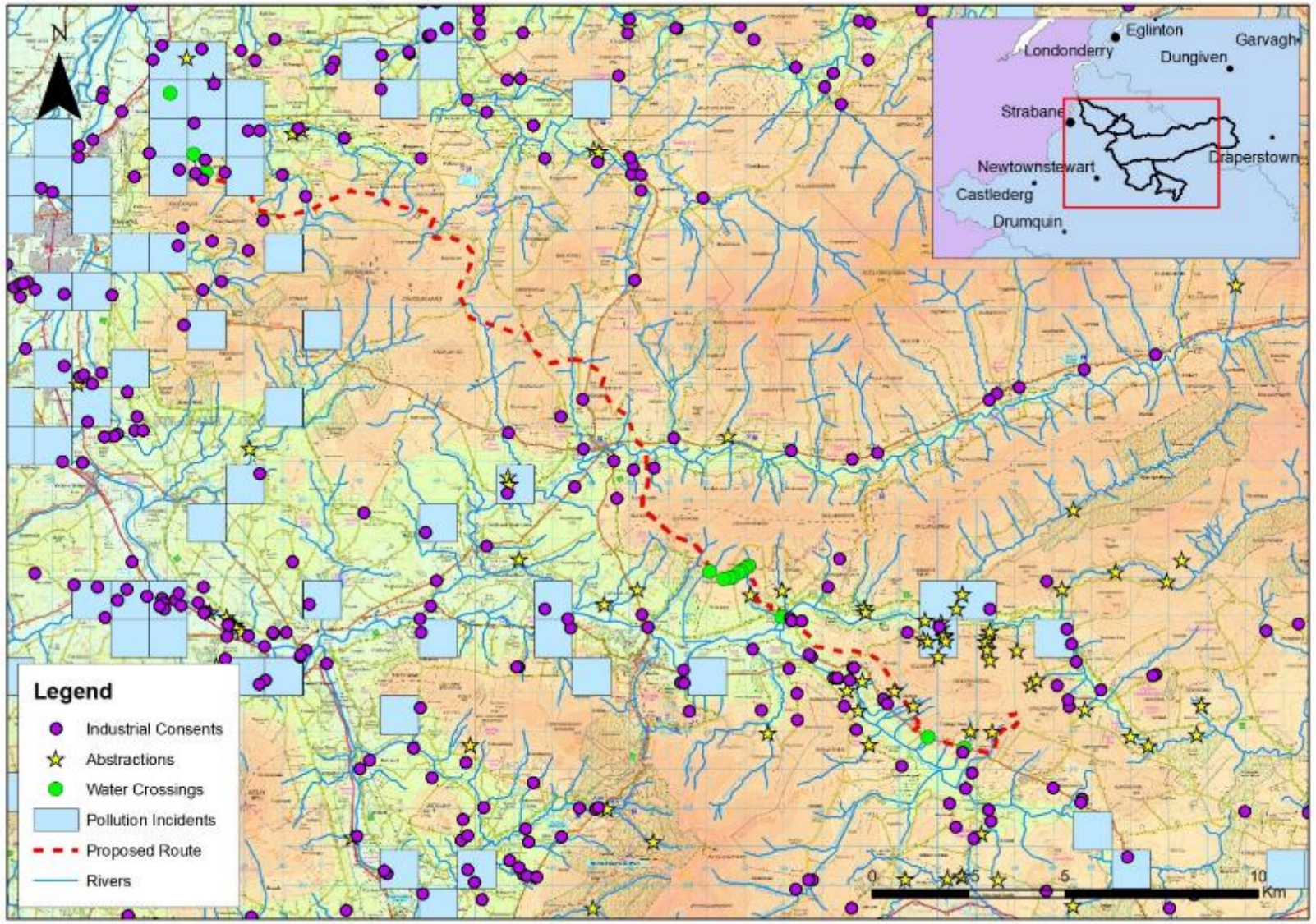

Figure 9-7: NIEA Response Data

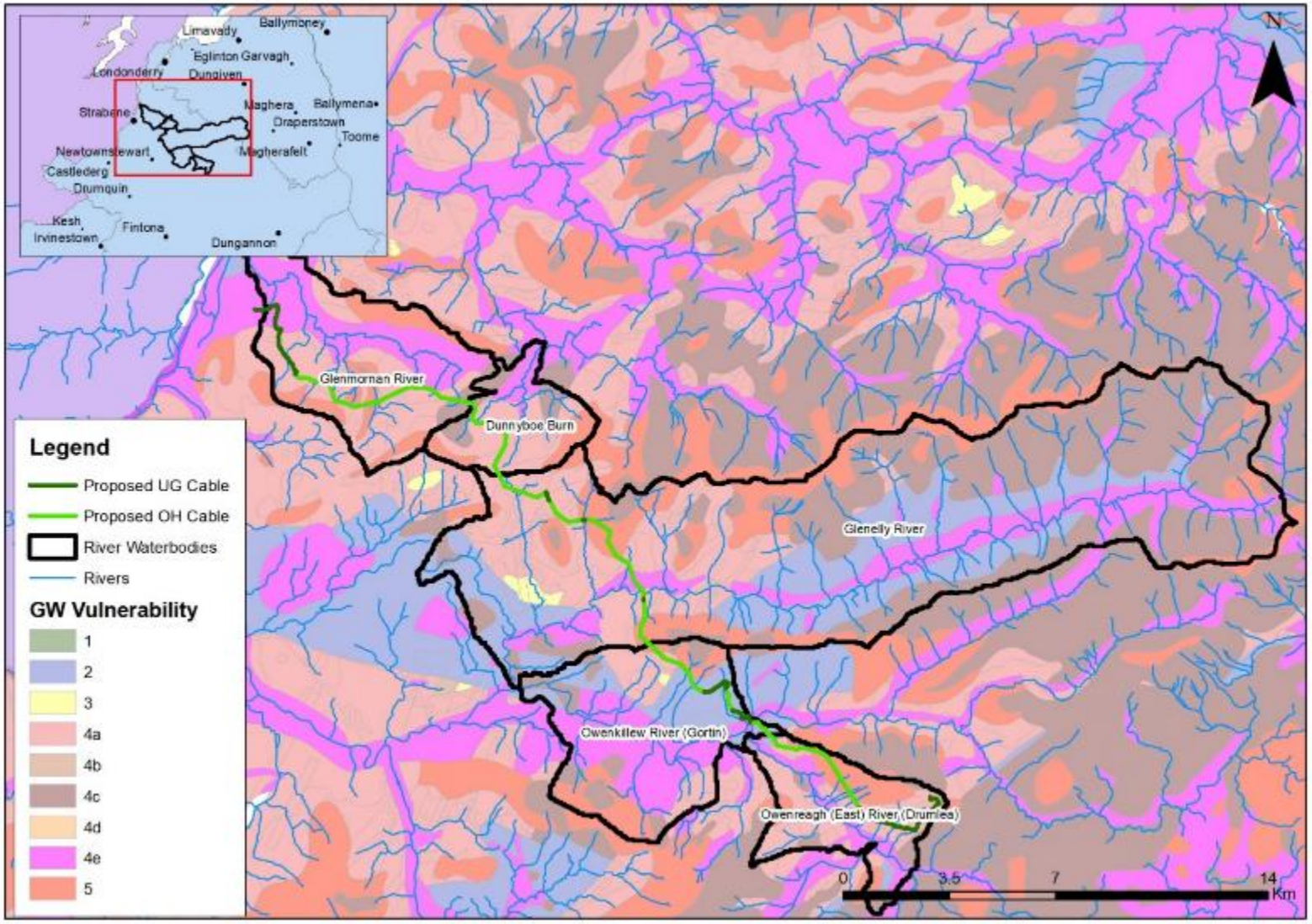

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Figure 9-8: Ground Water Vulnerability Mapping

9.7 Impact Assessment

The key focus of the water quality impact assessment is to ensure whether the development can be undertaken in a way which is consistent with the objectives of the WFD. Therefore likely significant effects were assessed for construction and operational phases of the project with particular regard to the objectives of the WFD. This section provides an assessment of the potential impacts from each component of the Proposed Development on water quality in and around the development area. It has been undertaken using information from published sources and consultation to characterise the water environment at the site, including rivers, streams, ponds, wetlands (including marshy grassland) and other water features including ground waters.

9.7.1 Water Body Sensitivity

Section 9.4 outlines the approach for establishing the significance of the impact. A key element in the determination of impact significance is the sensitivity of the receiving environment. For those water bodies that are traversed by the overhead powerline (**Table 9-13**) and the underground cable (**Table 9-14**) an assessment of their sensitivity is provided below.

The sensitivity of the receiving environment across the route in this case has been deemed low to very high due to the presence of water bodies with high status and/or with designations within close proximity including salmonid waters and the intersected SAC. Considering the scale of the development it is unlikely to have significant impact in the wider context of the RBD but could have significant impact on individual water bodies in close proximity to the site. As such each water body likely to be affected was considered when determining the sensitivity of the receiving environment.

Table 9-13-: Water body sensitivity summary of watercourses crossed by the proposed overhead powerline

Water Body	Location	Sensitivity
Fowl Glen Burn	O/H powerline crossing. Burn flows to north and is a tributary of Glenmornan River.	**High** - tributary of a designated salmonid water that is currently at good status with a WFD objective to maintain good status).
Owenreagh Burn	O/H powerline crossing. Burn flows to north and crossing location is at the confluence of the Owenreagh Burn and Glenawanda Burn. The Owenreagh Burn is a tributary of Glenmornan River.	**High** - tributary of a designated salmonid water that is currently at good status with a WFD objective to maintain good status).
Glentrasna Burn	O/H powerline crossing. Burn flows to the north; Upper catchment of the Glenmornan River.	**High** - tributary of a designated salmonid water that is currently at good status with a WFD objective of 2021 for the maintenance of good status).
Legnavadder Burn	O/H powerline crossing. Burn flows to north; Upper catchment of the Glenmornan River.	**High** - tributary of a designated salmonid water that is currently at good status with a WFD objective of 2021 for the maintenance of good status).
Legolougha Burn	O/H powerline crossing. Burn flows to north-east and is a tributary of Dunnyboe Burn.	**Medium** - tributary of non-designated salmonid water that is currently at good status with a WFD objective of 2021 for the maintenance of good status).
Glashygolgan Burn (2 crossings)	O/H powerline crossing the upper catchment of Glashygolgan Burn, which flows to south and is a tributary of Glenelly River.	**Medium** - tributary of a designated salmonid water that is currently at moderate status with a WFD objective of 2021 to achieve good status).
Letterbrat Burn (2 crossings)	O/H powerline crossing. Burn flows to south and is a tributary of Glenelly River.	**Medium** - tributary of a designated salmonid water, currently at moderate status with a WFD objective of 2021 to achieve good status).
Glenelly River near Plumbridge	O/H powerline crossing of main river, which flows to the west and is a tributary of the Owenkillew River.	**Very High** - designated salmonid water and tributary of Owenkillew SAC, currently at moderate status with a WFD objective of 2021 to achieve good status).
Trinamadan	O/H powerline crossing. Burn flows to south and is a tributary of Owenkillew River.	**Medium** (tributary of designated salmonid water and SAC, currently at moderate status with a WFD objective of 2021 for the maintenance of moderate status).

Water Body	Location	Sensitivity
Owenkillew River near Golan Bridge	O/H powerline crossing of the main channel river crossing which flows to west.	**Very High** (designated salmonid water (good salmonid nursery habitat) and SAC, currently at moderate status with a WFD objective of 2021 for the maintenance of moderate status. Downstream of any potential Freshwater Pearl Mussel (FPM) populations within the Owenkillew River SAC).

Table 9-14: Water body sensitivity summary of watercourses crossed by the proposed underground cable

Location Reference	Name of Watercourse	Sensitivity
ST1 (ch550m)	Glenmornan Tributary 1 at Berryhill Road	Medium - tributary of a designated salmonid water that is currently at good status but the local conditions are moderate based on aquatic surveys.
ST2 (ch2790m)	Glenmornan Tributary 2 at Hollyhill Road	Medium - tributary of a designated salmonid water that is currently at good status but the local conditions are moderate based on aquatic surveys.
ST3 (ch3370m)	Glenmornan Tributary 3 at Hollyhill Road	Medium - tributary of a designated salmonid water that is currently at good status but the local conditions are moderate based on aquatic surveys.
ST4 (ch50m)	Owenkillew Tributary 1 at Meenadoo Road	High - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are good based on aquatic surveys.
ST5 (ch450m)	Owenkillew Tributary 2 at Meenadoo Road	Low - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are poor based on aquatic surveys. Downstream of any potential FPM populations within the Owenkillew River SAC.
ST6 (ch695m)	Owenkillew Tributary 3 at Meenadoo Road	Low - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are poor based on aquatic surveys. Downstream of any potential FPM populations within the Owenkillew River SAC.
ST7 (ch895m)	Owenkillew Tributary 4 at Meenadoo Road	Low - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are poor based on aquatic surveys. Downstream of any potential FPM populations within the Owenkillew River SAC.
ST8 (ch980m)	Owenkillew Tributary 5 at Meenadoo Road	Low - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are poor based on aquatic surveys. Downstream of any potential FPM populations within the Owenkillew River SAC.
ST9 (ch1100m)	Owenkillew Tributary 6 at Meenadoo Road	Low - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are poor based on aquatic surveys. Downstream of any potential FPM populations within the Owenkillew River SAC.
ST10 (ch1230m)	Golan Burn at Meenadoo Road	High - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are good based on aquatic surveys).
ST10 (ch1450m)	Tributary of Golan Burn	Medium - tributary of designated salmonid water and SAC that is currently at moderate status but the local conditions are not sensitive based on photographic and desk top assessment).
ST 11	Owenkillew Tributary 7 at Gortacashill Road	High - tributary of designated salmonid water and SAC that is currently at moderate status however fish present.
ST12 (ch500m)	Owenreagh Tributary 1 at Crocknaboy Road	Low - tributary of a designated salmonid water that is currently at good status but the local conditions are poor based on aquatic surveys. The crossing is downstream of any potential FPM populations within the Owenkillew River SAC.
ST13 (ch1500m)	Owenreagh Tributary 2 at Crocknaboy Road	High - tributary of a designated salmonid water that is currently at good status with the local conditions also good based on aquatic surveys.

Whilst the Proposed Development will not directly impact on the protected areas listed in **Table 9-11** and **Table 9-12**, there are some protected areas in close proximity to the Proposed Development which are connected through hydrological pathways.

These include the Glenmornan River, the Glenelly River, the Owenkillew (Gortin) River and Owenreagh (East) River (Drumlea) which were designated as Salmonid Waters (originally designated under the FFD but now included as economically significant waters protected under Article 6 of the WFD). The Owenreagh (East) River has also a significant population of Freshwater Pearl Mussel and annexed species under the Habitats Directive, however the river is not currently designated for its protection.

Additionally the Owenkillew River SAC is intersected by the proposed overhead powerline near Golan Bridge and could potentially be affected by the Proposed Development. The other hydrologically connected SAC is the River Foyle and Tributaries SAC (northwest of the route). Teal Lough SAC (east of the route) and Black Bog (southeast of the route) are upstream of the Proposed Development therefore the conservation objectives will not be impacted by the Proposed Development. The only designated SPA is Lough Foyle SPA, north of the development. Two shellfish waters are also occurring within the Lough Foyle; Balls Point and Longfield Bank.

The likely significant effects from the pressures outlined on the water quality, ecological status and protected area objectives of the water bodies traversed by the project is assessed below, whether that be by causing a deterioration in water body status or preventing a water body currently at less than good status from achieving good status under the timelines outlined in the RBMP.

9.7.2 Construction Phase Impacts

9.7.2.1 Suspended Solids

Both temporary and permanent impacts on surface waters may occur during construction. Pollution from mobilised suspended solids (silt) is of concern. Suspended sediment due to run off from stripped construction areas (line corridors), stockpiled earth and the dewatering of excavations can have a severe negative impact on water quality. This is particularly true in sloping areas with underlying clay following topsoil stripping. In areas of moderate to high rainfall, the potential problems are exacerbated. If allowed to enter surface watercourses this run off can give rise to high suspended solids and detrimental impacts, in particular to fisheries and aquatic invertebrates which can impact the ecological status of a water body. Suspended solids may have an effect on:

- Sediment movement through rivers and its settlement onto the river bed causing formerly clean gravels to become clogged with fine sediment;
- The survival of fish eggs in gravel beds or spawning grounds as a result of deoxygenation caused by silt deposition;
- The survival of plants and algae by smothering;
- The survival of young fish and aquatic invertebrates such as freshwater pearl mussel, particularly the juvenile life stage, mayfly larvae (*Calopteryz* sp.) through fine sediment infiltration into river bed substrate;
- The success of angling due to increased turbidity; and
- Amenity value through impaired visual appearance.

Once a silt load enters a river it can result in long-term changes that cause chronic harm. Silt causes river hydromorphological changes, which in turn change the dynamics of the river in the future (Curran & Wilcock, 2005; Colosimo & Wilcock, 2005; Dietrich et al., 1989). Both bed and suspended materials, and subsequent changes in channel form associated with changes in sediment supply, may affect benthic invertebrates in many ways at various stages in their life cycle. The direct kill is only the first stage in the damage that silt causes to a benthic invertebrate population. Sediment that infiltrates the river bed decreases oxygen supply in interstitial areas, and destroys habitat for juvenile stages of the many benthic invertebrate life cycles. As mentioned above, all three of the water bodies associated with this application (Glenmornan River, Dunnyboe Burn and Owenreagh East River Drumlea) are currently at “good” status. It is an objective of the WFD that no waterbody should deteriorate in status, therefore all monitored elements must remain at “good” indicative quality or above.

The sediment subsequently provides a medium for macrophyte growth. Macrophytes can smother the river substrate and habitat further, and can trap more sediment which exacerbates the problem in the long term. Silt infiltration of river bed gravels can also have a negative effect on fish species (Levasseur et al., 2006).

9.7.2.1.1 Overhead Powerline sections

The route of the overhead powerline is largely cross country and access will be required to agricultural lands to erect the poles and string the conductors. Where land access is required damage to the ground surface providing a source of sediment and, depending on ground conditions, a pathway to surface waters via surface channels or overland flow would result in likely significant effects on the water quality and supported aquatic habitats. Table 9.1 identified those pole sets that are within 10 metres of a field drain or water course where the potential for impact is greatest.

In addition there will be some topsoil stripping and minor excavation required for the foundations of the overhead powerline poles. The typical footprint of the excavation is 1.5 m^2 whilst the worst case scenario, depending on ground conditions, is a footprint of 9m^2. This larger footprint is required in limited circumstances where a wooden brace is placed in the ground, thereby requiring a larger area to be stripped, to provide additional support to the pole set in soft ground conditions.

Even when the worst case scenario is considered the footprint of each pole set, i.e. 3m x 2.8m, represents a limited area of ground disturbance however if this is located adjacent to a watercourse the risk of suspended solids on the receiving environment is greater. On this basis, and considering the sensitivity categories for the watercourses ranges from 'low' to 'very high', as outlined in Table 9-12, with the Owenkillew River near Golan Bridge and the Glennelly River 'very high' the significance of the impact ranges from slight to large on a short to medium term basis based on the matrix outlined in **Table 9-5**.

9.7.2.1.2 Underground Cable Sections

As detailed in the OCEMP the majority of the proposed underground cable is to be installed in public carriageway in a 500mm wide trench approximately 1000mm in depth using the standard construction technique as summarised in Chapter 2 of the ES and detailed in the OCEMP. The material excavated in the road bed is not suitable for backfilling of the excavated trench therefore this material will not be re-used on site. If this material is stockpiled in the works area within the public carriageway fine sediment can wash into the road drainage and ultimately into the watercourses that the road drainage discharges to and therefore represents a source of suspended sediment to these watercourses.

In those locations where the road traverses a watercourse and suitable depth of cover is not available above the culvert or within the bridge structure it will be necessary to install the cable using alternative methodologies including excavation around and below a structure (Methodology A) or diverting off the road and undertaking the watercourse crossing by horizontal directional drill (HDD) (Methodology B) or damming and using an open cut trench in the watercourse (Methodology C). The alternative methodologies available are detailed in Volume II, Appendix 2.2 OCEMP Appendix D. The methodologies proposed at these locations are detailed in **Table 9-2** above.

The degree of risk is considered higher for open-cut because it involves direct disturbance of the watercourse bed and requires closer proximity of plant machinery to the watercourse.

HDD methods may result in the escape to the watercourse of pressurised drilling fluids (bentonite/ mud) through break out of drilling fluids from the underlying bed material or from surface run-off caused by drilling fluid returns at tunnel entry and exit points. However this occurs very infrequently as the drilling process is closely monitored and managed by the drill operator to ensure that if there is a reduction in pressure (which may indicate the escape of drilling fluids from the bore) the drilling operations are ceased until the source of the pressure reduction is identified and addressed. These drilling fluids may be considered a type of fine sediment which can infiltrate river substrate and sensitive habitats.

Given the sensitivity of the downstream water bodies many of which are salmonid waters, and the protected areas from some water bodies, i.e. the Owenkillew River SAC the sensitivity of the receiving environment is considered to range from low to high as outlined in Table 9-13**.** Based on the current status of the water bodies the deposition of suspended sediment would deteriorate the river habitat downstream therefore hindering the achievement of

good status. On this basis the magnitude of the impact can be considered as moderate to major based on the severity of run-off. An impact of moderate to major magnitude on a 'low' to 'high' sensitivity environment the likely significant effects are considered to range from slight to large adverse (**Table 9-5**) in the absence of mitigation. It is likely that these impact would be of short term duration.

9.7.2.2 Hydromorphological Impact

In addition to their contribution to sediment release soil erosion, removal of vegetation cover, soil compaction (caused by the bearing weight of heavy machinery), particularly in the riparian zone can alter preferential drainage paths and ultimately change the hydromorphological regime of a watercourse by changing the timing and magnitude of flows entering it and altering the riparian zone, banks and channel thus exacerbating sediment movement. In the absence of mitigation these processes will have permanent effects on associated watercourses both upstream and downstream of the proposed crossing locations resulting in a knock-on effect on water quality.

The magnitude of the impact is assessed as moderate based on the scale of the underground cable crossings and the fact that the pole sets on the overhead line will be set back a minimum of 10 metres from the majority of watercourses with only a limited number sited closer than 10 metres. Therefore the likely significant effects for an impact of moderate magnitude on a low to very high sensitive water body is considered to be large adverse in the absence of mitigation with the potential to affect the riparian zone and the hydromorphology of the watercourse.

9.7.2.3 Oils and other Chemicals

Construction of the Proposed Development will involve the use of plant and machinery at the active working areas as well as the associated temporary storage of construction materials, oils, fuels and chemicals in the site compounds. Two main compounds will be used to service the construction of the Proposed Development. These will be NIE Networks Omagh Depot and a temporary compound at the proposed Curraghinalt mine site. The materials for the construction of the Proposed Development will be stored at these locations and will only be delivered to the active working areas when works are scheduled and storage will only be for a temporary period of time and include materials such as wooden poles, steel cross arms, wooden baulks for use in pole and stay foundations, stay wire, porcelain and polymeric Insulators.

There will be no requirement for the use of cement or concrete during the Proposed Development, foundations for pole sets and stays will be secured using wooden baulks.

The main impact from the construction of the Proposed Development is therefore spillage or release of fuel oil and other dangerous substances from plant and machinery impacting on the surface and ground water bodies associated with the Proposed Development. There is also the risk that small residue amounts left on site will be mobilised by surface run-off and washed into the watercourses.

Given the scale of the Proposed Development and assuming minor to major spillage occurrences the magnitude of the impact is considered to be major and with the sensitivity of the receiving surface waters assessed to be 'low' to 'very high' the likely significant effects are assessed as negligible to very large adverse over short to medium term in the absence of mitigation.

9.7.2.4 Sewage and welfare facilities

Facilities will be provided along the route of the Proposed Development and in the proposed compounds to ensure appropriate collection and treatment of sewage is undertaken so as not to impact on the aquatic environment.

The impact of inadequate sewage and welfare facilities would result in a minor impact to receiving waters given the workforce that is anticipated at each working front as outlined in the OCEMP. Given the Proposed Development is linear and will require active working areas along the length of the route the sensitivity of the receiving environment is considered to be 'low' to 'very high' and therefore the likely significant effects, based on the matrix in **Table 9-4,** are considered negligible to moderate/large and for a short duration.

9.7.3 Operational Phase Impacts

9.7.3.1 Overhead Powerline

As outlined in the OCEMP once the circuit is commissioned it will be subject to regular inspections from the ground every three years. This will involve a single person walking along the route to visually inspect the overhead line. Vegetation management will also be carried out periodically as required (when vegetation encroaches on specified safety clearances, NIE Networks vegetation management cycle is typically once every three years). Wood pole replacement typically occurs every 30-40 years. The impact on water quality for these types of activities is low given the scale of the inspection activities and the vegetation maintenance proposed. It is envisaged that vegetation maintenance would require a two-person team accessing the target area on foot or via 4x4 with Mobile Elevated Working Platform (MEWP).

The scale of these works will mean that the magnitude of the impact is negligible and therefore the significance of the impact across all water body sensitivities is considered to be negligible based on the matrix in **Table 9-5** and there are no likely significant effects anticipated.

9.7.3.2 Underground Cable

The underground cable would undergo electrical testing every 5 years between terminal positions at each underground cable section. AS outlined in the OCEMP no intrusive works are required for testing. Testing involves disconnecting the underground cable section at each end of the cable and then connecting test gear (a handheld briefcase sized piece of equipment) and running tests. This would be carried out by an engineer who would travel to the site in their private vehicle.

Where underground cable faults occur a localised repair is carried out. This involves excavation at the location of the fault, cutting out the faulted piece of cable, inserting a new piece of cable into the duct, jointing the new cable into the existing cable network and then reinstating as per the Underground Cable construction methods set out in Volume II, Appendix 2.2 OCEMP Appendix D and summarised in Chapter 2 of the ES. The impact of these activities will be similar to those identified for the installation of the cable however the magnitude of the impact will be less given the localised scale of the potential fault repairs.

On this basis the magnitude of the impact can be considered as moderate for each of those impacts identified under the construction phase, i.e. suspended solids, hydromorphological impact, oils and chemicals and sewage/welfare facilities. An impact of moderate magnitude on a ‘low’ to ‘high’ sensitivity environment is considered to range from slight to moderate adverse (**Table 9-5**) in the absence of mitigation. It is likely that this impact would be of short term duration.

9.7.4 Decommissioning Stage Impact

9.7.4.1 Overhead Powerline

As outlined in the OCEMP, once operational, the overhead line will become a network asset and form part of the wider network. Decommissioning is not envisaged, however should the overhead line be required to be decommissioned, all associated structures and materials would be recovered and items recycled with the site returned to its original use. Decommissioning impacts will be the same or lesser than the impact of construction.

On this basis the magnitude of the impact can be considered as moderate for suspended solids and hydromorphological impacts, major for oil and chemicals and minor for sewage and welfare facilities. An impact of minor to major magnitude on a ‘low’ to ‘very high’ sensitivity environment is considered to range from negligible to very large adverse (**Table 9-5**) in the absence of mitigation. It is likely that this impact would be of short term duration.

9.7.4.2 Underground cable

Decommissioning is not envisaged, however should the underground cable be required to be decommissioned, it would be disconnected from the circuit breakers or poles to which it is connected, safely insulated using pot end joints and the cable recovered. As a result, the impact of decommissioning the underground cable is considered to be negligible for water quality.

9.8 Mitigation and Monitoring

Prior to the commencement of construction a final Construction Environmental Management Plan (CEMP) will be agreed with the Planning Authority to manage the prevention and control of environmental impacts during the construction phase. In order to achieve this, the final CEMP will provide a method of compliance with all environmental commitments outlined in the ES and will be within the parameters outlined in the OCEMP which has been submitted as an appendix to this ES, Volume II, Appendix 2.2 OCEMP. Furthermore, detailed construction method statements will be prepared and agreed with the relevant authorities (NIEA Water Management Unit, DAERA and Inland Fisheries) within the parameters included in the outline construction methodologies (Volume II, Appendix 2.2 OCEMP Appendix D) in advance of any waterway crossing or where proposed construction works occurs within 10 metres of a watercourse. The method statement will need to be submitted for DAERA agreement a minimum of eight weeks prior to works commencing onsite.

9.8.1 Construction Phase

Pollution Prevention Guidelines (PPGs) and Guidance for Pollution Prevention (GPP) are a series of documents developed by the Environment Agency for England and Wales, the Northern Ireland Environment Agency (NIEA) and the Scottish Environment Protection Agency (SEPA). The DAERA Planning and Environment section has published Pollution Prevention Guidance 4, “Standing Advice for Planners and Applicants Seeking Planning Permission for Developments which may Impact upon the Water Environment” (DAERA, 2017). This highlights the need for the developer and contractor to apply good practice in relation to pollution prevention and to adhere to the guidance contained within the relevant PPGs and GPPs. They provide useful information on good practice and DAERA recommend they are used as a source of information and good practice. Furthermore, DAERAs “Standing advice for development that may have an effect on the water environment (including groundwater and fisheries)” is applicable to the development under the following documents “Standing Advice WTR Pollution Prevention Guidance”, “Standing Advice WTR Discharges to the Water Environment”, “Standing Advice WTR Abstractions and Improvements” and “Standing Advice Sustainable Drainage Systems”.

Mitigation and control measures to address the potential for pollution associated with construction activities included in this assessment and the OCEMP has been informed by these guidance documents and will follow good work practices and sound design principles and best practice where relevant, including the following current series of guidance documents:

- GPP1: Understanding your environmental responsibilities - good environmental practices;
- GPP2: Above ground oil storage tanks;
- GPP5: Works and maintenance in or near water;
- PPG6: Working at construction and demolition sites;
- PPG7: Refuelling facilities;
- GPP8: Safe storage and disposal of used oils;
- GPP13: Vehicle washing and cleaning
- PPG18: Managing fire water and major spillages;
- GPP21: Pollution incident response planning;
- GPP 22: Dealing with spills
- GPP26: Storage and handling of drums & intermediate bulk containers.

Within these guidance documents a range of measures are applicable. Those relating specifically to the issues raised are highlighted in this statement. In addition, best practice provided by CIRIA in their series of guidance documents will also be applied where relevant.

- CIRIA Report C532 Control of Water Pollution from Construction Sites;
- CIRIA Report C649 Control of Water Pollution from Linear Construction Projects. Site Guide.
- CIRIA Handbook C651 Environmental Good Practice on site checklist

- CIRIA Report C692 Environmental Good Practice on site 3rd Edition
- CIRIA Report C689 – Culvert Design and operation guide

In the event of a pollution or environmental incident occurring that may impact upon the water environment, regardless of the time of day, the NIEA Water Pollution Hotline will be contacted within 30 minutes of the incident occurring unless it is unsafe to do so.

9.8.1.1 Sediment Control

Sediment, including all soils, mud, clay, silt, sand etc., is the single main pollutant generated at construction sites and largely arises from the erosion of exposed soils by surface water runoff. The adoption of appropriate erosion and sediment controls during construction is essential to prevent sediment pollution.

Mitigation and control measures to address the impact from suspended sediments associated with construction activities will follow good work practices and sound design principles. Contractors will establish contact with the relevant authorities, e.g. NIEA before works commence, with ongoing liaison throughout the construction. Contractors will be required to follow the requirements of best practice and relevant guidelines including:

- GPP5: Works and maintenance in or near water;
- PPG6: Working at construction and demolition sites;
- Technical Guidance C648: Control of Water Pollution from Linear Construction Projects, (CIRIA, 2006); and
- Technical Guidance C532: Control of Water Pollution from Construction Sites: Guidance for Consultants and Contractors (CIRIA, 2001).

The following specific measures, in accordance with the above guidance, will be taken to ensure adequate protection of the aquatic environment:

- Excess material stockpiles from the overhead line and underground cable will not be sited within 10 metres of a watercourse. This will ensure that there is a minimum of a 10 metre buffer between the stockpile and the water course to provide a barrier to prevent run-off from the stockpile reaching the aquatic zone.. Where the soil stockpiles represent a particular risk of runoff, i.e. if they are up gradient of a watercourse, on sloping ground or there is a limited buffer area to prevent overland flow, an interception ditch (cut-off) or silt fencing will be deployed to contain and direct run-off away from the aquatic zone;
- Tool Box talks will be given by the Environmental Manager nominated under the final CEMP to all contractor's site personnel to inform them of the mitigation measures required to ensure protection and conservation of the aquatic environment.
- A detailed schedule of plant and machinery is provided in Appendix C of the OCEMP. For the overhead power line tracked excavators (maximum 20T but more commonly 13T) will be used to install the pole sets to limit ground disturbance. Suitable smaller vehicles such as 4x4 pick-up trucks with MEWP and quad bikes will be used to transport linespersons on site to minimise movement and impact of larger vehicles
- Movement of vehicles on-site will be suspended during and immediately after heavy rainfall when ground conditions would be likely to deteriorate to ensure that ground disturbance is minimised and to prevent a source of sediment and its mobilisation to the aquatic environment via overland pathways (saturated flow) or preferential pathways. This decision would be made by the environmental manager under the contractor's CEMP.
- Movement of vehicles in close proximity to watercourses will be avoided, except where the cabling traverses a culvert on the road network. This is to ensure the integrity of the riparian zone in order to avoid risk of damage to the banks, associated erosion and the release of sediments into the channel.
- Silt fencing will be installed between the active working area and a watercourse where 10 metres set back is not possible and the working area encroaches within 10m of a watercourse (with the exception of dedicated watercourse crossing points) as identified in Table 9.1 or where particularly steep slopes heighten the risk of pollution.
- For the overhead line stringing across very high sensitivity watercourses, i.e. Owenkillew River and Glennelly, a drone will be employed to ensure no disturbance to the river. This will involve an initial pull

through of a fishing line by drone, the fishing line will then be used to pull through a rope at tension, with the rope used to subsequently pull through the bond at tension so that nothing comes into contact with the river or river banks at any time.

9.8.1.2 Watercourse Crossings and HDD Mitigation

- The HDD option is proposed for a number of crossings on the UGC route where the cable cannot be laid safely within the carriageway above a culvert or structure including the tributaries of the Owenkillew River (ST5, ST6 where HDD is the preferred option and ST7, ST8, ST9, ST11 where it is being considered as alternative option) tributary of the Glenmornan River (ST2, HDD is the alternative option) and the Golan Burn (ST10, ST10b, HDD is the alternative option).
- Ground Investigation prior to undertaking the crossing will characterise the nature of the strata through which the cable ducting is to be drilled through to assess the risk of drilling mud break out through fissures or weakness in the underground strata. To further reduce the risk of break out of drilling muds significant setback distances from the water course will be included to ensure significant buffers are in place for any surface break out of drilling mud as the drill profile transitions from the deeper strata to subsoils and ultimately the surface where the weak points in the sub surface conditions often occur.
- Where dewatering of cable trenches or launch and receiver pits from the HDD is required it will be directed to a suitable treatment area within the working area. Where the HDD occurs off-line, i.e. not within the footprint of the road this will include a small bunded area lined with tarpaulin or similar impermeable material to allow the settling out of suspended solids. The settled water will then be allowed to flow from the bund via diffuse flow outlet to a series of treatment swales made from sandbags to slow the overland flow and provide further opportunity for settlement. From these treatment swales the clean water will overtop the sandbags and flow onto the vegetation.
- Where dewatering is required from within the road footprint a tanker will be used to dewater the trenches for disposal off site. Where volumes are low an adequately sized silt sock will be used to filter the water before diffuse flow to the road verge.
- There will be no direct or indirect discharge from any excavations to surface water. Discharges to surface water from these treatment systems, if required, will be consented under the Water (Northern Ireland) Order 1999,
- The transmission and receiver pits, the size of which will depend on the drilling rig and the required drill profile, will be bunded and adequately sized to hold excess water. Liaison with landowners for confirmation on locations of land drains will also be undertaken. These will not be directly pumped into without being filtered through the ground.
- As per best practice drilling mud pressures will also be continuously monitored by an experienced drill operator using information transmitted back to the drill control panel from sensors at the drill head. If pressures levels drop to a level below that expected given the size of the bore and drilling profile that would indicate a potential loss of drilling mud this can be acted upon immediately by the drilling operator so that preventative action can be taken under the emergency pollution control measures.
- Water required for the drilling mud will be brought to site in large IBC`s and there will be not requirement for surface water abstractions.
- The works contractor will have all materials and machinery on site to deal with a drilling mud spillage or break out based on the mitigation outlined above. As a failsafe there will be a rapid reaction contract with specialist subcontractor should this be required to assist in the spillage response at the directional drilling locations which includes tanker call out, deployment of pumping and personnel. Emergency plans will be sent to the contractor in advance of works.. In addition to this, wash down of the drilling plant will be contained, tankered and disposed offsite.
- In the event of a drilling mud break out a road tanker will access drilling pits and the location of any HDD break out to recover any escaped drilling fluid. The sump in the drill pits will be accessible by vacuum bowser. Drilling pits will be in the road footprint or in adjacent lands where a wayleave/easement has been secured, so access to these pits will be within the works area and unobstructed access will be available for the tanker.

If a break out does occur it will be along the alignment of the drill and a wayleave/easement will have been secured allowing access to the area. If the break out occurs on third party lands off the line of the drill shot then NIE Networks will need to ensure access to these lands is agreed in advance of the drilling being undertaken to allow for such contingencies.

- River quality observer - As per the OCEMP continual visual inspection during the drilling process is essential and this duty can be alternated between trained persons to ensure that there is adequate cover for the duration of the drill. The purpose of the visual inspection is to spot any streaming of adverse colour or where visibility of identified depth markers becomes impeded. The highest risk of break out is within the first and final metres of the drill profile where there may be interface with weaker substrate, water table or physical pathways like tree roots so these locations will be important for the observers. Break out can occur remote from the drill head along the alignment of the drill hence visual inspection needs to be adept for the entire length of the drill shot and adjacent lands.
- Table 9.2 provides the methodologies that will be used to cross water courses, these are also detailed in Volume III, Appendix 2.2 OCEMP, Appendix D. Open cut cable crossing options are proposed where the cable cannot be laid safely within the carriageway above a culvert or structure. This methodology is an option on the tributary of the Glenmornan (ST3) and tributary 7 of the Owenkillew (ST11) or the tributary of the Golan Water (ST10b). Depending on the flow and size of the watercourse the open cut crossing will be undertaken in dry conditions by either damming the reach across which the UGC will be laid and over-pumping, i.e. pumping of water behind an upstream coffer dam (used to isolate the works area) into the river reach downstream of a secondary cofferdam installed to ensure water does not flow back into works area. The proposed use of temporary/coffer dams 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.

9.8.1.3 Hydromorphology

To stabilise the riparian zone and reduce the risk of bank erosion and sediment input to the channel the following measures will be undertaken:

- Disturbed areas will be returned to former landforms and vegetation of exposed areas will occur as soon as practicable once construction activities are completed in any particular location. Where open cut crossing of watercourses is proposed these areas are prone to erosion will receive particular attention, e.g. cleared banks will be stabilised to facilitate reinstatement. A biodegradable membrane will be deployed (e.g. Geojute; Terram) followed by reinstatement of the bank and riparian zone. Any areas where mitigation methods are used to prevent pollution from suspended solids from surface water runoff will be maintained after drilling or construction of the poles until there is no longer a threat to aquatic life, following vegetation being re-established.
- When reinstating watercourses, stockpiled stream bed rocks, pebbles and/or coarse gravel will be replaced and watercourse banks will be reinstated to stabilize and facilitate bio-restoration.
- Stream bank reinstatement will commence as soon as in-stream construction work is completed.
- For trenchless crossings where launch and exit pits have been excavated, all soils and vegetation will be reinstated and replanted.
- No abstractions will be permitted from surface waters during works. The source of water for drilling muds will be from either water mains or provided by the contractor.
- The majority of cabling works will occur within the road network, however, works will occur off line where open cut crossings of the water courses are proposed, liaison will be required with the landowners to determine if any unregistered private water supplies are located in close proximity to the works area. Should unregistered private water supplies occur within the study area, which will be confirmed with landowners prior to construction, measures to protect the well head, including horizontal clearance distances and the prohibition of handling or storage of chemicals on lands that drain to the water supply will be agreed with the landowner during the wayleave/easement and pre-entry agreements and will be implemented fully by the contractor to ensure these will not be impacted.

- The most significant impact on the quality of the well water would be associated with any accidental leaks and spillages in close proximity to a shallow well. A range of appropriate mitigation measures have been proposed to reduce the risk of leakage or spillages in section 9.7.1.3, however in the event of any such incident occurring remediation measures required will depend on the severity of the incident. Measures will include local soil and groundwater remediation and well rehabilitation or replacement.
- There are no known private wells in the vicinity of the proposed development. Notwithstanding this the impact on groundwater levels in any private well during the operational phase is not likely to result in significant effects as there will be very limited intervention with the exception of operational walkover inspections, vegetation maintenance and possible pole replacement. The nature of the inspections are walkover and given the scale of excavation for a typical pole set replacement will be approximately 1.5m^2 there will be no likely significant effects in terms of groundwater levels or quality of the private well as a consequence of the operation is considered negligible therefore mitigation is not necessary.
- The Derg water supply, which is supplemented by the River Strule (the Owenkillew and Glennelly rivers are tributaries of the Strule), is the main source of public water supply that could be affected by the project. However, pollution prevention mitigation, as outlined in this chapter will ensure that no impact on public water supply sources in terms of quality. Additionally, the construction phase involves the crossing of minor watercourses within the Strule public water supply over small time scales. Therefore, the works will not negatively impact the sufficiency of the public water supply as there is no abstraction requirement or significant impounding of watercourses required.

9.8.1.4 Oils and Chemicals

The use of oils and chemicals on-site requires significant care and attention. Fuel and chemical storage will only occur in the site compounds. As outlined in Section 2.4.6 of the Project Description two main compounds will be used to service the construction of the Overhead line. These will be located within the NIE Networks Omagh Depot and a temporary compound at the proposed Curraghinalt mine site. The following procedures will be followed at the site compounds to reduce the potential risk from the storage of oils and chemicals.

- The Control of Pollution (Oil Storage) regulations (Northern Ireland) 2010 create new standards for above ground Oil Storage facilities in industrial, commercial and Institutional sectors. In summary, the Regulations apply to:
  - Above ground oil storage in containers over 200 litres
  - Private domestic or residential oil tanks over 3,500 litres
  - Industrial, commercial and institutional/residential establishments (e.g. schools, day care centres, hospitals nursing homes)
  - Waste oil storage and companies who refine or distribute oil
  - Oil stored in buildings
- A key requirement of the Regulations is that oil storage containers covered by the Regulations, fixed or mobile, must have a secondary containment system (of 110% capacity) as defined by the regulations (e.g. a bund, which is an outer wall or enclosure designed to contain the contents of an inner tank, or a drip tray) to ensure that any leaking oil is contained and does not enter the aquatic environment.
- All relevant measures outlined in the Control of Pollution (Oil Storage) Regulations (Northern Ireland) 2010 guidance | Department of Agriculture, Environment and Rural Affairs (daera-ni.gov.uk) will be implemented during the construction and operation of the proposed development.
- Fuel, oil and chemical storage will be sited on an impervious base within a bund and secured (locked) to prevent vandalism or theft.
- All valves and trigger guns will be protected from vandalism and unauthorised interference and will be turned off and securely locked when not in use. Any tanks or drums will be stored in a secure container or compound, which will be kept locked when not in use.
- The risk of spilling fuel is at its greatest during refuelling of plant. Refuelling of plant will not occur in the active working areas but rather in the site compounds where it will be undertaken by appropriately trained people.

Refuelling in the site compound will be undertaken well away from any drains or watercourses. A spill kit will be available at all times and a bowser with secondary containment will be used. Vehicles will not be left unattended during refuelling nor will a delivery valve be jammed opened. Hoses and valves will be checked daily, before and after use, for wear and turned off and securely locked when not in use.

- A contingency plan for the works will also be prepared in accordance with PPG 21 Pollution Incident Response Planning. The Emergency Response Plan will reflect the parameters established by the OCEMP and detail actions to be taken in the event of an accidental spillage of fuel, chemicals or other hazardous material. The Plan should also detail the procedures to be followed if there is a breach in any licence conditions or a non-compliance.
- It will be important to ensure that the Environmental Manager is notified of all incidents where there has been a breach in agreed environmental management procedures. Suitable training should be provided to relevant personnel detailed within the Emergency Response Plan to ensure that appropriate and timely actions will be taken should an incident occur.
- Drip trays will be used for any large plant and vehicles where they are left overnight at an active work location.

9.8.1.5 Sewage and welfare facilities

In order to cater for the welfare of persons working on the construction of the project, a mobile welfare van (Volume II, Appendix 2.2 OCEMP Appendix C, Figure 14) will be positioned either within the active work section or, where there is an area used for parking vehicles in close proximity to the active work section, that area may also be used. The vehicle will be returned to the vehicle owner's depot for removal of sewage.

Sewage effluent from the temporary site compound will be removed using a vacuum tanker by a suitable licensed waste contractor.

9.8.2 Operational Phase

During the operational phase potential impacts could occur where underground cable faults need localised repairs to be carried out. Given the localised nature of these the impact is less significant than the construction phase however the mitigation measures proposed for the construction phase will also be applicable to these active work areas and will ensure the residual impact is negligible.

9.8.3 Decommissioning Phase

If the overhead line is required to be decommissioned, all associated structures and materials will be recovered and items recycled with the site returned to its original use. In terms of water quality the decommissioning would require access to lands and the use of plant and machinery to recover the materials. On this basis the sediment and oil and chemical mitigation outlined in the construction phase will be applicable and will ensure that the residual impact is negligible.

9.9 Residual Impacts

The likely significant effects of the Proposed Development were assessed for the construction, operational and potential decommissioning phases of the development. In terms of adverse impacts on the water quality the significance of the impacts were assessed to be **negligible to very large adverse** in the absence of adequate mitigation measures.

The likely significant effects on water quality for the affected water bodies and the residual impact with the mitigation applied have been summarised in **Table 9-15** and **Table 9-16**.

An assessment of the significance of the residual impacts is provided for the construction, operational and decommissioning phases of the project. With the implementation of the mitigation measures proposed in this assessment, the residual impact from the Proposed Development is considered to be **negligible**.

Table 9-15: Construction Phase OHL downstream sensitive watercourses - Magnitude and Significance of Effects without Mitigation, and Residual Effects after Mitigation.

Site ID	Sensitivity	Potential Effect	Magnitude of Effect	Significance without Mitigation	Residual Effect after Mitigation
Fowl Glen Burn	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
Owenreagh Burn	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
Glentrasna Burn	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
Legnavadder Burn	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
Legolougha Burn	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
Glashygolgan Burn (2 crossings)	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
Letterbrat Burn (2 crossings)	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
Glenelly River near Plumbridge (ST14)	Very High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible

Site ID	Sensitivity	Potential Effect	Magnitude of Effect	Significance without Mitigation	Residual Effect after Mitigation
Trinamadan	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
Owenkillew River near Golan Bridge (ST15)	Very High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible

Table 9-16: Construction Phase UGC - Magnitude and Significance of Effects without Mitigation, and Residual Effects after Mitigation ***Note that the assessment takes into account the crossing method.***

Site ID & crossing method	Sensitivity	Potential Effect	Magnitude of Effect	Significance without Mitigation	Residual Effect after Mitigation
ST1 Install as per normal technique above the structure or;	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
ST2 1. Alternate Methodology A: Excavation and Installation around and below a structure or; 2. Alternate Methodology B: Directional drilling	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
ST3 Alternative Methodology C: Dam watercourse and install open trench through watercourse	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
ST4 Install as per normal technique above the structure or;	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
ST5 Alternate Methodology B: Directional drilling	Low	Suspended Solids	Moderate	Slight	Negligible
		Sewage or welfare facilities	Minor	Negligible	Negligible
		Hydromorphological impact	Moderate	Slight	Negligible
		Release of oils or chemicals	Major	Moderate	Negligible

Site ID & crossing method	Sensitivity	Potential Effect	Magnitude of Effect	Significance without Mitigation	Residual Effect after Mitigation
ST6 Alternate Methodology B: Directional drilling	Low	Suspended Solids	Moderate	Slight	Negligible
		Sewage or welfare facilities	Minor	Negligible	Negligible
		Hydromorphological impact	Moderate	Slight	Negligible
		Release of oils or chemicals	Major	Moderate	Negligible
ST7 1. Install as per normal technique above the structure or; 2. Alternate Methodology B: Directional drilling	Low	Suspended Solids	Moderate	Slight	Negligible
		Sewage or welfare facilities	Minor	Negligible	Negligible
		Hydromorphological impact	Moderate	Slight	Negligible
		Release of oils or chemicals	Major	Moderate	Negligible
ST8 1. Install as per normal technique above the structure or; 2. Alternate Methodology B: Directional drilling	Low	Suspended Solids	Moderate	Slight	Negligible
		Sewage or welfare facilities	Minor	Negligible	Negligible
		Hydromorphological impact	Moderate	Slight	Negligible
		Release of oils or chemicals	Major	Moderate	Negligible
ST9 1. Install as per normal technique above the structure or; 2. Alternate Methodology B: Directional drilling	Low	Suspended Solids	Moderate	Slight	Negligible
		Sewage or welfare facilities	Minor	Negligible	Negligible
		Hydromorphological impact	Moderate	Slight	Negligible
		Release of oils or chemicals	Major	Moderate	Negligible
ST10 1. Install as per normal technique above the structure or; 2. Alternate Methodology B: Directional drilling	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
ST10b 1. Alternate Methodology C: Dam watercourse and install open trench through watercourse or; 2. Alternate Methodology B: Directional drilling.	Medium	Suspended Solids	Moderate	Moderate	Negligible
		Sewage or welfare facilities	Minor	Slight	Negligible
		Hydromorphological impact	Moderate	Moderate	Negligible
		Release of oils or chemicals	Major	Large	Negligible
ST11 1. Alternate Methodology C: Dam watercourse and install open trench through watercourse or; 2. Alternate Methodology B: Directional drilling.	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible
ST12 Install as per normal technique above the structure or;	Low	Suspended Solids	Moderate	Slight	Negligible
		Sewage or welfare facilities	Minor	Negligible	Negligible
		Hydromorphological impact	Moderate	Slight	Negligible

Site ID & crossing method	Sensitivity	Potential Effect	Magnitude of Effect	Significance without Mitigation	Residual Effect after Mitigation
		Release of oils or chemicals	Major	Moderate	Negligible
ST13 Install as per normal technique above the structure or;	High	Suspended Solids	Moderate	Large	Negligible
		Sewage or welfare facilities	Minor	Moderate	Negligible l
		Hydromorphological impact	Moderate	Large	Negligible
		Release of oils or chemicals	Major	Very Large	Negligible

9.10 Cumulative and transboundary effects

9.10.1 Cumulative Effects

The definition for cumulative impacts used in the Institute of Environmental Management and Assessment (IEMA) guidance on EIA originates from the US Council on Environmental Quality, and is as follows:

"the impacts on the environment which result from incremental impacts of the action when added to other past, present and reasonably foreseeable future actions..."

Cumulative impacts therefore can cover all aspects of the environment. While a single activity may itself result in a minor impact, it may, when combined with other impacts (minor or significant) in the same geographical area, and occurring at the same time, result in a cumulative impact that is collectively significant.

In the context of water quality it is important to consider hydrological connectivity when considering cumulative impacts and the catchment based approach should be central to any assessment. The assessment based on water bodies ensures that past and present activities are accounted for in the baseline and therefore the impact assessment.

With the implementation of the proposed mitigation there are no likely significant effects from the Proposed Development during the construction, operation or potential decommissioning phases, which would result in either positive or negative cumulative effects with other Proposed Developments on the existing water resource for the area traversed by the Proposed Development. There will be no discernible change to the existing baseline water quality environment as a result of the Proposed Development and therefore no likely significant cumulative effects with other projects including the proposed Curraghinalt Mine development.

Notwithstanding this an assessment of committed developments has been undertaken to establish the likelihood for significant cumulative effects. As has been highlighted in Chapter 8 Fisheries and Aquatic Ecology significant cumulative effects on water quality occur when proposed or existing developments are either hydrologically connected or drain to the same receiving environment. It is therefore more important to consider additional developments in the context of river sub catchments, both locally and on a wider river basin or sub-basin scale.

9.10.1.1 Rationale for selection of Zone of Influence

The approach adopted for the assessment for cumulative effects was informed by the advice note by the UK Planning Inspectorate for nationally significant infrastructure projects (https://infrastructure.planninginspectorate.gov.uk/wp-content/uploads/2015/12/Advice-note-17V4.pdf). The Planning Inspectorate recommends a staged approach whereby, to identify the potential for significant cumulative effects, and other planning approved or pending developments, a Zone of Influence (ZOI) is first identified for the environmental aspect under consideration. Given the close interaction with aquatic ecology the same approach to the delineation of the ZOI has been adopted.

For water quality/fisheries and the aquatic environment, the delineation of the ZOI has been based on the sub-basins draining to the water courses that are traversed by the proposed development. There are a number of reasons for using these sub-basins to delineate the ZOI for the cumulative impact assessment as outlined below:

- These sub-basins delineate the sub catchment boundary of the water courses traversed by the proposed development and represent hydrologically connected areas where pressures from existing activities or other committed developments result in cumulative effects with the proposed development. An assessment of the significance of these is undertaken in the sections below.
- The water body sub basins are the WFD reporting units for surface water status classification and the environmental objectives for these water bodies. The potential for cumulative effects can impact on the status classification and the achievement of the environmental objectives for the water body therefore it is important to assess the cumulative effects at this scale.
- The potential for direct impacts on the physical form of a water body channel, habitat and riparian zone from the proposed development are localised and when undertaken in accordance with the mitigation will not have the potential for cumulative effects beyond the water body sub basin scale. The indirect impacts on physico-chemical and chemical parameters, e.g. sediment, hydrocarbons, which can in turn affect the aquatic habitats and biological elements of the water body status, have the ability to impact on a wider area due to hydrological pathways and therefore have the greatest potential for cumulative impacts, even in downstream sub basins.
- If there were the potential to impact significantly on the flow regime, water quality or introduce impediments to the achievement of the environmental objectives of other water bodies then the cumulative assessment would need to consider a wider ZOI but, provided it can be demonstrated that the cumulative effects will not compromise the environmental objectives of the water body sub basin within which the development is proposed then there is no need to further extend the ZOI. If the proposed development were likely to significantly impact on the flow regime or introduce barriers to fish migration (such as impoundments), to an extent that there would be a reduction in the available habitat of downstream water bodies or their ability to assimilate existing pressures then the ZOI would need to be extended to account for potential cumulative effects impact. However, the nature of this development will not result in these types of impact therefore when it is demonstrated that there is no impact at the sub-basin level then the ZOI does not need to be extended beyond this. The assessment of cumulative effects demonstrates that there is no significant cumulative effects at the water body sub basin scale therefore the ZOI does not need to extend beyond this.

All developments within the ZOI were categorised by type as follows:

- Industrial
- Livestock and Poultry
- Overhead lines and electrical connections
- Quarry and Minerals
- Residential
- Slurry Tanks
- Waste facilities and wastewater treatment works (WWTW)
- Windfarm and Hydro renewable energy

The total number of developments within the ZOI was initially determined as a “long list” (as per UK Planning Inspectorate advice) from which a “short list” could then be produced by excluding/ screening out developments where there is no potential for likely significant effects on water quality/fisheries and aquatic ecology (and therefore on cumulative effects together with the proposed development). The exclusion/ screening out of such developments was based on a tiered approach using information on temporal scope, spatial scale, and nature of the development.

For water quality/fisheries and aquatic ecology, the spatial location of the development in relation to the proximity of a watercourse was considered most important because without a hydrological pathway to the Owenkillew and Glenmornan sub-catchments, there is no potential for impacts arising from sediment, other pollutants, obstruction of fish passage, or habitat loss, on fisheries or aquatic ecology. ArcGis 10.8.1 was used to display the spatial locations of all developments from the long list against the DAERA NIEA river segment shape file layer, which displays the Northern Ireland river and stream network (https://www.daera-ni.gov.uk/articles/download-digital-datasets). Developments intersecting or within a defined buffer distance of a watercourse in the selected sub-

basins were then further scrutinised. There is no definitive minimum distance specified within which a development can be permitted adjacent to a watercourse, although based on pollution prevention guidelines provided by Environment Agencies across the UK, a minimum distance of 10m from a watercourse is recommended for activities such as cement working and wheel washing (PPG5; https://www.netregs.org.uk/media/1418/gpp-5-works-and-maintenance-in-or-near-water.pdf?utm_source=website&utm_medium=social&utm_campaign=GPP5%2027112017).

However, the minimum distance will be site specific and depend also on gradient and soil types. Use of 10m and 50m distance is recommended for storage of fuels and oils from a watercourse and well/ borehole, respectively (Pollution Prevention Guideline 5: works in or near water). Therefore, if the geographic co-ordinate of a development did not intersect or occur within 50m of a watercourse, the development was screened out, and thus excluded, from the long list for further assessment of potential cumulative effects. The distance between the development and nearby watercourses was measured using ArcGis 10.8.1 based on the centroid of the geographic co-ordinate of the planning application as provided by RPS.

For large developments, where the spatial spread is potentially greater than that indicated by the location centroid (e.g. multiple turbine Wind Farms, quarries and sand/ gravel extractions), the planning reference was searched using the Northern Ireland Planning Portal to determine whether an environmental assessment or request for such was recommended by planning https://epicpublic.planningni.gov.uk/publicaccess/); the development was excluded only if no environmental assessment or environmental impact information was requested by the Planning Authority or available, and provided that no watercourses sensitivities were identified in the Development Management Officer Report (case officer), or if available, the Biodiversity checklist and/or Preliminary Ecological Appraisal (PEA).

For developments with hydrological connections, the Northern Ireland Planning Portal website (https://epicpublic.planningni.gov.uk/publicaccess/search.do?action=simple&searchType=Application) was then searched using the relevant planning application reference to determine the availability of environmental assessment information; few developments were accompanied by Environmental Statements or information focusing on fisheries and the water environment as potential sensitive receptors. For developments lacking Environmental Statements but retained (not screened out) for further assessment of cumulative effects, information contained in Biodiversity checklists, PEAs and in Planning Reports prepared by Case Officers, was further scrutinised to determine the likelihood of significant effects.

9.10.1.2 Screening of developments and assessment of likely cumulative effects

Section 8.6.2 of Chapter 8 Fisheries and Aquatic Ecology outlines the approach to the screening of the long list of developments identified within the different categories outlined above with the ZOI. The same principles are applicable to water quality and the achievement of the WFD objectives, therefore the assessment is not repeated in this Chapter.

There were 10 developments that were screened in for further assessment as outlined in Chapter 8, Table 8.22 in addition to the Curraghinalt Gold Mine Project. These projects are also relevant to the water quality chapter given the same potential for hydrological pathways providing a link to the aquatic environment from the different pressures sources, i.e. the different developments.As outlined in the Chapter 8 Fisheries and Aquatic ecology there are no likely significant cumulative effects from these 10 developments and the Curraghinalt Gold Mine Project based on a review of the relevant planning and environmental documentation for these developments and the impact assessment undertaken in this chapter.

9.10.2 Transboundary Effects

The study area associated with the Proposed Development is within the Upper Foyle Catchment. The Foyle catchment is a cross border catchment and therefore the hydrological link extends to areas beyond the international border in the River Foyle and Lough Foyle. The project is therefore hydrologically linked to both the River Finn SAC and the Lough Foyle SPA in the Republic of Ireland. However the residual impact after the implementation of the mitigation measures is assessed as negligible and given that there is no likelihood for significant cumulative effects there will be no potential for significant transboundary effects on water quality as a result of the Proposed Development. This is consistent with the EIA determination undertaken by the Department

for Infrastructure (included in Volume III, Appendix 1.2) which states in relation to the River Finn SAC: *"Given the distance from the receiving streams it is unlikely that there will be significant transboundary effects."*

9.11 Conclusion

This chapter assesses the likely significant effects of the Proposed Development on the water quality and WFD status of the receiving watercourses within the Glenmornan and Owenkillew catchments. It provides relevant baseline information on water quality and WFD status enabling the impacts to be identified and evaluated.

It has been determined that impacts are primarily related to the release of sediment, oil and other chemicals to the receiving watercourses, the direct hydromorphological impact on watercourses and the risk for inadequate sewage/welfare facilities to cause pollution. These impacts from the Proposed Development were assessed for the construction, operational and decommissioning phases of the development. In terms of adverse impacts on the water quality and the likely significance of the effects were assessed to be negligible to very large adverse in the absence of adequate mitigation measures.

A series of specific mitigation measures have been designed to avoid adverse effects on water quality with regard to the construction phase; the operational and potential decommissioning phases are expected to have no significant effects.

It is concluded that, with the implementation of the proposed mitigation measures the construction, operation and decommissioning of the proposed UGC and OHL will have no significant effects on water quality of the water bodies traversed and therefore will not result in a risk to the achievement of the WFD objectives for these water bodies and their water dependent protected areas.

9.12 References

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APPENDIX 1.2 DFI SCREENING RESPONSE

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Department for Infrastructure
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NIE Networks
c/o Connections
Customer Delivery
57 Dargan Road
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BT3 9JU

Dfl Strategic Planning Division
71 Ebrington Square
Derry/Londonderry
BT47 6FA

Date: 08th December 2020

YourRef:

Our Ref: LA11/2019/1000/F

LA10/2019/1368/F

Please Contact: (Please quote at all times)

Contact Number: Graeme Walker

028 7131 4146

Dear Sir/Madam,

Location: **Adjoining 89 Woodend Road Ballymagorry, through townlands of Ballymagorry, Woodend, Milltown, Ballee, Holly-hill, Kennaghan, Owenreagh, Knockanbrack, Lagvittal, Knocklnarvoer, Craignagapple, Lagavadder, Ballykeery, Craigatuke, Meendamph, Balix Upper, Letterbrat, Glencoppogagh (Main Portion), Aghalane and Lisnacreaght ending at 681m NW of 24 Meenadoo Road Culvacullion Gortin.**

737m NW of 56 Mullydoo Road Greencastle, through townlands of Crockanboy, Teebane West, Casorna, Rousky, Drumlea, Garvagh, Meenadoo, Trinamadan and Culvacullion ending at 785m NW of 24 Meenadoo Road Culvacullion Gortin.

Proposal: **33kV power line involving both construction of above ground 33kV overhead line supported by wooden poles and underground 33kV cable laid below ground level in ducts, to serve Curraghinalt mine (currently under consideration planning application LA10/2017/1249/F).**

33kV connection is c37.9 km in length, comprising of c26.9 km of overhead line supported by single and double wooden pole sets and c11 km of underground cabling.

c 22.8 km of the powerline is within the Derry City & Strabane

District Council area comprising of c 18.7km of overhead line supported by single and double wooden pole sets and c 4.1 km of underground cabling.

c 15.1 km of the powerline is within the Fermanagh & Omagh District Council area comprising of c 8.2 km of overhead line supported by single and double wooden pole sets and c 6.9 km of underground cabling.

I refer to the above planning applications LA11/2019/1000/F and LA10/2019/1368/F called in by the Department on 23rd December 2019.

As the proposed development is one which falls within Category 3 – Energy Industry, (c) Transmission of electrical energy by overhead cables of the Planning (EIA) Regulations (NI) 2017, the Department is obliged under Regulation 12 to make a determination as to whether the planning application should be accompanied by an Environmental Statement.

The Department is of the opinion that the proposed development would be likely to have significant effects on the environment and hereby determines that the planning application must be accompanied by an Environmental Statement. The reasons for this determination are set out in the attached screening determination.

I would advise you that under Regulation 16(5) of the above Regulations, you are required , within **4 weeks** from the date of this determination, to inform the Department's in writing that you:-

(a) accept the Department's determination and propose to provide an Environmental Statement; or
(b) do not accept the Department's determination and propose to seek a hearing before the Planning Appeals Commission.

If you do not inform the Department in writing in accordance with Regulation 16(5) as outlined above then the permission sought shall be deemed to be refused at the end of the relevant 4 week period.

Matters for inclusion in an environmental statement are set out in Schedule 4 of the above Regulations, which is not to say that a particular statement must cover every aspect of the potential effects identified in the Schedule at the same level of detail. Emphasis should be placed on the main or significant environmental effects/issues to which the proposed development gives rise, the scope of which you are advised to discuss with the statutory bodies and this office. I would point out, however, that whereas the Department and the statutory bodies may express views about the environmental issues that should be addressed and the information that should be included in the statement, initially they may not be aware of all the potential effects/issues and therefore responsibility for the content of the statement must rest with the applicant.

In the event that the statement when submitted should contain insufficient information to enable the likely significant effects of the proposal to be thoroughly assessed, the Department may ask you to supply the necessary information under Regulation 21. Receipt of such information must be publicly advertised as required by Regulation 18 of the Planning (EIA) Regulations (NI) 2017.

Yours faithfully

[SIGNED]

Graeme Walker

for Strategic Planning Directorate

Department for Infrastructure
An Roinn Bonneagair
www.infrastructure-ni.gov.uk

Contents

1. Introduction 2
2. Nature and Extent of Proposed Development 2
3. EIA Legislation and Requirement for EIA Determination 3
4. Screening Determination for EIA 4
5. Environmental Impact Assessment Screening Determination 20
6. Statement on the Main Reasons for the Conclusion 20

1. INTRODUCTION

1.1 This report represents the Department's determination on the need for Environmental Impact Assessment with respect to the proposed powerline applications (listed below). In making its determination it has had regard to the following Environmental Impact Assessment Screening reports prepared by RPS on behalf of the applicant NIE Networks:

- Ecological Impact Assessment;
- Landscape and Visual Screening Assessment;
- Cultural Heritage Screening Assessment;
- Water Quality Screening Assessment;
- Fisheries & Aquatic Ecology Screening Assessment with update;
- Flood Risk Analysis (mapping);
- Outline Construction Environmental Management Plan (OCEMP).

1.2 Given the detailed technical appraisal in many of the reports the Department also conducted a consultation exercise with relevant expert consultees and their responses were also taken into account in the determination. Account was also taken of the RPS letter accompanying the request for EIA screening determination.

2. NATURE AND EXTENT OF PROPOSED DEVELOPMENT

2.1 The development is contained within two separate applications submitted to the local Councils, (Fermanagh and Omagh District Council and Derry City and Strabane District Council) and subsequently called-in by the Department under Section 29 of the Planning Act (NI) 2011.

2.2 The application references are LA10/2019/1386/F - Fermanagh & Omagh Council District & LA11/2019/1000/F – Derry City & Strabane Council District. The proposal consists of a 33kV power line involving both construction of above ground 33kV overhead line and underground 33kV cable laid in ducts. These in combination will provide the electricity supply to the proposed Curraghinalt mine (currently under consideration planning application LA10/2017/1249/F).

2.3 The total line length is c37.9 km, comprising of c26.9 km of overhead line and c11 km of underground cabling. Some 15.1 km of the powerline is within the Fermanagh &

Omagh District Council area comprising of c 8.2 km of overhead line and c 6.9 km of underground cabling. A further 22.8 km of the powerline is within the Derry City & Strabane District Council area comprising of c 18.7km of overhead line with c 4.1 km of underground cabling.

2.4 The design is a mix of single and double ("H") wood pole structures which are supported by stays at points where the overhead line route changes direction or terminates. Each wooden pole will be stout with a 200mm head diameter. The pole heights will range from 11-20m, with the H pole consisting of 2 poles braced together 1.8m apart and a steel cross arm supporting the 3 phase conductors.

3. EIA LEGISLATION AND REQUIREMENT FOR EIA DETERMINATION

3.1 Section 51 of the Planning (NI) Act 2011 allows the Department by regulations to make provision about the consideration to be given, before planning permission for development of any class specified in the regulations is granted, to the likely environmental effects of the proposed development. The relevant Regulations made by the Department are *The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2017* - the 'EIA Regulations'.

3.2 Under Regulation 12 (1) of the EIA Regulations, where it appears to the Department that the application received is:

a) a Schedule 1 or Schedule 2 application;
b) the development in question has not been subject of a screening determination as to whether the development is or is not EIA development;
c) the application is not accompanied by a statement referred to by the applicant as an environmental statement…….;
the Department shall make a screening determination as to whether the development is EIA development.

Regulation 8 of the EIA Regs shall apply as if receipt of the application were a request made under paragraph (1)(a) of regulation 8.

3.3 In assessing whether the development falls within Schedule 1 or 2 development TABLE 1 sets out the principal steps in the process:

TABLE 1	Yes/No – Please Describe
Does the proposed development fall within the scope of Schedule 1	NO
Does the proposed development fall within a type listed in Column 1 of Schedule 2?	YES The proposed development mostly falls within category 3 of Column 1 – Energy Industry, (c) Transmission of

	electrical energy by overhead cables (underground component not mentioned).
Does the proposed development meet any of the relevant thresholds and / or criteria in Column 2 of Schedule 2?	NO (i)The nominal voltage of the electric line does not exceeds 33kV; and (ii)the purpose of the line is to supply one consumer; (iii) modification of an existing line is not proposed outside the tolerances specified in the Overhead Lines (Exemption) Regulations (Northern Ireland) 1992
Is the proposed development to be located within a "sensitive area"?	YES The majority of the proposed development is located within the Sperrin AONB. A portion of the proposed development spans the Owenkillew River, a designated Special Area of Conservation (SAC) and a European Site. The Owenkillew River is also an Area of Special Scientific Interest (ASSI).
Does the proposed development change or extend development described in Column 1 of Schedule 2?	NO

3.4 Regulation 2 defines "sensitive area" as any of the following - Areas of Special Scientific Interest (ASSI), Areas of Outstanding Natural Beauty (AONB), National Parks, World Heritage Sites, Scheduled Monuments and European Protected Sites. As Schedule 2 applies to any part of that development to be carried out in a sensitive area, the development is Schedule 2 development and a screening determination is required to determine as to whether the development is EIA development.

4. SCREENING DETERMINATION FOR EIA

4.1 As the development is determined to fall within Schedule 2, the screening process considers whether the development is EIA development. EIA development is defined at Regulation 2 as development which is **'likely to have significant effects on the environment by virtue of factors such as nature, size or location'.** As required by regulation 8(7), where the Department has to decide whether Schedule 2 development is EIA development, they must take into account the selection criteria set out in Schedule 3 as are relevant to the development. The development under consideration comprises the two powerline planning applications and it is the totality of their likely significant effects that forms the basis of the screening determination.

4.2 The Department has taken into account the selection criteria set out in Schedule 3, as are relevant to the proposed development and as assessed in the screening determination matrix at Table 2. In considering the assessment the matrix assists in:

- identifying the potential impacts of the proposed development based upon the characteristics of the development and its location;
- considering whether significant environmental effects are likely based upon the characteristics of the potential impacts and the possibility of effectively reducing the impact;
- establishing the broad considerations leading to the detailed reasons for conclusion at Section 6

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
SIZE AND DESIGN		
Will the proposed development be out of scale with the existing environment?	NO Overhead powerline infrastructure is widely present throughout parts of the rural landscape – whilst extensive in overall length it is not out of scale with the existing environment.	N/A
CUMULATIVE EFFECTS		

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Are there potential cumulative impacts with other existing and/or approved developments	YES Visual impact with existing wind turbines, existing powerlines, the proposed mine served by this proposal, existing residential properties/rural development and consented turbnes etc.	NO The Sperrin AONB is considered to a have a high sensitivity to change and given the length of the proposed development and in combination with other developments it is considered there is the potential for significant visual impacts. No landscape mitigation measures are proposed.
USE OF NATURAL RESOURCES		
Will the proposed development use natural resources such as land, water, materials or energy, especially any resources which are non-renewable or are in short supply?	YES The development by its nature of sourcing and erecting wooden poles, overhead wires and laying underground cabling will impact on the use of natural resources.	NO Whilst the project, would result in the need for excavation of land to provide the infrastructure, and use of materials the effects are not considered to be significant. The main raw material is considered a renewable resource.

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Will construction, operation or decommissioning of the project involve actions which will cause physical changes in the topography of the area?	YES The development by its nature of erecting wooden poles and laying underground cabling will impact on the topography albeit it is unlikely to change significantly the topography of the area.	NO This is not considered to be a likely significant effect. The OCEMP indicates relatively small intrusive construction activities and it is not envisaged that there will be any significant change to the area's topography.

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Are there any areas on/around the location which contain important, high quality or scarce resources which could be affected by the project, e.g. forestry, agriculture, water/coastal, fisheries, minerals?	YES There are important water courses that are home to pearl mussel and salmon.	YES The OCEMP in support of the application sets the parameters in respect of water quality, fisheries and aquatic ecology, within which the detailed provisions of the final CEMP will be delivered. The OCEMP includes best practice for works in and around watercourses taking account of matters such as: structural integrity, site drainage, foul water disposal, silt management, fuels and material storage, monitoring, pollution prevention and emergency planning. The mitigation measures delivered through the CEMP are dependent on suitable planning conditions and a low risk for the various methodologies operating over an extensive area in a variety of terrains and ground conditions and habitat interests. The Department is not convinced that standard planning conditions will address all these matters and finds the potential remains for likely significant effects.
PRODUCTION OF WASTE		

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Will the construction, operation or decommissioning of the proposed development produce wastes?	YES There will be excavated earth and building materials during construction phase	NO With the mitigation measures proposed this is not considered to be a likely significant effect. It is considered the amount of waste arising from evacuations to lay cable or set poles would not be significant and an amount of the excavated material will be reinstated where possible as backfill.
POLLUTION AND NUISANCES		
Will the construction, operation or decommissioning phases of the proposed development release pollutants or any hazardous, toxic or noxious substances to the air?	YES Potential for impacts on local air quality at construction phase due to use of machinery/plant, dust from excavation and construction traffic,	NO It is not considered that the nature of any of the construction excavation works would give rise to release of any hazardous, toxic or noxious airborne substances or be likely to have a significant effect upon air quality. It is considered that in line with best practice for construction phase, traffic management and dust control measures could be secured as necessary by condition in consultation with Environmental Health Departments.

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Will the construction, operation or decommissioning of the proposed development lead to risk of contamination of land or water from releases of pollutants?	YES Potential primarily for soil, mud and clay to be released into surrounding watercourses via surface water run-off, the potential removal of vegetation along watercourses, use and storage of fuels, oil for machinery and treatment of sewage facilities, and primarily during construction phase.	YES It is acknowledged the Owenkillew and Glenelly catchments in particular are highly sensitive receptors. The Owenkillew is an SAC and incorporates the Owenkillew River Area of Special Scientific Interest (ASSI). The SAC features the largest population of freshwater pearl mussel in Northern Ireland. The OCEMP in support of the application sets the parameters in respect of water quality, fisheries and aquatic ecology, within which the detailed provisions of the final CEMP will be delivered. The mitigation measures are dependent on suitable planning conditions and a low risk for the various methodologies operating over an extensive area in a variety of terrains and ground conditions and habitat interests. The Department is not convinced that standard planning conditions will address all these matters and finds the potential remains for likely significant effects.

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Will the construction, operation or decommissioning phases of the proposed development cause noise, vibration or the release of light, heat, energy or electromagnetic radiation?	YES The proposed development will generate electric and magnetic fields (EMF) with potential for a noise impact. There is potential to generate noise from plant and machinery during construction phase	NO It is considered this is not a significant effect and EMF can be considered in consultation with Public Health Agency who can provide expert advice on the relevant ICNIRP guidelines. Likely significant environmental effects arising from vibration and noise during construction can be controlled through restrictions on hours or operation for construction.
MAJOR ACCIDENTS		
Will there be any risk of major accidents (including those caused by climate change, in accordance with scientific knowledge) during construction, operation or decommissioning?	YES Potential for human error that could impact on the environment	NO As with most construction operations there is a risk of major accidents happening. In carrying out the operations, workers must adhere to the Health and Safety at Work (NI) regulations and expert advice can be sought from HSENI through the consultation process. It is considered this is not a likely significant effect and can be mitigated by appropriate condition.
HUMAN HEALTH		

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Will the project present a risk to the population (having regard to population density) and their human health during construction, operation or decommissioning? (for example due to water contamination or air pollution)	YES Potentially there could be impact on the human health of the surrounding population in terms of use of plant equipment, material transportation and possible dust from construction operations.	NO With the mitigation measures proposed this is not considered to be a likely significant effect. Advice will also be taken from Public Health Agency as part of the consultation process and appropriate conditions can be applied to implement any agreed CEMP measures. Dust pollution is not considered to be a likely significant effect given the nature of the development. Where any small and localised impacts arise dust control measures could be secured by condition in consultation with Environmental Health Departments if necessary.
LAND USE		
Are there existing and/or approved land uses or community facilities on or around the location which could be affected by the project? E.g. housing, densely populated areas, industry / commerce, farm/agricultural holdings, forestry, tourism, mining, quarrying, facilities relating to health, education, places of worship, leisure /sports / recreation	YES The majority of the land use that the proposal traverses is rural in nature, therefore there could be potential impact on local residents, farming activities and tourism etc.	YES Given the extent of the development it is not established that there would not be likely significant effects on residential amenity. 208 properties and clusters of properties are identified within the 500m corridor. The outlook from a number of these properties has the potential to be significantly impacted and a residential visual amenity assessment should be carried out as part a wider residential amenity assessment. A likely significant effect cannot be precluded.

TABLE 1 Schedule 3 selection criteria as are considered relevant	Potential Impact (Yes/No/N/A) Briefly describe potential impact. If answer NO, the answer in the second column is N/A	Is this likely to result in a significant effect? (Yes/No/N/A) Include measures envisaged to avoid or prevent significant adverse impacts on the environment
NATURAL ENVIRONMENT		

Are there any areas on or around the application site that are protected under international or national legislation for their ecological, landscape, cultural heritage or other value which could be affected by the construction, operation or decommissioning of the proposed development? Are there any protected areas which are designated or classified for their terrestrial, avian and marine ecological value, or any non-designated / non-classified areas which are important or sensitive for reasons of their terrestrial, avian and marine ecological value, located on or around the location and which could be affected by the project? (e.g. wetlands, watercourses or other water-bodies, the coastal zone, mountains, forests or woodlands, undesignated nature reserves or parks. (Where designated indicate level of designation (international, national, regional or local))). Could any protected, important or sensitive species of flora or fauna	YES The majority of the proposed development falls with the Sperrin AONB. A portion of the proposed development spans the Owenkillew River, a designated Special Area of Conservation (SAC) and therefore a European Site. This is also an Area of Special Scientific Interest (ASSI). The Owenkillew and Owenreagh Rivers are within the River Foyle and its tributaries Special Area of Conservation (SAC) - supports significant numbers of Atlantic Salmon and Otter. The Owenkillew River is an SAC and incorporates the Owenkillew River Area of Special Scientific Interest (ASSI), Drumlea and Mullan Woods and Owenkillew and Glenelly Woods ASSI. The SAC features the largest population of freshwater pearl mussel in Northern Ireland. Also includes salmon, otter, bog woodland, water crowfoot and old woodlands.	YES It is considered that there will be likely significant effects on designated sites, habitats and species. The mitigation measures are dependent on suitable planning conditions and a low risk for the various methodologies operating over an extensive area in a variety of terrains and ground conditions and habitat interests. The Department is not convinced that standard planning conditions will address all these matters and finds the potential remains for likely significant effects. At least one species will require further survey work to assess impact.

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
which use areas on or around the site, e.g. for breeding, nesting, foraging, resting, over-wintering, or migration, be affected by the project?	Owenreagh River ASSI for the feature of freshwater pearl mussel. Also possible impact on peat which supports blanket bog and wet heath habitats which are priority habitat under Annex 1 of the EU Habitats Directive. Potential impact on protected species such as otter, badger, newt, common lizard, breeding birds and fritillary marsh butterfly.	
WATER RESOURCES		

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Are there any water resources including surface waters, e.g. rivers, lakes/ponds, coastal or underground waters on or around the location which could be affected by the project, particularly in terms of their volume and flood risk? Are there any groundwater source protection zones or areas that contribute to the recharge of groundwater resources which could be affected by the proposed development?	YES There is potential for impacts to occur on surface water and ground water quality. Potential for run off into sensitive receiving water courses.	NO It is considered that the risk of flooding in the development corridor is low. Whilst there is potential for temporary impoundment for some minor streams it is not considered a significant effect in terms of affecting water volume. In terms of ground water impacts, the poles, when sunk into the ground may release some contamination due to the protecting coats they will be covered in, however it is not considered nor is there evidence to suggest these are likely be significant and can be fully assessed as part of the consultation process with NIEA.
Are there any areas on or around the location of the proposed development where environmental quality standards are already exceeded which could be affected by the proposed development?	NO DfI Planning are not aware of any documented evidence to suggest there are any specific areas in the proximity of this proposal where there are issues with environmental quality standards.	N/A
LANDSCAPE AND VISUAL		

Are there any areas or features on or around the location which are protected for their landscape and scenic value, and/or any non-designated / non-classified areas or features of high landscape or scenic value on or around the location which could be affected by the project? Where designated indicate level of designation (international, national, regional or local). Is the project in a location where it is likely to be highly visible to many people?	YES The route is largely within the Sperrin AONB (nationally important) and will traverse 4 different landscape character areas. Circa 28km will be over ground. Given the length of the powerline route it is considered that it will have impacts for both local residents and to the wider community who may visit the locality for tourist or recreation purposes.	YES The Sperrin AONB in parts is considered to a have a high sensitivity to change; whilst wooden pole overhead lines are not uncharacteristic in parts of the route corridor, given the length of the route, in parts over an open elevated landscape, and in combination with other developments it is considered that there is potential for likely significant environmental effects. Of the 208 dwellings identified within the 500 metre corridor, the screening assessment judges all to be minor/moderate with respect to their experience of visual effects (Table 10). Given the number of properties along the length of the line corridor it is considered that a Residential Visual Amenity Assessment (RVAA) would provide additional information to assess whether the development is likely to result in visual changes which significantly affect the quality of life or living conditions of residents – which would also assist in assessing wider residential amenity issues. The potential of likely significant effects arising from the outlook from neighbouring properties cannot be excluded. Potential of the 11 viewpoints selected to illustrate the existing visual context is queried as well as the significance of the impacts. A likely significant effect cannot be precluded.
TRANSPORTATION AND ACCESS		

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
Are there any transport routes on or around the location which are used by the public for access to recreation or other facilities, which could be affected by the proposed development? Are there any transport routes on or around the location which are susceptible to congestion or which cause environmental problems, which could be affected by the development?	YES The development has potential have an impact in terms of increase traffic movements and volume of vehicles on the road network, mostly during construction phase. Potential impact on laying of underground cables along parts of road network	NO Impacts will be concentrated at the construction phase for a period circa 12-18 months and therefore not long term. With the projected vehicle trip numbers (Table 4.2 of the OCEMP) and using mostly the existing road network during the construction phase (Appendix C of the OCEMP) it is not considered to be a likely significant effect.
CULTURAL HERITAGE AND ARCHAELOGY		
Are there any areas or features which are protected for their cultural heritage or archaeological value, or any non-designated / classified areas and/or features of cultural heritage or archaeological importance on or around the location which could be affected by the project (including potential impacts on setting, and views to, from and within)? Where	YES Based on the available information there are scheduled monument sites in proximity to the route of the line, a number of industrial heritage sites (bridges) and a number of listed buildings.	YES Mitigation is proposed to include exclusion zones at construction phase within the vicinity of identified/recorded/potential archaeological monuments. A licensed archaeological monitoring programme to be implemented at early construction phase and post evaluation excavation reporting as necessary. It is considered the project has the potential to have a likely significant effect on cultural heritage (e.g.: on the setting of a group of prehistoric monuments in Culvacullion and Trinamadan townlands) by introducing

TABLE 1 **Schedule 3 selection criteria as are considered relevant**	**Potential Impact** **(Yes/No/N/A)** **Briefly describe potential impact. If answer NO, the answer in the second column is N/A**	**Is this likely to result in a significant effect?** **(Yes/No/N/A)** **Include measures envisaged to avoid or prevent significant adverse impacts on the environment**
designated indicate level of designation (international, national, regional or local).		an incongruous form of development into parts of the upland landscape. This impact has not been sufficiently mitigated and the impact is thus likely to be significant ~~I~~t is not considered that there are likely significant effects on the various listed buildings along the proposed route There is no LB's within the 200m corridor and only two within 1km.
TRANSBOUNDARY		
Is the project likely to lead to transboundary effects?	YES The project is hydrologically linked to the River Finn SAC; there is potential for sediments or contaminates to impact this watercourse through surface water run-off. There may be transboundary visual impact from the project	NO Given the distance from the receiving streams it is unlikely that there will be significant transboundary effects. It is considered they may be some transboundary visual impacts at the northern point of the line with County Donegal however given the distance and nature of the proposal it is considered these are unlikely to have a significant transboundary visual impact.
STABILITY		
Is the location susceptible to earthquakes, subsidence, landslides, erosion, or extreme /adverse climatic conditions?	N/A	N/A

5. ENVIRONMENTAL IMPACT ASSESSMENT SCREENING DETERMINATION

5.1 The Department has had regard to the scale and nature of the project and provided a proportionate assessment taking account of all available information including consultee responses, the proposed mitigation measures outlined in the detailed technical screening documents and the probability of impacts on the receiving environment arising from the proposed development during the construction or operational phases.

5.2 The Department does not concur with various submissions that all the impacts are reduced to no likely significant effects, in some cases even where extensive mitigation measures are proposed. On that basis the Department determines that the proposed development is EIA development and that the proposed project must proceed by way of an Environmental Impact Assessment.

6. STATEMENT ON THE MAIN REASONS FOR THE CONCLUSION

6.1 In reaching the conclusion that the proposed project must proceed by way of an Environmental Impact Assessment, the Department has had regard to the environmental information submitted including in particular the Ecological Impact Assessment **EcIA** (with a confidential badger survey), Landscape and Visual Impact Assessment **LVIA**, Cultural Heritage Screening Assessment **CHSA**, Water Quality Screening Assessment **WQSA**, Fisheries & Aquatic Ecology Screening Assessment **FAESA** and the additional Fisheries & Aquatic Screening Assessment - Received 15.09.20 **aFAESA**, Flood Risk Analysis **FRA** and the Outline Construction Environmental Management Plan **OCEMP**. It has also taken into account consultee comment. The main reasons for the conclusion reached are:

- **Potential Water Quality Effects**

  In the **WQSA** the potential impacts are assessed for the construction, operational and decommissioning phases of the development. Neither the operational nor the decommissioning phase is likely to give rise to significant environmental effects. The significance of the adverse impacts on water quality are assessed in the construction phase to be in a range from negligible to very large adverse in the absence of adequate mitigation measures. The potential impacts on water quality for affected water bodies for both overhead line and underground cable are summarised in Tables 8.1 and 8.2. It is concluded that provided the mitigation measures proposed in the assessment are implemented, the residual impact from the development is considered to be negligible.

  The mitigations measures proposed comprise three main elements related to prevention of sediment pollution, measures to reduce the risk of bank erosion and sediment input to the channel and procedures to be followed to reduce the potential risk from the storage of oils and chemicals. Off-site sewage disposal is not considered

to be significant. The proposed mitigation measures at Section 7 are largely repeated at Section 5 in the OCEMP.

The construction method for the underground watercourse crossings are listed in Table 2.1 and as identified in Figures 5.1 to 5.3 of the WQSA. Where the methodology differs from the standard technique outlined in Section 2.2.3 the detailed methodology is provided in Appendix D of the OCEMP.

The Department is satisfied that the proposals might well be routine and standard industry environmental management systems though the OCEMP does not provide an evidence base to demonstrate the risk associated with the various mitigation methodologies. Information on how routine such methodologies are or how their use and operational outcomes in similar sensitive environments including river crossings with high nature conservation value would have allowed some comparison of risk. In the absence of same the probability of a significant effect cannot be ruled out.

Notwithstanding whether or not the mitigation measures are routine and of low risk they must also be capable of successful implementation. The mitigation measures will form part of the site-specific Construction Environmental Management Plan (CEMP) which will be in operation during the construction phase.

Successful implementation goes beyond adherence to published guidelines and operating practices as it is relies on whether the planning system has the appropriate means to monitor, control and enforce the CEMP provisions. As a planning condition cannot in itself prevent harm if for example the CEMP methodologies/processes fail it is particularly important that there is a strong evidence base of low risk for the various methodologies operating over an extensive area in a variety of terrains and ground conditions with significant habitat interest. The issue should be read in conjunction with the mitigation measures proposed for ecology and fisheries & aquatic ecology given their interrelated nature.

Whilst not precluding that this could be done at low risk the Department finds that, for screening purposes, there is material doubt and in applying the precautionary principle, which underlies the EIA Directive, the potential for likely significant effects on water pollution should be resolved in favour of EIA. (see also comment in ecology and aquatic ecology on mitigation)

- **Potential Ecological Effects**

The **OCEMP** at Section 6 outlines the ecological mitigation measures informed by the **EcIA**. Residual impacts (Section 7 of the EcIA) identifies the significance of effects after the implementation of mitigation measures. This indicates that for the different phases, even with mitigation measures there remain a range of adverse effects including:
major adverse on the NIPH Wet Woodland, during construction and operation;
moderate adverse on Owenreagh Hill Local Wildlife Site, during construction and on bats if Bat Roost Inspection Surveys of Trees confirm the presences of bat roosts.

There is doubt about what this effect will be as Bat Roost Inspection Surveys are required to confirm (Table 1 Preliminary Roost Assessment for Trees and Further Survey Inspection Result);
minor adverse on Glenelly River Local Wildlife Site, during construction and operation but no permanent damage following the implementation of mitigation measures to protect water quality;
- on Golan Burn Local Wildlife Site, during construction and during operation but no permanent damage following the implementation of mitigation measures to protect water quality and reinstate habitat;
- on the NIPHs Blanket Bog; Wet Modified Bog; Upland Fens, Flushes and Swamps; Upland Heath and Purple Moorgrass and Rush Pasture, during construction due to pole and cable installation, with temporary disturbance to features of regional importance but no permanent damage and No Significant Effect during operation following the implementation of mitigation measures to protect habitat;
- on the NIPH Rivers and Streams, during construction due to site clearance of vegetation and watercourse crossings and during operation due to vegetation management, with temporary disturbance to features of regional importance, but no permanent damage following the implementation of mitigation measures to protect water quality;
- on the NIPH Hedgerows and the non-priority habitat broadleaved semi-natural woodland during construction and operation due to site clearance of vegetation and vegetation management, with the loss of woodland of regional importance following the implementation of mitigation measures;
- on the non-priority habitat marshy grassland during construction due to pole and cable installation, with temporary disturbance to features of regional importance but no permanent damage and No Significant Effect during operation following the implementation of mitigation measures to protect habitat.

Measures are proposed in Section 8 of the EcIA to compensate for damage to Northern Ireland Priority Habitats across the project. These areas will be in addition to compensatory measures already outlined within the Curraghinalt mine site *Ecological Mitigation and Management Plan* submitted in respect of planning application LA10/2017/1249/F and will be delivered by the developer (Section 6.6 of the OCEMP). The Department has checked the relevant mine site ecological mitigation and can find no reference currently to these additional compensatory measures required by the powerlines. No weight is therefore attached to this proposal and the impacts remain as described at 7.2.

The ecological mitigation measures proposed in the OCEMP at Section 6 are informed by the EcIA report. Ecological protection relies in combination on the ecological mitigation measures detailed in the EcIA, the WQSA, the two FAESA reports and as set out in the OCEMP. The measure in the WQSA and FAESA are dealt with separately and this section focuses on those mitigation measures identified in the EcIA and the OCEMP. The OCEMP sets out the standards that will be implemented throughout the life of the development including details of the construction and operation of the project, construction method statements at

watercourse crossings, environmental management measures that will be put in place to mitigate environmental effects and provides details of audit procedures.

Of central importance in monitoring mitigation measures is the provision of an ECoW, or several, who will provide direction at both pre-construction and during construction in relation to undertaking a range of activities including appropriate monitoring. It is indicated that the direction of the ECoW will be binding.

The Department does not find that the combination of mitigation/compensation and implementation measures will be routine. For example there is potential for a number of ECoWs on site particularly where multiple active work sections may be constructed in parallel using additional work teams. Whilst the OCEMP outlines the binding powers of the ECoW, in terms of implementation, these powers must also be capable of control through the planning systems. Given the linear extent of the site, the number and diverse range of habitats impacted, the potential for numerous working sites simultaneously, the Department is not convinced that the OCEMP measures, primarily under the control of the applicant and however well-intentioned would be sufficient to ensure that all mitigation measures are implemented by a routine planning condition. For the mine project the Department is considering the need to appoint its own on-site ecologists and as part of the project this should be extended to the powerlines. These would be employed by the Department but funded by the applicant and this measure (and its costs) will be the subject of detailed negotiations and the subject of a S76 planning agreement. Any binding powers, for example the ability to stop work, it is felt should rest with the Department' s ecologist and enforced through a legally binding planning agreement rather than a breach of planning condition.

The Department finds that, for screening purposes, there is potential for likely significant effects on bats which may only be determined following further survey work. Compensation measures do not appear to be currently subsumed within the mine application. The Department also finds material doubt in how mitigation measure will be implemented, particularly where a S76 planning agreement may have to be negotiated and in applying the precautionary principle, which underlies the EIA Directive, the potential for likely significant effects on ecology should be resolved in favour of EIA.

- **Potential Cultural Heritage Effects**

*The **CHSA*** at Section 6 sets out the mitigation measures primarily for the construction phase. These comprise three main measures:

- Creation of exclusion zones at initial phase of Construction Stage, adjacent recorded/potential archaeological sites
- Licenced archaeological monitoring programme (watching brief) at earliest stage(s) of construction phase at all greenfield cable route areas, adjacent areas of identified Cultural Heritage constraints (recorded and potential) and pole-sets not subject to field inspection as part of this report
- Post-evaluation/excavation reporting, as appropriate, to the relevant authorities

The letter requesting a screening determination indicates that design iterations were completed following detailed field surveys including cultural heritage matters. The assessment of significance of Effect is categorised as Profound, Very Significant, Significant, Moderate, Slight, Not Significant or Imperceptible and the study corridor was determined to be 200m wide for assessment of potential direct impacts and the 1km wide study area for indirect visual impact assessment. Impacts are summarised at Table 4.

HED (Historic Monuments) has assessed the information and has some concerns regarding the impact of the proposed overhead powerlines (OHL) on the setting of a group of prehistoric monuments in Culvacullion and Trinamadan townlands, Co. Tyrone. This includes a stone circle (TYR 18: 56), four stone circles and alignments known as the Slieve Beg standing stones (TYR 18: 08) and 3 standing stones that are possibly the remains of a megalithic tomb (TYR 18: 50). The first two of these are scheduled monuments afforded statutory protection under the provisions of the Historic Monuments and Archaeological Objects (NI) Order 1995. HED (Historic Monuments) considers that any adverse impact upon the setting of these monuments should be avoided and advises that the applicant considers realigning the proposed OHL to avoid the impacts identified in the archaeological impact assessment accompanying the application. Currently the setting of these monuments is relatively undisturbed upland, with wide views across the area and more distant views towards Donegal. The introduction of the OHL as proposed will introduce an incongruous form of modern development into this upland landscape and change the character of the functional and visual settings of this group of monuments. A further group of potential prehistoric monuments has been identified to the north-east of these recorded monuments by the applicant's archaeological consultants during field work for this project. Taken with the recorded monuments these indicate that a substantial prehistoric landscape is present on Slieve Beg.

Physical, visual and functional setting criteria were used by the applicant's consultant to describe the potential impact on the setting of the newly discovered stone arrangement, as well as the nearby Scheduled Monuments. Trinamadan, close to the boundary with Culvacullion, County Tyrone. Consideration was given to amending the alignment to potentially lessen the indirect impact on the setting of the stone arrangement but such movement had the potential to increase the visual prominence of the OHL and might have also potentially brought the line closer to other potential archaeological features.

Proposed cultural heritage mitigation measures are to a large extent limited to those relating to archaeological monitoring during the construction phase and post-evaluation/excavation reporting, as appropriate, to the relevant authorities. The ability to mitigate by adjusting the route of the line may be constrained by other factors such as landscape or nature conservation impacts and such detailed consideration is a matter for the planning application where it would be possible to consider the relative balance between these sometimes competing interests.

For screening purposes, based on the route as submitted and HED comments, the Department is persuaded that there will be potential for likely significant effects. The potential for likely significant effects on cultural heritage should be resolved in favour of EIA.

- **Potential Landscape and Visual Effects**

In the **LVIA** the potential landscape and visual effects are assessed for the construction and operational phases of the development. All of the identified LCAs have been predicted to experience localised, temporary, adverse but not significant landscape impacts during the construction phase which is accepted. During the operational phase of the development no significant landscape effects are predicted for any of the four LCAs and the wider AONB due to the nature of development and the open, expansive nature of the landscapes within which it is placed (Table 8 of the LVIA Summary of Predicted Landscape Effects). Visual effects from 11 representative viewpoints are predicted to range from minor and not significant to a single impact of minor to moderate and not significant (Table 9 of the LVIA: Summary of Predicted Visual Effect).

Mitigation measures are not proposed though it is indicated that the initial route design took account of the Holford Rules which are used by NIE Networks as a tool to select and assess potential route options for overhead power lines. The route design of the development has addressed the principles established by these Rules which are not solely concerned with landscape but involve a consideration of other matters such as cultural heritage, ecological and technical e.g. consideration of the need to maintain clearances from specified structures such as phone masts and wind turbines and to minimise crossings with other existing power lines. It is considered that a number of matters remain to be addressed.

The limited number of viewpoints (11 No) is unlikely to be fully representative of the viewpoints and visual effcets of the development along its route. The Department does not agree that there are unlikely to be significant landscape effects because it does not accept that only one viewpoint VP 7 Glenelly Road would result in minor to moderate and not significant visual impact. It considers that VPs 2, 3, 4, 8 and 10 (and the landscape they represent) have the potential to result in greater visual effects than VP7. OHLs are generally a minor element or not visible in these viewpoints.

As these viewpoints are representative, selected to illustrate the existing visual context of the development and as an aid to the visual impact assessment (1.7 of the LVIA) the extent to which these may be characteristic of the entire route is not known. If they are, and impacts are greater than for VP7, then there is potential for likely significant landscape effects over an extensive part of the route. If they are not characteristic then a greater range of viewpoints would be required to better reflect the entire route.

The range of cumulative impacts identified represent the landscape and visual impacts of the development when viewed in context with other development within the study area and is limited to proposed development. (Table 7 of the LVIA - Cumulative Developments Considered). The cumulative impacts of existing development including overhead lines, telecommunication masts, wind turbines and built form, where present within the landscape have been considered as part of the LVIA baseline and are noted in views where applicable. There is little reference in the baseline to these features and references to existing overhead lines are generalised as at 1.3.1. Information on existing powerlines are identified for small parts of the route at Drawings 689-1-1 - 689-1-4 which include 33kv overhead lines. Such information for the entire route would have been helpful to allow a fuller assessment of likely cumulative impacts.

The predicted visual impacts on residents of residential properties that occur within 500m of the Proposed Development has also been undertaken. The significance of effect is judged as none for 119 properties, minor for 73, minor to moderate for 16 and none for moderate to major or major to substantial. Whilst reserving judgement on the exact numbers and effects, given the broad numbers indicated of the residential properties impacted along the route, the Department considers there is potential for likely significant effects on residential amenity. With outlook from neighbouring properties as one subset of assessing residential amenity the Department considers it important that a Residential Visual Amenity Assessment Is carried out to assess the views from properties and in particular where the significance of effect is judged to be minor/moderate or above. Without this it is not possible to conclude that there would not be likely significant effects on residential amenity.

The Department finds material doubt in regard to the number of viewpoints, the visual impacts from the viewpoints, the extent that the viewpoints are characteristic of the entire route, cumulative impacts and the impacts on residential outlook. In applying the precautionary principle, which underlies the EIA Directive, the potential for likely significant landscape and visual effects should be resolved in favour of EIA.

- **Potential Fisheries & Aquatic Ecology Effects**

The NIEA Natural Environment Division (NED) consultee response highlighted Loughs Agency (LA) concerns with the March 2020 **FAESA**, particularly the representation of wild brown trout habitat within the stream crossing points. NED considered the proposal may be capable of having significant impacts on the populations within the designated sites. In response an additional report was prepared (aFAESA September 2020) assessing the potential significance of the effects associated with the construction of the UGCs. The aFAESA sets out the magnitude and significance of potential effects during the construction phase for each river crossing at Table 17. Without mitigation the effects during the construction phase are predicted to be at worst of Major Magnitude and of Very Large Significance. With mitigation, residual effects are reduced to neutral where the net impact will be negligible.

The underground cable construction sequence and construction methodology is covered at Section 6 of the OCEMP. At a number of specific locations the construction of the underground cable will be carried out as per the Activities 1 – 3 but after this will be subject to alternative methodologies referred to in Table 4.1 of the and detailed in Appendix D of the OCEMP

Mitigation measures relating to UGC are covered at 4.6.1 of the Alternative Underground Cable Construction Methodologies for Location Specific Requirements. At the locations ST2, ST3, ST5, ST6, ST7, ST8, ST9, ST10, ST10b and ST 11 as shown in drawing nos. 689-1-1 - 689-1-4, the construction of the underground cable will be carried out as per the methodology Activities 1 – 3. Following this, the alternative methodologies referred to in Table 4.1 and with further detail provide in Appendix D of the OCEMP will be undertaken.

It is noted that HDD will only be used where ground conditions indicate a low risk drilling fluid breakout to the watercourse. In assessing effect it is noted at 6.1.3 of the aFAESA that an appropriate geo-technical assessment will be undertaken to determine the porosity of the stream bed underlying proposed HDD crossings so that the risk of drilling mud break out can be ascertained. Open cut approaches will still be used where the local geology and on-site management is deemed still to pose a risk of rupture or drilling mud run-off. While the obvious immediate effects of an open-cut crossing is sediment entrainment, if the procedure is short-term it will have lower magnitude of impact as compared to a drilling fluid break-out or any surface run-off associated with trenchless crossings.

The Department considers that the appropriate methodology to be adopted is reliant on further geotechnical assessment and locations ST5 and ST6 appear to propose HDD with no alternative in advance of further assessment.

As the Department finds some marginal material doubt in this regard and in applying the precautionary principle, which underlies the EIA Directive, the potential for likely significant effects on fisheries & aquatic ecology should be resolved in favour of EIA.

- **Flood Risk**

The Proposed Development including placement of each pole structure has been reviewed against present day 1% AEP floodplains of the watercourses along the route. As it has been demonstrated that none of the pole structures are located within the strategic flood plain (9 in total are located within 5m) it is not considered to represent a flood risk. None of the works involved In either the construction or potential de-commissioning of the development will impact on the flood plain or increase flood risk. The development will not impact on flood risk during the operational phase.

Signed

[redacted]

[redacted]

[redacted]

Date: 10/11/2020

APPENDIX 1.1 EIA SCREENING REQUEST

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Our ref: NI1851

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74 Boucher Road, Belfast
Co. Antrim BT12 6RZ
T +44 2890 667 914

Date: 13th January 2020

Dfl Planning
Buillding 71
Ebrington Square
Londonderry
BT47 6FA

Dear Sir/Madam,

RE: CURRAGHINALT 33KV CONNECTION PROJECT – REQUEST FOR EIA SCREENING DETERMINATION

I write in respect of the planning applications, submitted by NIE Networks on 22nd November 2019 (Planning references: LA10/2019/1386/F & LA11/2019/1000/F), which seek consent to develop a new 33kV connection (hereafter 'the Proposed Development') between Strabane Main Sub-Station and the proposed Curraghinalt mine, currently under consideration by the Department for Infrastructure (Dfl) under planning application LA10/2017/1249/F.

Pursuant to the terms of Regulations 8 and 12 of The Planning (Environmental Impact Assessment) Regulations (Northern Ireland) 2017 ("the EIA Regulations"), the applicant is hereby submitting a request for a formal EIA Screening Determination in respect of the Proposed Development.

Regulation 8(3) of the EIA Regulations states that a request for a Screening Determination must be accompanied by:

(a) A plan sufficient to identify the land;
(b) A description of the development, including in particular –
    i. A description of the physical characteristics of the development, and, where relevant, of demolition works;
    ii. A description of the location of the development, with particular regard to the environmental sensitivity of geographical areas likely to be affected.
(c) A description of the aspects of the environment likely to be significantly affected by the development;
(d) To the extent the information is available, a description of any likely significant effects of the Proposed Development on the environment resulting from –
    i. The expected residues and emissions and the production of waste, where relevant; and
    ii. The use of natural resources, in particular soil, land, water and biodiversity.

Regulation 8(4) also makes provision for the person making the request to submit additional information in respect of a description of any features of the Proposed Development or any measures envisaged to avoid or prevent what might otherwise have been significant adverse effects on the environment.

In accordance with these requirements, and for the purposes of the EIA determination, a Site Location Plan is provided in support of the planning applications showing the Proposed Development in its entirety with the relevant council boundaries demarcated. This submission sets out below a description of the Proposed

Development and its potential effects on the environment. This submission should be read in conjunction with the planning application(s) and all associated materials including the following reports which address the relevant potential impacts across the whole Proposed Development:

- Ecological Impact Assessment;
- Landscape and Visual Screening Assessment;
- Cultural Heritage Screening Assessment;
- Water Quality Screening Assessment;
- Fisheries & Aquatic Ecology Screening Assessment;
- Flood Risk Analysis (mapping);
- Outline Construction Environmental Management Plan (OCEMP).

1.1 SUMMARY OF THE PROPOSED DEVELOPMENT

The Proposed Development comprises a 33kV connection to serve the proposed Curraghinalt mine, currently under consideration under planning application LA10/2017/1249/F.

The Proposed Development connects the existing NIE Networks Strabane substation to a proposed substation building at the mine site; the substation at the mine site is proposed as part of planning application LA10/2017/1249/F.

The proposed 33kV connection is 37.9km in length, comprising of 26.9km of overhead line (OHL) supported by single and double wooden pole sets and 11km of underground cabling (UGC).

The design is a mix of single and double ("H") wood pole structures which are supported by stays at points where the overhead line route changes direction or terminates. Each wooden pole will be stout with a 200mm head diameter. The pole heights will range from 11-20m, with the H pole consisting of 2 poles braced together 1.8m apart and a steel cross arm supporting the 3 phase conductors.

1.2 DETERMINING WHETHER ENVIRONMENT IMPACT ASSESSMENT (EIA) IS REQUIRED

1.2.1 Screening Methodology

Under the EIA Regulations, developments may fall within the descriptions of development defined in Schedule 1 or Schedule 2. In the case of a Schedule 1 development, EIA is required. Schedule 2 developments do not automatically require EIA but must be screened formally to determine the need for an EIA.

Development which is classed as being Schedule 2 requires an EIA screening determination if the proposal is of a description mentioned in column 1 of the table in Schedule 2 where either:

(a) any part of that development is to be carried out in a 'sensitive area'; or
(b) any applicable threshold or criterion in the corresponding part of column 2 of that table is respectively met or exceeded in relation to that development.

Regulation 2 defines "sensitive areas" as being Areas of Special Scientific Interest (ASSI), Areas of Outstanding Natural Beauty (AONB), National Parks, World Heritage sites, Scheduled Monuments and European Protected Sites.

Schedule 1 Assessment
The Proposed Development does not fall within any category in Schedule 1.

Schedule 2 Assessment
The Proposed Development does fall within the relevant Column 1 of Schedule 2, Description of development under category 3 - Energy Industry, (c) Transmission of electrical energy by overhead cables. However, the Proposed Development does not meet or exceed the applicable thresholds and criteria in column 2 of Schedule 2, in that:

(i) the nominal voltage of the electrical line does not exceed 33kV;
(ii) the purpose of the line is the provision of a supply to one consumer;
(iii) it does not comprise the modification of an existing line outside the tolerances specified in the Overhead Lines (Exemption) Regulations (Northern Ireland) 1992 (S.R. 1992 No. 118).

The Proposed Development falls within the following sensitive areas:

AONB – the Proposed Development route falls within the Sperrins AONB with the exception of approximately 4.2km of the route (largely comprised of UGC) located between Strabane Main substation and the AONB boundary in the townland of Holly-Hill, approximately 3km northeast of Strabane.

European Site & ASSI – the Proposed Development spans the Owenkillew River (via an OHL), approximately 4km northeast of the village of Gortin. The Owenkillew River is designated as a Special Area of Conservation (SAC) and is therefore a European Site. It is also an ASSI.

Schedule 3 *Selection Criteria*
Regulation 8(3) of the EIA Regulations requires that:

> "When making a request for a screening determination, an applicant shall, taking into account so far as relevant the selection criteria and the available results of other environmental assessments required under Union legislation (other than legislation implementing the requirements of the Directive)…."

The selection criteria as outlined in Schedule 3 are listed under 3 headings as follows:

- Characteristics of the development
- Location of the development
- Characteristics of the potential impact

Consideration of each of the selection criteria and the relevant sub-criteria is set out below.

1.3 CHARACTERISTICS OF THE PROPOSED DEVELOPMENT

1.3.1 Background Summary

The Proposed Development will provide a new 33kV distribution power line from the existing Strabane Main substation to the proposed Curraghinalt mine; the development will be constructed and operated by NIE Networks.

Early line design undertaken by NIE Networks in conjunction with the developers of the mine project, took place in March 2016 with development of a revised route completed in December 2016 following further technical investigations and land owner discussions. This initial route design took account of the Holford Rules which are used by NIE Networks as a tool to select and assess potential route options for overhead power lines. In summary the rules cover the following headline considerations:

- *Rule 1: Avoidance, where possible, of the major areas of high amenity value.*
- *Rule 2: Avoid smaller areas of high amenity value, or scientific interest by deviation, provided that this can be done without using too many angle towers.*
- *Rule 3: Other things being equal, choose the most direct line, with no sharp changes of direction and thus with few angle towers.*
- *Rule 4: Choose tree and hill backgrounds in preference to sky backgrounds, wherever possible; and when the line has to cross a ridge, secure this opaque background as long as possible and cross obliquely when a dip in the ridge provides an opportunity. Where it does not, cross directly, preferably between belts of trees.*
- *Rule 5: Prefer moderately open valleys with woods where the apparent height of the towers will be reduced, and views of the line will be broken by trees.*
- *Rule 6: In country which is flat and sparsely planted, keep the high voltage lines as far as possible independent of smaller lines, converging routes, distribution poles and other masts, wires and cables, so as to avoid a concatenation or 'wirescape'.*
- *Rule 7: Approach urban areas through industrial zones, where they exist; and where it is necessary to cross residential and recreational land carefully consider the option of undergrounding for lines other than those of the highest voltage.*

It should be noted that while the Holford Rules were developed in consideration of Transmission level projects which employ steel pylons that are larger in height and mass, and therefore will result in greater impacts than the wooden pole structures in the Proposed Development. The route design of the Proposed Development has addressed the principles established by these Rules.

The initial route design also considered the need to maintain clearances from specified structures such as phone masts and wind turbines and to minimise crossings with other existing power lines. Further design iterations were completed following detailed field surveys (considering ecological and cultural heritage matters) and further land owner discussions.

1.3.2 Technical Description – Size & Design

A detailed description of the proposal and the operations necessary to construct the development are provided in the outline Construction Environmental Management Plan (OCEMP) accompanying this submission. The OCEMP sets the parameters in respect of environmental management of the construction process within which the detailed provisions of the final CEMP will be delivered.

As noted above, the Proposed Development comprises of 26.9km of OHL and 11km of UGC. The OHL will comprise three conductors suspended on single wood poles and double wooden poles (H poles) supported by stays at points where the overhead line route changes direction or terminates. Each wooden pole will be stout with a 200mm head diameter. The pole heights will range from 11-20m, with the H pole consisting of 2 poles braced together 1.8m apart and a steel cross arm supporting the 3 phase conductors.

The conductors will be All Aluminum Alloy Conductors (AAAC). The poles support conductors and to ensure that conductor clearances to ground meet the statutory requirements of The Electricity Safety, Quality and Continuity Regulations (Northern Ireland) 2012 which sets minimum clearances between NIE Networks overhead lines at all voltages and general obstacles, vegetation, railway property, and other power lines. The span between the poles will be generally around 100 m but can vary from 30 m to 130 m, the specific span being determined by the design objectives of locating poles within or near field boundaries and minimising environmental impacts.

The height of the poles will range from 11-20m depending on the terrain as set out in Appendix B - (Pole Schedule) in the OCEMP.

The underground cable is rated at 33kV and comprising of 3x240 mm^2 single core XLPE cables installed in 100mm diameter ducts with an additional 100m diameter duct also laid as a spare duct for communication links. The cable trench is 500mm wide by 1000mm deep.

1.3.3 Project Overview & Use of Natural Resources

The Proposed Development has a small physical footprint with regards to the construction/placement of OHL poles, representing a minimal permanent loss of land. Locations of OHL poles have been considered in the context of existing land uses, in particular with regards to agricultural land use. Where feasible, through discussions with land owners, OHL poles have been placed so as to limit impact upon agricultural lands and practices. Loss of land (due to placement of structures) is therefore low, with limited impact in terms of both agricultural land and habitats with ecological value.

Waste arising from excavations (to facilitate OHL poles and UGC trenches) will be limited as excavated material will be reinstated where possible. All excavated material for OHL poles will be used as backfill, with no imported backfill being required nor is there a need for spoil to be removed from the site. Details of the excavation footprint and foundation footprint for each pole is set out in Appendix B - (Pole Schedule) in the OCEMP. Spoil generated during excavation of the UGC trench where it occurs within the road bed is expected to be unsuitable for reuse as backfill and will be removed using a dumper and/or grab lorry. Excavated material will be drawn to a registered disposal site.

Traffic generated by the Proposed Development will only occur during the construction phase which will be temporary and localised in nature. An Overhead Line Construction Work Team consists of the following sub-teams:

- Access and Landowner engagement officer (1 person)
- Material delivery team (Maximum of 2 persons in one delivery vehicle)
- Pole erection team (1 excavator operator + 3 Linespersons)
- Stringing team (9 Linespersons + 2 tractor operators + 1 excavator operator)
- Audit Team (1 auditor + 2 persons to assist)

An Underground Cable Work Team will consist of no more than 8 persons. Team members will sign onto the Active Work Location at the beginning of each working day at the Mobile Site Office. They will assemble at their employer's place of work and travel to site. The Mobile Welfare Vehicle will be used to transport the work team to site. An additional designated vehicle may also be used as necessary to transport members of the work team and hand tools. This additional vehicle will be no larger than a 6 person light commercial vehicle.

The presence of electrical OHL infrastructure is not uncommon throughout the wider locale of the study area; OHL connections between small settlements and individual properties are common place.

As confirmed in the OCEMP, the characteristics of the Proposed Development are such that it will not result in significant use of land, soil, water or biodiversity features. There will be limited waste produced and it will not result in pollution or other nuisance.

1.3.4 Location of the Proposed Development

The Proposed Development is located primarily within a rural, upland landscape, extending from the Strabane Main Substation (which is located approximately 3km northeast of the town of Strabane, County Tyrone), to the Curraghinalt mine which is located approximately 7.5km east of the village of Gortin, County Tyrone.

The route (of the OHL and UGC) traverses largely rural, upland areas, avoiding close proximity to settlements. Small settlements, clusters and individual properties occur throughout the wider study area.

Sections of the UGC follow the alignment of the existing road network including Ballee Road, Hollyhill Road, Pine Road, Glenforan Road, Drumlea Road, Gorticashel Road, Meenadoo Road and Crockaboy Road. The OHL route traverses a wide range of habitat types (detailed within the ecological assessment) but the majority of line traverses habitat defined as *improved grassland*.

All but 4.2km of the Proposed Development is located within the Sperrins AONB. The Proposed Development spans the Owenkillew River, a designated SAC and ASSI.

1.4 CHARACTERISTICS OF THE POTENTIAL IMPACT

The characteristics of the potential impacts of the Proposed Development are considered in a number of supporting environmental screening reports. These reports are summarized below.

1.4.1 Ecology

An Ecological Impact Assessment (EcIA) has been completed in respect of the Proposed Development and is submitted in support of the Proposed Development planning application(s).

Designations – There are a number of statutory and non-statutory designated sites of international, national and local nature conservation importance within the Zone of Influence (ZoI) of the Proposed Development. These include the Owenkillew River SAC and ASSI; the River Foyle and Tributaries SAC and ASSI; the River Finn SAC in the Republic of Ireland; Owenreagh Hill Local Wildlife Site (LWS); Glenelly River LWS; and Golan Burn LWS. The route of the Proposed Development has been designed, as far as possible, to avoid designated sites. The Proposed Development has the potential to impact the water quality of designated sites where construction works are in close proximity to watercourses or at watercourse crossings. There is also potential to impact habitats during pre-construction site clearance works; construction works that will include machinery access, excavation and installation of infrastructure and also during operational maintenance works that will require the removal of vegetation to defined safety clearance distances. Extensive mitigation measures including timing of works, good practice measures, pollution prevention measures, contingency planning and method statements are set out in the OCEMP to protect watercourses.

Northern Ireland Priority Habitats (NIPH) – There are a total of six NIPH that occur along the route of the Proposed Development. These include blanket bog; upland fens, flushes and swamps; upland heath; purple moor-grass and rush pasture; wet woodland; and hedgerows. The route of the Proposed Development has been designed, as far as possible, to avoid both NIPH and the loss of habitats which are considered features of natural heritage importance. There are a number of locations along the route of the Proposed Development however where pre-construction site clearance works, construction works and operational maintenance works will have a direct impact on NIPH.

An ECoW will be present during all construction works within priority habitat to provide direction on avoidance of sensitive areas of habitat and to ensure that all mitigation measures set out in the OCEMP and Final CEMP will be implemented during construction.

Non-Priority Habitats – These include woodland, marshy grassland, semi-improved grassland, improved grassland, earth banks and scrub. The Proposed Development will have a direct impact on these habitats considered of local and site level ecological value during pre-construction site clearance works, construction works and operational maintenance works. Mitigation measures will include an Ecological Clerk of Works (ECoW) to supervise works, a reduction in Working Area, sensitive working practices and habitat reinstatement.

Invasive Non-Native Species – The non-native invasive species Japanese knotweed and Himalayan balsam can found along the route of the Proposed Development. Pre-construction site clearance, construction works and operational maintenance works have the potential to spread these invasive species in the absence of mitigation measures. An Invasive Non-Native Species Method Statement has been produced and included in the OCEMP. The method statement sets out the measures that will implemented to prevent the spread the non-native species Japanese knotweed and Himalayan balsam during the construction of the Proposed Development.

Species of Conservation Interest – There is potential for the following protected species along the route of the Proposed Development bat species, otter, marsh fritillary, pine martin, red squirrel, badger, smooth newt, common lizard and bird species. The only confirmed protected species recorded included otter, badger and marsh fritillary. Pre-construction site clearance, construction works and operational maintenance works have the potential to have a direct and indirect impact on these species in the absence of mitigation measures. An ECoW will be present during all construction works to provide direction and to ensure that all mitigation measures set out in the OCEMP and Final CEMP will be implemented during construction.

In line with the terms of regulation 8(4) of the EIA Regulations, the proposed mitigation measures are set out in the EcIA and in the OCEMP accompanying this submission. They include provision for the appointment of an Ecological Clerk of Works (ECoW). The EcIA also makes provision for appropriate compensatory measures to offset impacts upon NIPH through restoration / enhancement measures of existing peatland habitats; it is considered that no significant and/or residual impacts in respect of ecology will arise as a result of the development.

1.4.2 Ornithology

An ornithological report has been prepared in respect of the Proposed Development and is submitted in support of the project planning application(s) (as an Appendix of the EcIA).

The scope of the report including associated surveys, was agreed with DAERA prior to commencement of works, focusing on breeding wader species. Breeding wader surveys were conducted between March – June in both 2018 and 2019 within areas along the Proposed Development route, as agreed with DAERA. The objective of these surveys was to capture breeding wader activity along the corridor of the Proposed Development area and immediate environs.

Surveys did not identify the presence of breeding waders. A single snipe recorded during the late season visit in both years showed signs of breeding behaviour. The report concludes that given the findings of the survey and low occurrence of breeding waders, the Proposed Development would not have a significant effect upon breeding waders.

Pre-construction site clearance works and removal of vegetation including trees, scrub, hedgerows and shrubs have the potential to have effects on wild birds. The mitigation proposed in the OCEMP directs that such works will be completed outside the bird breeding season which extends between 01 March and 31 August inclusive. In areas of marsh fritillary presence works will have to be confined to between 01 October to 31 January in consideration of periods in which marsh fritillary larvae are above ground and vulnerable.

If pre-construction site clearance and removal of vegetation are deemed necessary within the bird breeding season an ECoW will undertake a survey to check for breeding birds immediately prior to works and confirm that breeding birds will be protected from harm during works. In the event that nesting birds are recorded during the construction phase of the Proposed Development, the ECoW will consult DAERA.

1.4.3 Cultural Heritage and Archaeology

A Cultural Heritage Screening Assessment has been prepared in respect of the Proposed Development and is submitted in support of the Proposed Development planning application(s). The following is a summary of the Screening Assessment and its conclusions.

There are no Listed Buildings located within the 200m proposed distribution 33kV power line assessment corridor. The nearest Listed Building (HB11/17/001) is located 337m from the proposed distribution 33kV power line. There is one other Listed Building located within the 1km buffer of the proposed distribution 33kV power line, located 428m from the line. Site survey and assessment has established that, due to mature tree planting, well vegetated boundaries and intervening topographical changes between these sites and the proposed distribution 33kV power line, no significant effects on Listed Buildings are predicted as a consequence of the Proposed Development.

In addition, there are no Historic Parks, Gardens and Demesnes located within the 200m proposed distribution 33kV power line assessment corridor. The nearest Historic Parks, Gardens and Demesnes site (Holyhill) is located 400m from the proposed distribution 33kV power line.

There are no Defence Heritage sites located within 200m of the proposed alignment. The nearest Defence Heritage site is located 2km from the proposed distribution 33kV power line.

There are no Battle sites located within 200m of the proposed alignment. The nearest Battle site (Battle of the Fords – Northern Crossing) is located 2.6km from the proposed distribution 33kV power line.

There are no Areas of Significant Archaeological Interest (ASAI) located within 200m of the proposed alignment. The nearest ASAI site is located 5km from the proposed distribution 33kV power line.

There are no UNESCO World Heritage Sites (Cultural) located within 200m of the proposed alignment. The nearest UNESCO World Heritage Sites is located 118km from the proposed distribution 33kV power line.

A desktop survey coupled with field inspection of the proposed scheme was undertaken in order to identify all known and protected cultural heritage sites in the vicinity/area of the Proposed Development, as well as to identify any possible previously unrecorded sites and ensure that any such sites which may be impacted are afforded appropriate mitigation measures therein. An undulation/mound was noted approximately 115m to the north of pole-set 2292 in the townland of Rousky. Field survey by two fully qualified and experienced archaeologists could not determine if this feature is archaeological in origin. This potential feature is located outside of the 200m assessment corridor and will not be directly impacted by the proposed overhead line. The undulating nature of the field in which this feature is located means that it is invisible from many close-by locations, being screened by the natural topography. In addition, views from the feature towards the proposed line are already impacted by the existing overhead line (OHL) within the same field. This feature is noteworthy, but in the absence of further (potentially intrusive) archaeological investigation it cannot be verified as archaeological. This feature will not be directly impacted by the Proposed Development.

A stone arrangement and small stone cairn was also observed in the townland of Trinamadan. The site is located between two pole-sets 40.8m away, while the line itself will be located 17m north of the nearest stone. The overhead line will not have a direct physical impact on the identified elements of the site, however it will have an indirect impact on the respective context and setting of the site within the landscape. As such, also taking due cognisance of its potential grouping value with scheduled sites this indirect impact on the potential site is considered low value with medium magnitude of impact, thereby having a potential moderate significance of effect.

The stone arrangement is a remote previously unrecorded potential archaeological site, which currently has no heritage designation or appreciable amenity value. It will not be directly impacted by the pole-sets of the proposed OHL, however the setting of this potential site will be impacted. The Value of this site of local importance is considered ‘Low’; the magnitude of the impact on the setting may be considered ‘Medium’, as there is considerable change, thus the Significance of Effect is considered ‘Moderate/ Negative’.

The placement of the closest poles maximises the distance to the stone arrangement. The pole locations have been selected in consideration of limiting the visual prominence, proximity to the stone arrangement and a badger sett. In consideration of these matters, the proposed line design is considered the best available option.

Robust mitigation measures will be put in place to lower the potential for direct impact on the newly discovered sites (even inadvertent) and on previously unrecorded sub-surface during works.

The proposed OHL development will have no direct impact on recorded cultural heritage assets, or on the newly discovered potential archaeological features (possible mound and possible stone arrangement). Predicted impacts of the proposed OHL development will be of a visual nature. However, no likely predicted significant impact is expected on the cultural heritage resource as a result of this Proposed Development.

In line with the provisions of regulation 8(4) of the EIA regulations, the report provides details of proposed measures to mitigate any potential direct impacts on previously unknown sub-surface features. Any such potential impacts are deemed to be adequately mitigated by a licensed programme of archaeological monitoring (watching brief) with appropriate evaluation, recording and reporting. It is anticipated that formal agreement (with DfC HED) and delivery of such a programme of works will be a condition of any forthcoming planning approval.

The screening assessment concludes that there are no likely predicted significant impact is expected on the cultural heritage resource as a result of this Proposed Development.

1.4.4 Landscape and Visual

A Landscape and Visual Screening Assessment is submitted in support of the Proposed Development planning application(s).

The Proposed Development is located primarily within a rural, upland context, traversing a number of Landscape Character Areas (LCAs) as defined by the Northern Ireland Regional Landscape Character Assessment. The majority of the OHL element of the route falls within the Sperrin Mountains, Glenelly Valley and South Sperrin LCAs.

The Proposed Development is also located within the Sperrins AONB with the exception of approximately 4.2km of the route.

Whilst the Proposed Development is located within a largely rural environment there are a number of small settlements, clusters and individual properties throughout the study area however, electricity poles and overhead line infrastructure are not uncharacteristic within such landscapes.

The Proposed Development is located within four landscape character areas identified as Foyle Valley, Sperrin Mountains, Glenelly Valley and South Sperrin LCAs. All LCAs have been assessed for both construction and operational phase effects as a consequence of the Proposed Development. All of the LCAs have been predicted to experience localised, temporary, adverse but not significant landscape impacts during the construction phase. During the operational phase of the Proposed Development no significant landscape effects are predicted for any of the LCAs due to the nature of the elements of the Proposed Development and the open, expansive nature of the landscapes within which they have been placed.

The Proposed Development is also largely located within the Sperrins Area of Outstanding Natural Beauty. No significant landscape effects have been predicted to occur within the AONB due to the nature of the elements of the Proposed Development and the nature of the landscapes within which they have been placed.

A total of 11 viewpoints have been assessed, for both construction and operational phases of the Proposed Development. All of the viewpoints assessed have been predicted to experience temporary, adverse but not significant visual impacts during the construction phase. During the operational phase no significant visual impacts are predicted for any of the viewpoints assessed.

Of the 208 residential properties and property clusters assessed, 16Nr. are predicted to experience a Minor to Moderate visual impact during the operational phase of the Proposed Development. Such impacts have been assessed as not significant as views from these properties are often expansive in nature and the Proposed Development is readily absorbed within the available views.

No significant visual impacts have been predicted to occur for Way marked trails such as the Ulster way, Vinegar Hill Loop or for scenic trails such as the Central Sperrins Scenic Route or for the numerous cycling trails that occur within the study area.

In conclusion the surrounding landscape and its visual resources have the ability to accommodate the changes associated with this type of development.

1.4.5 Noise

The Proposed Development has the potential to generate noise impacts during the construction phase. Use of plant and machinery in excavation for pole sets and UGC trenches and the transportation of plant equipment and materials will all generate noise levels above normal background levels.

Construction works will however be of a temporary nature and limited to the environs and the immediate locality of works (i.e. pole locations and UGC cable trenches). Works will be subject to the provisions of a Construction Environmental Management Plan (CEMP) which includes best practice for construction works including limitations of working hours. An outline CEMP is included in support of the application and it sets the parameters in respect of noise management within which the detailed provisions of the final CEMP will be delivered.

The Proposed Development will have no significant noise impact during the operational phase. No significant and/or residual impacts in respect of noise will arise as a result of the development.

1.4.6 Traffic and Transportation

The Proposed Development has the potential to generate impacts on traffic movements and access to the existing road network, during the construction phase due to the transportation of plant equipment and materials. The requirement for trenching along the existing road network for the installation of the UGC has the potential to impact upon access.

Such impacts will however be of a temporary nature and limited to the environs and the locality of works. An outline CEMP is included in support of the application and it sets the parameters in respect of traffic management within which the detailed provisions of the final CEMP will be delivered. Works shall be subject to the provisions of the Final CEMP which will include best practice for construction works including traffic management, implementation of road notices, traffic lights, barriers, pedestrian ways etc. In line with established practice the detailed traffic management measures as set out in the Final CEMP will be agreed with the Department for Infrastructure (DfI) Roads Service and the Police Traffic Branch prior to the commencement of works.

Traffic generated by the Proposed Development will only occur during the construction phase which will be temporary and localised in nature. An Overhead Line Construction Work Team consists of the following sub-teams:

- Access and Landowner engagement officer (1 person)
- Material delivery team (Maximum of 2 persons in one delivery vehicle)
- Pole erection team (1 excavator operator + 3 Linespersons)
- Stringing team (9 Linespersons + 2 tractor operators + 1 excavator operator)
- Audit Team (1 auditor + 2 persons to assist)

An Underground Cable Work Team will consist of no more than 8 persons. Team members will sign onto the Active Work Location at the beginning of each working day at the Mobile Site Office. They will assemble at their employer's place of work and travel to site. The Mobile Welfare Vehicle will be used to transport the work team to site. An additional designated vehicle may also be used as necessary to transport members of the work team and hand tools. This additional vehicle will be no larger than a typical 6 person light commercial vehicle.

Operation and maintenance traffic will only include light commercial vehicles and is estimated to consist of an average of 6 trips per year to various points along the 37.9km route.

Should the development be required to be decommissioned, the traffic levels are expected to be similar to those required for the construction phase. Decommissioning impacts will be the same or lesser than the impact of construction.

The Proposed Development will have no significant impact upon transportation during the operational phase or in the event of the development being de-commissioned. No significant and/or residual impacts upon traffic or transportation will arise as a result of the development.

1.4.7 Air Quality

The Proposed Development has the potential to generate impacts upon local air quality during the construction phase due to an increase in plant equipment and material transportation and dust arising from excavation works. However such impacts will be of a temporary nature and limited to the close environs and the locality of works. All works will be carried out in accordance with established best practice for construction works including traffic management and implementation of dust control measures.

The Proposed Development will have no significant impact upon air quality.

No significant and/or residual impacts upon air quality are likely as a result of the development.

1.4.8 Water Quality, Fisheries and Flood Risk

In the absence of appropriate mitigation, the Proposed Development has the potential to generate impacts upon water quality and fisheries, arising at the construction phase through excavations in and around the watercourses, including instances where the proposed OHL route is intended to span a watercourse or where the UGC route is proposed to cross a watercourse. Spillages of construction related materials or substances such as oils or cement or excavated materials, into a watercourse, also represent a potential impact upon water quality during the construction phase.

An OCEMP is included in support of the application and it sets the parameters in respect of water quality, fisheries and aquatic ecology, within which the detailed provisions of the final CEMP will be delivered. Construction works shall be subject to the provisions of a Final CEMP which includes best practice for works in and around watercourses taking account of matters such as: structural integrity, site drainage, foul water disposal, silt management, fuels and material storage, monitoring, pollution prevention and emergency planning.

Consideration has been given to the crossings of all watercourses along the length of the route (including UGC) following completion a detailed engineering survey; appropriate, detailed methodologies are provided for each water crossing within the OCEMP.

The Water Quality Screening Assessment outlines the potential effects of the Proposed Development on the water quality and WFD status of the receiving watercourses within the Glenmornan and Owenkillew catchments. It provides relevant baseline information on water quality and WFD status enabling the potential effects to be identified and evaluated.

It has been determined that potential impacts are primarily related to the release of sediment, oil and other chemicals to the receiving watercourses, the direct hydromorphological impact on watercourses and the potential for inadequate sewage/welfare facilities to cause pollution. These potential impacts from the Proposed Development were assessed for the construction, operational and decommissioning phases of the development. In terms of adverse impacts on the water quality the significance of the impacts were assessed to be negligible to very large adverse in the absence of adequate mitigation measures.

A series of specific mitigation measures have been designed to avoid adverse effects on water quality with regard to the construction phase; the operational and decommissioning phases are expected to have no impact.

It is concluded that, provided with the mitigation measures are implemented as specified, construction, operation and decommissioning of the proposed UGC and OHL will have a negligible impact on water quality of the water bodies traversed and therefore will not result in a risk to the achievement of the WFD objectives for these water bodies and their water dependent protected areas.

The Fisheries & Aquatic Ecology Screening Assessment outlines the potential effects of the UGC installation on the fish stocks and fish habitats of the receiving watercourses within the Glenmornan and Owenkillew catchments. It also considers potential impacts of the OHL installation at two highly sensitive watercourses, the Glenelly and Owenkillew. It provides relevant baseline information on fisheries and aquatic ecological health enabling the potential effects to be identified and evaluated.

It has been determined that potential impacts are primarily related to sediment release and entrainment and the release of other pollutants to the receiving watercourses with related effects on fish stocks and the wider

stream ecosystem. Without mitigation it is considered that these impacts have the potential to be of Major Magnitude and of Very Large Significance depending on the sensitivity of individual watercourses.
A series of specific mitigation measures have been designed to avoid adverse effects on fisheries with regard to the construction phase; the operational and decommissioning phases are expected to have no impact.

It is concluded that, with the mitigation measures being implemented as specified, 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 for streams directly downstream.

In respect of flood risk, Planning Policy Statement 15 – Planning & Flood Risk (PPS15) sets out the Department's planning policies to minimise risk to people, property and the environment. PPS15 adopts a precautionary approach to development decisions which takes account of climate change and is supportive of the well-being and safety of people. PPS15 contains five policies that planning authorities must take into account in assessing proposals for development that may be at risk of flooding or that have implications for flooding elsewhere.

In line with the principles set out in Planning Policy Statement 15, a 1% Annual Exceedance Probability (AEP) event should be considered when assessing the flood risk from rivers. Detailed flood maps for the area are not available so indicative maps can be used from Flood Maps (NI) to identify general areas that are prone to river flooding.

The Proposed Development including placement of each pole structure has been reviewed against present day 1% AEP floodplains of the watercourses along the route. The Proposed Development in association with the strategic flood plain is presented in Figures NI1851_001 (Pages 1 – 4), accompanying this submission.

None of the pole structures are located within the strategic flood plain (9 in total are located within 5m); the Proposed Development is not considered to represent a flood risk. None of the works involved in either the construction or potential de-commissioning of the development will impact on the flood plain or increase flood risk. The development will not impact on flood risk during the operational phase.

1.4.9 Electric and Magnetic Fields

The Proposed Development comprises of a 33 kV OHL and UGC which will generate electric and magnetic fields (EMFs). EMFs are also produced wherever electricity is generated, transmitted or used. Public exposure to power-frequency EMFs comes from a range of sources including household wiring and appliances, low-voltage distribution power lines or underground cables, and high-voltage transmission power lines or underground cables.

EMF public health protection guidelines have been published by the International Commission on Non-Ionizing Radiation Protection (ICNIRP, 1998). They form the basis of an EC Recommendation and have been adopted in the UK, on the basis of advice from the government's scientific health advisors, in the form of a Code of Practice agreed with the electricity industry. This specifies reference levels that should not be exceeded in order to ensure public health protection. Compliance with the ICNIRP guidelines and Code of Practice is required by the Strategic Planning Policy Statement for Northern Ireland, 2015:

"*In relation to power lines current Government policy is that exposures to powerline Electro Magnet Fields (EMFs) should comply with the 1998 International Commission on Non-Ionizing Radiation Protection (ICNIRP) Guidelines. A voluntary Code of Practice Power Lines: Control of Microshocks and other indirect effects of public exposure to electric fields A voluntary Code of Practice (DECC, July 2013) has been agreed by the Department of Energy and Climate Change, the Department of Health, the Energy Networks Association, the Welsh Government, the Scottish Government, and the Northern Ireland Executive. It sets out what is regarded as compliance with those aspects of the EMF exposure guidelines that relate to indirect effects as far as the electricity system is concerned. Further Government policies relating to EMFs from overhead power lines, advise that as a precautionary measure they should, where reasonable, have optimum phasing. This is the subject of a companion Code of Practice "Optimum phasing of high voltage double-circuit power lines". This Code of Practice applies in England, Wales, Scotland, and Northern Ireland.*

Any proposal for the development of new power lines should comply with the 1998 International Commission on Non-Ionizing Radiation Protection (ICNIRP)." (SPPS, paragraphs 6.249 & 6.250)

On the basis of the guidance for EMFs for electricity infrastructure adopted in the UK and the published evidence to support that, the levels of power-frequency EMFs from the Proposed Development will be well below the guideline public exposure reference levels set to protect health and as such, the Proposed Development will have no significant related impact during the operational phase.

1.4.10 Transboundary Considerations

The potential for the Proposed Development to give rise to transboundary impacts has been considered in respect of designated sites, water quality and visual impact.

The analysis has concluded that:

- The project is hydrologically linked to the River Finn SAC via a 5 km downstream pathway. Potential water quality effects might occur on this designated site through the same pathways for the River Foyle and Tributaries SAC. At the construction stage, there is a possibility that suspended sediments and/or contaminants may enter the aquatic environment during activities associated with the crossing of watercourses. Surface waters could possibly carry those suspended sediments or pollutants downstream into the River Finn SAC.
- Extensive mitigation measures to protect watercourses from direct and indirect effects associated with the Proposed Development are detailed in the Water Quality Screening Assessment and the Fisheries & Aquatic Ecology Screening Assessment and are set out in the OCEMP. The OCEMP will provide a framework from which a final CEMP will be developed and will be adhered to by the appointed contractor. The OCEMP and final CEMP sets out the standards that will be implemented throughout the life of the Proposed Development; provides full details of the construction and operation of the project; provides construction method statements at watercourse crossings; sets out environmental management measures that will be put in place to mitigate environmental effects; and provides details of audit procedures.
- The implementation of the mitigation measures to protect watercourses from direct and indirect effects associated with the Proposed Development, will reduce the likely significance of effects on the River Foyle and Tributaries SAC and River Finn SAC to No Significant Effect.
- The Water Quality Screening Assessment confirms that the study area associated with the Proposed Development is within the Upper Foyle Catchment. The Foyle catchment is a cross border catchment and therefore the hydrological link extends to areas beyond the international border in Lough Foyle. However the residual impact after the implementation of the mitigation measures is assessed as negligible and therefore there will be no potential for significant transboundary effects on water quality as a result of the Proposed Development.
- The Landscape and Visual Screening Assessment has concluded that while, in theory, the study area associated with the Proposed Development as identified in the Zone of Theoretical Influence (Appendix A; Figure 1.3) does extend to areas beyond the international border, to the north of Strabane, the site survey and assessment works have concluded that the Proposed Development is not visible over that distance in the wider landscape.

It is therefore confirmed that no significant transboundary landscape or visual effects will occur as a result of the Proposed Development.

1.4.11 Cumulative Effects

The Proposed Development seeks to provide a connection to the proposed Curraghinalt mine. In consideration of the potential impacts outlined above and the detailed assessments undertaken in support of the planning application(s), it is concluded that there are no cumulative effects related to the Curraghinalt development.

The Landscape and Visual Screening Assessment has assessed the potential cumulative impact of the Proposed Development with the mine proposal. It is considered that there will be a direct effect upon those portions of the South Sperrin LCA affected by the proposed Curraghinalt project where the developments will occur in close proximity in the vicinity of Crockanboy Road. However the south-eastern extent of the Proposed Development, approximately 3km of cable route, is proposed to be underground, which negates the likelihood for inter-visibility of the two developments in combined or successive views. The magnitude of cumulative impact associated with the Proposed Development in combination with the proposed Curraghinalt project will therefore be negligible and insignificant.

There are a number of wind farms such as Owenreagh and Craignagpple, located within the locale of Proposed Development. Existing electricity poles and overhead line infrastructure are also present throughout the area

and as such are not uncharacteristic. The Landscape and Visual Screening Assessment has considered the potential cumulative impact of the development in combination with the approved windfarms and the proposed Curraghinalt project and concluded that the magnitude of cumulative impact associated with the Proposed Development and the proposed Curraghinalt project in combination with the approved wind turbines will be direct and negligible, which in this case would give rise to a minor and insignificant cumulative effect on the landscape.

It is not considered that the potential for likely significant effects will arise in culmination with other development.

1.5 DECOMMISSIONING

Once operational, the Proposed Development will become a network asset and form part of the wider network. Decommissioning is not envisaged, however should the Proposed Development be required to be decommissioned, all associated structures and materials would be recovered and items recycled with the site returned to its original use. Decommissioning impacts will be the same or less than the impact of construction.

1.6 CONCLUSION

Having considered the likely effects associated with the Proposed Development, it is concluded that significant effects on the environment will not arise.

The Proposed Development does not comprise EIA development and no Environmental Statement should be required to accompany the planning application(s). The aforementioned environmental screening reports submitted in support of the planning application(s), address the environmental impacts, associated with the Proposed Development and conclude that there are no predicted impacts that would warrant a determination that the Proposed Development is EIA development.

It is requested that the planning authority provide a screening determination in accordance with the terms of Regulations 8 and 12 of the EIA regulations within the statutory 4 week period.

Should you require any further information or clarification in respect of this submission, please do not hesitate to contact me.

Yours sincerely,
for RPS Group Limited
on behalf of NIE Networks

Seamus Fay
Director - Planning
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Enclosures:

- *Landscape and Visual Screening Assessment* - 4no. copies;
- *Cultural Heritage Screening Assessment* - 4no. copies;
- *Water Quality Screening Assessment* - 4no. copies;
- *Screening Assessment of Potential Effects of the Curraghinalt 33kV Connection on Fisheries and Aquatic Ecological Quality in Streams of the Glenmoran and Owenkillew River Catchments* - 4no. copies;
- *Ecological Impact Assessment* - 4no. copies;
- *Ecological Survey for Badger* – 4no. copies;*
- *Curraghinalt 33kV Connection with 1% AEP Strategic Flood Extent* - Figures NI1851_001 (Pages 1 – 4) - 4no*. copies;*
- *Outline Construction Environmental Management Plan (OCEMP)* - 4no. copies.

*Confidential report – not be made publicly available.