Irish Water Report

Environmental Impact Assessment Screening Report - Ballybofey - Stranorlar Waste Water Discharge Licence Review Application

Contents

1. Introduction

This Environmental Impact Assessment (EIA) Screening Report has been prepared by Nicholas O'Dwyer Ltd., on behalf of Irish Water to form an opinion as to whether or not the proposed operational activities from the Ballybofey-Stranorlar agglomeration (*i.e.,* the operational discharges from a 9,200 p.e. Ballybofey-Stranorlar WwTW in so far as they relate to the risk of environmental pollution of the receiving waters, (River Finn (Donegal)) should be subject to Environmental Impact Assessment (EIA) and if so, whether an Environmental Impact Assessment Report (EIAR) should be prepared in respect of it.

2. Background

The twin-towns of Ballybofey and Stranorlar are located on the West and East banks of the River Finn respectively, in Co Donegal. They are situated on the N15 National Primary route, approximately 30 km to the North East of Donegal town in the centre of the county. The agglomeration is spread over 15 no. townlands namely, Glebe, Cappry, Ironworks, Stranorlar, Ballybofey, Admiran, Drumboe Lower, Drumboe Upper, Magherapaste, Tircallan, Greenhill, Navenny, Dunwiley, Mullandrait and Dreenan.

The influent load to the Ballybofey-Stranorlar WwTP is primarily domestic wastewater. There are no active IPC or waste licensed activities discharging to the agglomeration or to the River Finn upstream or downstream of the agglomeration. There are 9 no. licensed Trade Effluent activities (namely 1 no. industrial, 2 no. commercial and 6 no. relating to food service establishments) discharging to the agglomeration sewers under Section 16 of the Local Government (Water Pollution) Acts 1977.

At the time of the EPA's determination and granting of D0120-01, the WwTP serving both Ballybofey and Stranorlar, located at NGR 214646E, 394775N, had a capacity of 4,000 p.e. Treated effluent from the WwTP discharged to the River Finn at NGR 214908E 394443N *ca.* 440 metres South East of the treatment plant. The WwTP was organically overloaded at the time and therefore upgrades to the WwTP were needed to increase the capacity of the plant to cater for current and future design loadings.

An upgrade of the WwTP to 9,200 p.e commenced in March 2018 and the plant was commissioned and fully operational in January 2020. The plant provides secondary treatment with phosphorous removal to the standards required by the Urban Wastewater Treatment (UWWT) Regulation (S.I. No. 254 of 2001).

The objectives of the WwTP upgrade works were to increase the treatment capacity of the plant to meet the current needs of the towns and to allow for future growth (9,200 p.e. 10 year horizon, secondary treatment) and to ensure that wastewater from the agglomeration is treated and discharged in compliance with the Urban Wastewater Treatment Regulations 2001, and the conditions as set out in the WWDL D0120-01 issued by the EPA in December 2010, thereby improving the water quality of the River Finn and the aquatic environment.

There are 3 other Projects which are currently being progressed by Irish Water, as follows:

- St. Joseph's Pumping Station Outfall and Rising Main Project
- Navenny Pumping Station, Rising Main and Chestnut Road Sewer Upgrades Project
- Meetinghouse Lane to Ballybofey Bridge Sewer Upgrade Project

These Projects, which were granted planning by Donegal Co. Co. in December 2021, are due to commence construction in Q1 2023, with an estimated 18-month construction programme anticipated.

Completion of all these Projects will (i) ensure that there is sufficient capacity at the Ballybofey-Stranorlar WwTP, (ii) ensure the works meet the requirements of WWDL D0120-01, (iii) help effectively manage the service capacity of the network, (iv) will future proof Ballybofey-Stranorlar and the surrounds for wastewater services and (v) will ensure that the Ballybofey-Stranorlar WwTW operates in a manner that supports the achievement of the receiving waterbodies (River Finn) objectives under the Water Framework Directive, and that Irish Water's obligations under the Birds and Habitats Directives, and all applicable Directives and National Regulations, are met.

Ultimately, the completion of the Ballybofey-Stranorlar WwTP and Networks Projects will ensure that the environmental requirements of the WWDA Regulations can be met.

3. Ballybofey Stranorlar Agglomeration Operational Discharges

The waste water works under this WWDL review consists of a WwTP (design capacity 9,200 p.e.) at Stranorlar Townland (NGR 214646E, 394775E); a Primary Discharge (SW001) which discharges to the River Finn (same location as D0120-01); 5 no. overflows which will act as Dual Function Overflows (*i.e.*, an overflow which can act as a Storm Water Overflow (SWO) or as an Emergency Overflow (EO) depending on the event); and 4 no. overflows which will act as SWOs.

A description of the operational discharges is provided below:

Primary Discharge (SW001)

Treated Effluent is discharged *via* the existing outfall pipe NGR 214908E, 394443N into the receiving waters, the River Finn (Finn (Donegal)_060).

The WwTP design effluent standards (as per D0120-01) are provided in **Table 3.1** below:

Table 3.1 – Design effluent standards (as per D0120-01)

Parameter	ELVs as per D0120-01
cBOD	25mg/l
COD	125mg/l
Suspended Solids	35mg/l
Total Ammonia (as N)	2mg/l
Ortho-P (as P)	1mg/
pH	6.0 - 9.0

These standards as set by the EPA in 2010, and which were subsequently re-assessed in 2022 by Irish Water to ensure they were suitable for an increased load (*i.e.*, 9,200 p.e. WwTP), give effect to the principle of the Combined Approach as defined in Waste Water Discharge (Authorisation) Regulations, 2007 to 2020 in that they accommodate the Urban Waste Water Regulations, and the status and objectives of the receiving waterbody of the primary discharge, the Finn River.

Secondary Discharges

There are no secondary discharge points associated with the waste water works.

Overflows:

There will be 9 no. overflows within the agglomeration. 5 no. overflows will act as Dual Function Overflows and 4 no. overflows will act as Storm Water Overflows.

All SWO have been designed and will operate to meet the definition of '*Storm Water Overflow'* as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended, and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995.

All overflows discharge to the River Finn (Finn (Donegal)_060) apart from SW004 and SW009 which both discharge to the Finn (Donegal)_070.

Table 3.2 below lists the overflows associated with this licence review.

Table 3.2 – Overflows Associated with WWDL Review

Overflow	Asset	Type	Coords NGR	Receiving Waterbody
SW003*	Located at Villa Rose, Back Lane Ballybofey	SWO	214061E 394837N	Finn (Donegal)_060
SW004*	Fern View / Woodlawn SWO	SWO	215178E 394996N	Finn (Donegal)_070
SW006*	WwTP Storm Tank Overflow	SWO	214908E 394443N	Finn (Donegal)_060
SW007	WwTP Storm Pumps u/s of inlet works	SWO/EO	214908E 394443N	Finn (Donegal)_060
SW008	Main Street SWO	SWO	214474E 394835N	Finn (Donegal)_060
SW009	St Josephs PS	SWO/EO	215592E 394631N	Finn (Donegal)_070
SW010	Navenny PS	SWO/EO	214382E 394251N	Finn (Donegal)_060
SW011	Glenfinn PS	SWO/EO	TBC**	Finn (Donegal)_060
SW012	Drumboe Ave. PS	SWO/EO	214470E 395059N	Finn (Donegal)_060

*Existing overflows as per D0120-01. Note that the above coords are as surveyed under the IW's SWO Assessment Programme and coordinates have been updated as required.
**Coordinates for SW011 will be forwarded to the agency as the exact discharge location is currently being investigated.

4. Key Measures to Avoid/Prevent Significant Adverse Effects

The upgraded Waste Water Treatment Works at Ballybofey-Stranorlar will incorporate the following key measures to prevent unintended discharges to the Finn River:

- SWOs have been designed to meet the definition of '*Storm Water Overflow'* as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995.
- There are two storm tanks at the upgraded WwTP. The existing tank has capacity for 446m^3 stormwater storage, and the newly constructed tank has capacity for 495m^3 allowing for a total storm water storage of 941m^3 stormwater storage.
- Navenny & St. Josephs Pumping Stations allow for the provision for plug in mobile generator. Standby generator capable of automatic self-maintained operations under mains failure and mains restorations conditions
- Installation of a Programmable Logic Control (PLC) Control System, any process or plant critical alarms will be hardwired between plant installations. The PLC system will communicate with each other and with the SCADA system.
- Installation of a new SCADA package, providing continuous real-time monitoring, control, and data acquisition of all plant associated with WwTP.
- Each Pumping Station will make provision for high-level and low-level alarms to be transmitted to the SCADA system.
- The pumps will be of a non-blocking design, suitable for pumping and chopping media containing high levels of: solids, sludge, rags, fats, hair-balls, wood, grit, stones and fibrous or stringy material.
- SCADA system will be capable of providing an Email or SMS notification in the event of an alarm being activated
- Alarms for pump failures and/or power outages at Navenny & St. Joseph's Pumping Stations to be fed to SCADA with alarms sent to operators.
- Storm Water Overflows monitored with electromagnetic flow meters from Navenny & St Joseph's Pumping Stations.

5. Compliance with EU & National Legisation

The effluent discharge standards as set by the EPA under D0120-01, and which were subsequently re-assessed in 2022 by Irish Water to ensure they were suitable for an increased load (*i.e.,* 9,200 p.e. WwTP), will ensure that there is no environmental risk posed to the receiving water environment as a result of the operational discharges from the agglomeration.

The Ballybofey-Stranorlar WwTW will operate to ensure that the emissions from the agglomeration will comply with, and will not result in the contravention of, EU and National legislation. Please refer to **Attachment B.6** *Compliance with EU Directives / National Regulations* of the WWDA application, for further confirmation of same.

6. Description of the Receiving Water Environment

The operational discharges from the Ballybofey-Stranorlar agglomeration discharge to the River Finn (Donegal) which is part of the Foyle Catchment (Hydrometric Area 01). This catchment includes the area drained by the River Foyle and by all streams entering tidal water between Culmore Point, Co. Derry and Coolkeeragh, Co. Derry. This is a cross border catchment with a surface area of 2,919km², 914km² of which is located within the Republic of Ireland (RoI).

The draft 3rd Cycle Catchment Report (2021) for this Hydrometric Area (HA), determined that for At Risk river waterbodies excess nutrients and chemical impacts remain the most prevalent issues, along with morphology, organic pollution, and hydrology. Pressures identified affecting the greatest number of waterbodies within HA 01 include agriculture, followed by forestry, peat, urban wastewater, hydromorphology, domestic waste water, urban run-off, and industry.

Although the Ballybofey-Stranorlar agglomeration, and specifically the SWOs, are listed as a significant pressure in At Risk waterbodies (namely the Finn (Donegal)_060) in the draft 3rd cycle catchment assessment, the report makes note that "*The Ballybofey-Stranorlar (D0120) agglomeration, which is impacting Finn (Donegal)_060, is due to be upgraded in 2022*".

The WFD status of the Finn (Donegal)_060 is Poor (WFD 2013-2018) and At Risk of not achieving Good water quality status by 2027. Further downstream the Finn (Donegal)_060 flows to the Finn (Donegal)_070 and then to the Finn (Donegal)_080 which are both Poor status. The River Finn then flows into the River Mourne at the town of Strabane, a town in Tyrone, Northern Ireland, approximately 22km downstream.

The Finn (Donegal)_060 waterbody trends at Station RS01F010700 (Finn (Donegal)_Ballybofey Br) for Ammonia is Downwards (*i.e*., decreasing concentrations). There is no trend cited for Ortho-P at this station. At Station RS01F010800 (Br. S of Stranorlar) downstream of the operational discharges, the trend for Ammonia is Upwards (*i.e.,* increasing concentrations). In terms of Ortho-P at this station, the trend is Downwards (*i.e*., decreasing concentrations). For 2013-2018, the WFD status for both Ammonium and Ortho-P is High.

The EPA undertake biological monitoring of the River Finn at various locations. Upstream of the primary discharge at RS01F010600 (*ca.* 3.8 km upstream of the primary discharge), the 2019 monitoring reported a Q value of 3-4 (Moderate). Downstream of the primary discharge at RS01F010800 (*ca.* 0.4km), the 2020 monitoring reported a Q value of 3 (Poor).

Recent ambient monitoring data for River Finn (Donegal)_060 (2020-2022) is shown in the tables below.

Table 6.1 - 2020-2022 Ambient Monitoring – *ca.* 1.2km Upstream of the Primary Discharge Location at RS01F010700 (Data Source: Catchments.ie)

Parameter	pH	BOD (mg/l)	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (% sat)	SS (mg/l)	Temp (°C)	TN (mg/l)
Number of Samples	26	25	25	25	26	25	26	25
Mean Result	**7.04**	**1.15**	**0.042**	**0.033**	**95.25**	**4.94**	**11.05**	**0.75**
Max Result	7.50	3.00	0.120	0.343	106.9	16.00	19.30	1.87
Min Result	6.70	0.71	0.014	0.008	80.60	4.24	4.90	0.24

Parameter	pH	BOD (mg/l)	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (% sat)	SS (mg/l)	Temp (°C)	TN (mg/l)
Mean EQS as per S.I. No. 77/2019 Good Status *	*6-9*	*≤1.5*	*≤ 0.035*	*≤0.065*				
Mean EQS as per S.I. No. 77/2019 High Status *	*6-9*	*≤1.3*	*≤ 0.025*	*≤0.040*				
95%ile EQS as per S.I. No. 77/2019 Good Status *	*6-9*	*≤2.6*	*≤ 0.075*	*≤0.14*				
95%ile EQS as per S.I. No. 77/2019 High Status *	*6-9*	*≤2.2*	*≤ 0.045*	*≤0.09*				
*Overall compliance with relevant **Mean EQS Good Status*** *	Yes	Yes	**No**	Yes				
*Overall compliance with relevant **Mean EQS High Status*** *	Yes	Yes	**No**	Yes				
*Overall compliance with relevant **95%ile EQS Good Status*** *	Yes	Yes	Yes	Yes				
*Overall compliance with relevant **95%ile EQS High Status*** *	Yes	Yes	Yes	Yes				

* EQS under S.I. No. 77 of 2019
Note: Where data was reported as less than the limit of detection, LOD/2 was applied

Table 6.2 - 2020-2022 Ambient Monitoring – *ca*. 0.4km Downstream of the Primary Discharge Location at RS01F010800 (Data Source: Catchments.ie)

Parameter	pH	BOD (mg/l)	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (% sat)	SS (mg/l)	Temp (°C)	TN (mg/l)
Number of Samples	39	38	38	38	39	26	39	25
Mean Result	**7.01**	**1.43**	**0.035**	**0.027**	**96.82**	**5.11**	**11.17**	**0.82**

Parameter	pH	BOD (mg/l)	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (% sat)	SS (mg/l)	Temp (°C)	TN (mg/l)
Max Result	7.90	7.30	0.220	0.147	108.10	20.00	19.20	1.52
Min Result	6.50	0.71	0.007	0.011	83.60	4.24	3.30	0.44
*Mean EQS as per S.I. No. 77/2019 Good Status **	*6-9*	*≤1.5*	*≤ 0.035*	*≤0.065*				
*Mean EQS as per S.I. No. 77/2019 High Status **	*6-9*	*≤1.3*	*≤ 0.025*	*≤0.040*				
*95%ile EQS as per S.I. No. 77/2019 Good Status **	*6-9*	*≤2.6*	*≤ 0.075*	*≤0.14*				
*95%ile EQS as per S.I. No. 77/2019 High Status **	*6-9*	*≤2.2*	*≤ 0.045*	*≤0.09*				
*Overall compliance with relevant **Mean EQS Good Status **	Yes	Yes	**No**	Yes				
*Overall compliance with relevant **Mean EQS High Status **	Yes	**No**	**No**	Yes				
*Overall compliance with relevant **95%ile EQS Good Status **	Yes	Yes	Yes	Yes				
*Overall compliance with relevant **95%ile EQS High Status **	Yes	Yes	Yes	Yes				

* EQS under S.I. No. 77 of 2019
Note: Where data was reported as less than the limit of detection, LOD/2 was applied

Based on the Irish Water Compliance Data for 2020 – 2022 at RS01F010700 (*ca.* 1.2km u/s of the WwTP discharges) and the downstream ambient monitoring location RS01F010800 (*ca.* 0.4km d/s at which is downstream of all operational discharges), it is noted that the operational discharges do not have a significant observable impact on the water quality of the receiving waterbody. The mean concentration for Ammonia is within the required EQSs for Good and High status (mean and 95%ile) both upstream and downstream. In relation to BOD, the mean upstream (1.15mg/l) is within the required EQSs for Good and High status (mean and 95%ile). The mean BOD downstream is 1.43mg/l, therefore the mean High status EQS of ≤1.3 is not met. The mean Good status EQS and the 95%ile EQS for Good and High status are met however. In terms of Ortho-P, the mean upstream concentration is 0.042mg/l and the mean downstream is 0.035mg/l. Therefore, the mean Good and High status EQS for Ortho-P are not met upstream or downstream of the operational discharges but the 95%ile Good and High status EQS are met.

There are no nutrient sensitive waters, designated shellfish area, drinking water abstraction points in proximity to the Ballybofey-Stranorlar agglomeration, or downstream of its operational discharges.

The River Finn is designated as a *"Salmonid Water*" under the European Commission's (Quality of Salmonid waters) Regulations, 1988. The Finn and its tributary the Reelin are probably the most prolific salmon and grilse rivers in Donegal, and throughout the Foyle catchment. The River is also designated as a SAC, of which Atlantic Salmon are a water dependent Qualifying Interest. The completed upgrade works at the WwTP to meet the ELVs as per D0120-01, and the completion of the proposed Networks Projects will contribute towards compliance with the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019), and will assist in the efforts to achieve Good WFD Status by 2027, and also in maintaining the current High status for both Ammonium and Ortho-P. This will provide a high level of protection to the River Finn and the Atlantic Salmon contained therein; thereby ensuring that the operational discharges do not cause a breach of the European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I No. 203 of 1988) in the River Finn.

The River Finn is not a designated pearl mussel habitat under the European Objectives (Freshwater Pearl Mussel) Regulation, 2009. There is a record for pearl mussel being found on the River Finn downstream of the Castlefinn WwTP's primary discharge, which is *ca*. 14.5km downstream of the Ballybofey-Stranorlar primary discharge point. A single shell fragment was found at the site in 1993/94. There were no other pearl mussels found anywhere in the River Finn (Donegal), even after extensive searches.

There are no NHAs or pNHA downstream of the operational discharges. The nearest NHA is the Meenagarranroe Bog NHA (Site code: 002437) which is located *ca*. 6.2 km South West of the primary discharge point, however no pathway exists by which the operational discharges could impact upon this site. The closest NHA/pNHA downstream of the operational discharges is the River Foyle, Mongavlin to Carrigans pNHA (Site code: 002067) which is located a significant distance (*ca.* 29km) downstream of the operational discharges and is considered to be too remote to be influenced by the Ballybofey-Stranorlar operational discharges.

The operational discharges from the Ballybofey-Stranorlar WwTP discharge directly to the River Finn SAC (Site code:002301). The River Finn SAC has a number of water dependent Qualifying Interests *i.e*., [3110] Oligotrophic waters containing very few minerals of sandy plains, [1106] Salmon (*Salmo salar*) and [1355] Otter (*Lutra lutra*). Further downstream (*ca*. 16km) where the UK border meets the River Finn upstream of Clady, is a SAC designated in the UK, namely the River Foyle & Tributaries SAC. This SAC includes the River Foyle and its tributaries *i.e.,* that part of the River Finn which lies within Northern Ireland. The water dependent Qualifying Interests of this site includes Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation [3260], Otter (*Lutra lutra*) and Salmon (*Salmo salar*). The WAC calculations

which support this application show that the receiving Finn (Donegal)_060 river has adequate assimilative capacity for the primary discharge (9,200 p.e load) based on notionally clean river background concentrations to meet the 95%ile High EQS status for BOD, Ammonia and Ortho-P. The completed upgrade works at the WwTP to meet the ELVs as per D0120-01 and the completion of the proposed Networks Projects, which includes for the upgrade of St Joseph's Pumping Station and the Navenny Pumping Station, network improvements, and the upgrade of Storm Water Overflows to meet the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflow*s', 1995., will contribute towards compliance with the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019), and will assist in the efforts to achieve to Good WFD Status by 2027, and in maintaining the current High status for both Ammonium and Ortho-P. All of which will provide a high level of protection to the River Finn SAC and the downstream River Foyle & Tributaries SAC and their water dependent Qualifying Interests.

An AA Screening Report which supported the 2016 planning application for the Ballybofey-Stranorlar Sewerage Scheme, and the subsequent Donegal County Council Appropriate Assessment Screening (13th September 2016), concluded and determined respectively, that it can be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development (in this case the construction and operation of the Ballybofey-Stranorlar Sewerage Scheme), individually or in combination with other plans and projects, would be likely to have a significant effect on the River Finn SAC, or indeed any other European site.

Refer to **Attachment D.2.2** AA Screening Report, July 2016, and **Attachment B.3.6a** for Donegal County Council Planners Report, and specifically their Screening Determination for further details.

7. Waste Assimilative Capacity

Waste Assimilative Capacity (WAC) calculations have been completed to inform this WWDL review process and to show the impact of the primary discharge from the WwTP on the receiving waterbody, the River Finn (Donegal)_060).

The calculations were based on the 95%ile flow in the river, 1.32m^3/s, (as provided by the EPA Hydrometric and Groundwater Section), the projected normal waste water loading of 2,070 m^3/d, and the proposed operational standards/ELVs (as per D0120-01). The calculations were based on the actual background mean concentrations at Station - RS01F010700, data from 2020-2022, and the EPAs "*notionally clean river*" approach values.

The current WFD status of the Finn(Donegal)_060 is Poor. The notionally clean river approach helps to determine if the discharge from the upgraded Ballybofey-Stranorlar WwTP on its own is likely to cause a deterioration in the status of the receiving waterbody, or if the discharge will impede the achievement of the Good WFD status objective by 2027. The WFD 2013-2018 status for Ammonium and Ortho-P are both High for the Finn (Donegal)_060. Therefore, the High status EQS for both Ammonia and Ortho-P are applied.

Table 7.1 - WAC for 9,200 PE (based on Notionally Clean River)

Parameter	Upstream River Conc Note 1	Proposed ELVs	Contribution from Primary Discharge (mg/l)	Predicted D/S Conc (mg/l)	Relevant Standard (mg/l) – High Status – 95%ile EQS
BOD	0.260	25	0.45	0.701	<2.20 Note 2
Total Ammonia	0.008	2	0.036	0.044	<0.09 Note 2

Parameter	Upstream River Conc Note 1	Proposed ELVs	Contribution from Primary Discharge (mg/l)	Predicted D/S Conc (mg/l)	Relevant Standard (mg/l) – High Status – 95%ile EQS
Ortho-Phosphate (MRP)	0.005	1	0.018	0.023	<0.045 Note 2

Note 1: Based on notionally clean river approach.
Note 2: European Union Environmental Objectives (Surface Waters) (Amendment). Regulations 2019 (S.I. No. 77 of 2019) – High Status EQS.

Table 7.2 - WAC for 9,200 PE (Background Concentration mg/l (Actual) (Station RS01F010700-Mean 2020-2022))

Parameter	Upstream River Conc Note 1	Proposed ELVs	Contribution from Primary Discharge (mg/l)	Predicted D/S Conc (mg/l)	Relevant Standard (mg/l)
BOD	1.15	25	0.45	1.578	<2.20 Note 2
Total Ammonia	0.03	2	0.036	0.068	<0.09 Note 2
Ortho-Phosphate (MRP)	**0.042**	1	0.018	**0.059**	<0.045 Note 2

Note 1: Based on actual upstream river concentrations.
Note 2: European Union Environmental Objectives (Surface Waters) (Amendment). Regulations 2019 (S.I. No. 77 of 2019) – High Status EQS.

As shown above, the resultant downstream concentration for BOD, Total Ammonia and Ortho-P comply with the relevant High Status EQSs in terms of the notionally clean river background concentrations, although for the actual background concentrations, the resultant concentration for Ortho-P does not comply with the relevant High Status (95%ile) EQSs.

As can be seen above for RS01F010700 the mean background concentration for Ortho-P (2020-2022) is 0.042mg/l which is above the High Status 95%ile EQS of 0.035mg/l. Agriculture is listed as a significant pressure for the upstream rivers of the Finn(Donegal)_060, including the Finn (Donegal)_030, Finn(Donegal)_040, and Finn(Donegal)_050, and the associated tributaries, such as the Roughburn_010 which enters the Finn River *ca*. 7.5km upstream of the WwTP. A major issue associated with agriculture in this catchment is phosphorous loss. Phosphorous loss relates to the direct discharge, or runoff of phosphorous from the impervious surfaces and poorly drained soils on the farms leading to an increase in phosphorous in the surface waters, and thus the associated downstream surface waters. Agricultural impacts on this waterbody are outside of the control of Irish Water.

In summary, based on the notionally clean river approach, the proposed ELVs (BOD 25mg/l, Total Ammonia 2mg/l, and Ortho-P 1mg/l) will ensure that the operational discharges from the Ballybofey-Stranorlar WwTP will not have an obervable negative effect on the receiving waterbody, and will contribute towards achieving the Good WFD Status Objective by 2027 in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019) while contributing to maintaining the current (2013-2018) High WFD status for both Ammonium and Ortho-P.

Refer to **Attachment D.2.3** of WWDL review application for the WAC calculations.

8. EIA Screening Criteria Assessment

This section of the EIA Screening Report considers the proposed development (*i.e.,* operational discharges from the Ballybofey-Stranorlar WwTW) against the Schedule 7 criteria. Schedule 7 specifies '*Criteria for determining whether a development would or would not be likely to have significant effects on the environment'* under these three headings.

1. Characteristics of proposed development
2. Location of proposed development
3. Characteristics of potential impacts

Schedule 7A of the Planning and Development Regulations sets out *'Information to be provided by the Applicant or Developer for the Purposes of Screening Sub-threshold Development for Environmental Impact Assessmen*t'. This information includes:

1. A description of the proposed development
2. A description of the aspects of the environment likely to be significantly affected by the proposed development.
3. A description of any likely significant effects, to the extent of the information available on such effects, of the proposed development on the environment
4. The compilation of the information at paragraphs 1 to 3 shall take into account, where relevant, the criteria set out in Schedule 7

This Screening Report includes the relevant Schedule 7A information. This is contained in **Sections 2** to **7** above, and in the Schedule 7 criteria commentary provided in the tables below.

8.1 Characteristic of the Proposed Development	
a. The size and design of the whole of the proposed development	The design of the upgraded WwTP is 9,200 p.e. The current p.e. based on the 2021 collected loads is 6,167 p.e. The design of the plant is below the 10,000 p.e mandatory threshold for EIA. All Storm Water Overflows have been designed and will operate to meet the definition of '*Storm Water Overflow'* as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995. The source of the wastewater in the agglomeration is largely domestic in nature. Refer to **Sections 2** and **3** of the EIA Screening Report for further details.

8.1 Characteristic of the Proposed Development	
b. cumulation with other existing and/or approved projects	There are no active IPC or waste licensed activities discharging to the agglomeration or to the River Finn (Donegal) upstream or downstream of the agglomeration. There are 9 no. licensed Trade Effluent activities (namely 1 no. industrial, 2 no. commercial and 6 no. relating to food service establishments) discharging to the agglomeration sewers under Section 16 of the Local Government (Water Pollution) Acts 1977. The licensed industrial load is 1,592 p.e (*ca*. 26% of the total current p.e of 6,192). The Killygordon WwTP (D0518-01) is located *ca.* 7.3 km downstream of the Ballybofey-Stranorlar agglomeration. This plant has an organic design capacity p.e of 600 and has a current peak weekly load of 347 (Source: 2021 AER). The plant is compliant with the ELVs set in D0518-01. The discharge from the WwTP is not having an observable negative impact on water quality, or on the WFD status of the receiving waterbody *i.e.,* Finn (Donegal) 070, (Poor WFD status). Donegal County Council planning portal was reviewed to identify any planning applications which have been submitted and/or granted within the last 5 years (from September 2022). The majority of applications relate to domestic dwellings. This review did not identify any other projects, either existing or approved, which have the potential to interact with the Ballybofey-Stranorlar agglomeration's operational discharges, and result in significant cumulative impacts.
c. the use of natural resources, in particular land, soil, water and biodiversity;	The Ballybofey-Stranorlar works incorporates key measures to avoid and prevent significant effects on the receiving Finn (Donegal) River (refer to **Section 4** of this Report). The effluent discharge standards and the design of the overflows will ensure that there is no environmental risk posed to the receiving water environment or its associated biodiversity as a result of the discharges from the agglomeration. As such, the use of these resources is not considered significant.
d. the production of waste;	Not applicable for operational discharges.
e. pollution and nuisances;	The WwTW operational discharges have been designed and incorporate key measures to avoid and prevent significant effects on the receiving Finn (Donegal) River (refer to **Section 4** of this Report). Refer to **Section 7** of this Report and **Attachment D.2.3** of the WWDA application for details on the WAC of the Finn (Donegal) River. An assessment of the potential for impacts on receiving waters from priority substances in the primary discharge has been carried out to inform this WWDA application. It concluded that with dilution none of the substances listed in the Specific Pollutants, Priority and Priority Hazardous Substances as outlined in the Surface Water Regulations, are likely to be present in the effluent discharge to the Finn River, at concentrations above the specified standards as per European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended (now S.I No. 77 of 2019) (Refer to **Attachment D.2.4** of the WWDA application for a copy the Priority Substances Assessment Report).

8.1 Characteristic of the Proposed Development	
	There are no other nuisances that would cause unusual, significant, or adverse effects of a type that would, in themselves require an EIA.
f. the risk of major accidents and/or disasters which are relevant to the project concerned, including those caused by climate change, in accordance with scientific knowledge;	The Waste Water Treatment Works incorporates a number of key measures to prevent unintended discharges to the Finn (Donegal) River. Refer to **Attachment C.2** of the WWDA application and **Section 4** of this EIA Screening Report for further details. It is considered that there is minimal potential for major accidents, and/or disasters which are relevant to operational discharges on the basis of best scientific knowledge.
g. the risks to human health (for example due to water contamination or air pollution).	There are no drinking water abstractions downstream of the operational discharges so there is no significant risk to drinking water abstractions from the operational discharges from the Ballybofey-Stranorlar agglomeration. There are no risks to human health from the operational discharges that would cause unusual, significant, or adverse effects of a type that would, in themselves require an EIA.

8.2 Location of Proposed Development	
The environmental sensitivity of geographical areas likely to be affected by projects must be considered, with particular regard to:	
(a) the existing and approved land use;	Not applicable.
(b) the relative abundance, availability, quality, and regenerative capacity of natural resources (including soil, land, water, and biodiversity) in the area and its underground;	The operational discharges from the Ballybofey-Stranorlar agglomeration discharge to the Finn River (Finn (Donegal)_060 and Finn (Donegal)_070) which are within the Foyle Catchment (Hydrometric Area 01). This catchment includes the area drained by the River Foyle and by all streams entering tidal water between Culmore Point, Co. Derry and Coolkeeragh, Co. Derry. This is a cross border catchment with a surface area of 2,919km², 914km² of which is located within the Republic of Ireland (RoI). The draft 3rd Cycle Catchment Report (2021) for this Hydrometric Area (HA), determined that for At Risk river waterbodies excess nutrients and chemical impacts remain the most prevalent issues, along with morphology, organic pollution, and hydrology. Pressures identified affecting the greatest number of waterbodies within HA 01 include agriculture, followed by forestry, peat, urban wastewater, hydromorphology, domestic waste water, urban run-off, and industry. Although the Ballybofey-Stranorlar agglomeration, and specifically the SWOs, are listed as a significant pressure in At Risk waterbodies (namely the Finn (Donegal)_060) in the draft 3rd cycle catchment assessment, the report makes note that "*The Ballybofey-Stranorlar (D0120) agglomeration, which is impacting Finn (Donegal)_060, is due to be upgraded in 2022*".

8.2 Location of Proposed Development	
	The significant pressures for the Finn (Donegal)_060 have been cited within the draft 3rd cycle Catchment Report as Urban Runoff and Urban Waste Water. The Finn (Donegal)_060 waterbody trends at Station RS01F010700 (Finn (Donegal) - Ballybofey Br) for Ammonia is Downwards (*i.e*., decreasing concentrations). There is no trend cited for Ortho-P at this station. At Station RS01F010800 (Br S of Stranorlar) downstream of the operational discharges, the trend for Ammonia is Upwards (*i.e.,* increasing concentrations). In terms of Ortho-P at this station, the trend is Downwards (*i.e*., decreasing concentrations). For 2013-2018, the WFD status of both Ammonium and Ortho-P are noted as High. The EPA undertake biological monitoring of the River Finn at various locations. Upstream of the primary discharge at RS01F010600 (*ca*. 3.8 km upstream of the primary discharge point), the 2019 monitoring reported a Q value of 3-4 (Moderate). Downstream of the primary discharge at RS01F010800 (*ca*. 0.4km), the 2020 monitoring reported a Q value of 3 (Poor). Based on the Irish Water Compliance Data for 2020– 2022 at RS01F010700 *ca*. 1.2km u/s of the WwTP discharges and the downstream ambient monitoring location RS01F010800 *ca.* 0.4km d/s downstream of all operational discharges, it is noted that the operational discharges do not have a significant observable impact on the water quality of the receiving waterbody. Refer to **Section 6** of this report Based on the proposed ELVs, along with design of the overflows and the measures in place to prevent unintended discharges, it is considered that operational discharges will not have a significant effect on the abundance, quality, or regenerative capacity of the Finn (Donegal) River. Refer to **Sections 3** to **7** of this Report for further details.
(c) the absorption capacity of the natural environment, paying particular attention to the following areas:	(i) wetlands, riparian areas, river mouths; The operational discharges will not give rise to significant effects on the absorption capacity of the natural environment of the Finn River and the associated riparian areas. Refer **Point (b)** above. (ii) coastal zones and the marine environment The operational discharges have no potential to impact on these features of the natural environment due to the location of the discharges. (iii) mountain and forest areas The operational discharges have no potential to impact on these features of the natural environment due to the location of the discharges. (iv) nature reserves and parks

8.2 Location of Proposed Development	
	The operational discharges have no potential to impact on these features of the natural environment due to the location of the discharges. (v) areas classified or protected under national legislation; Natura 2000 areas designated by Member States pursuant to Directive 92/43/EEC and Directive 2009/147/EC; There are no designated shellfish waters or designated bathing waters, nutrient sensitive waters, within the region of the operational discharges, or within their zone of influence. The River Finn is designated as a "*Salmonid Water"* under the European Commission's (Quality of Salmonid waters) Regulations, 1988. The Finn and its tributary the Reelin are probably the most prolific salmon and grilse rivers in Donegal, and throughout the Foyle catchment. The River is also designated as a SAC, of which Atlantic Salmon are a water dependent Qualifying Interest. The completed upgrade works at the WwTP to meet the ELVs as per D0120-01, and the completion of the proposed Networks Projects will contribute towards compliance with the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019), and will assist in the efforts to achieve Good WFD Status by 2027, and also in maintaining the current High status for both Ammonium and Ortho-P. This will provide a high level of protection to the River Finn and the Atlantic Salmon contained therein; thereby ensuring that the operational discharges do not cause a breach of the European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I No. 203 of 1988) in the River Finn. There are no NHAs or pNHA downstream of the operational discharges. The nearest NHA is the Meenagarranroe Bog NHA (Site code: 002437) which is located *ca*. 6.2 km South West of the primary discharge point, however no pathway exists by which the operational discharges could impact upon this site. The closest NHA/pNHA downstream of the operational discharges is the River Foyle, Mongavlin to Carrigans pNHA (Site code: 002067) which is located a significant distance (*ca*. 29km) downstream of the operational discharges and is considered to be too remote to be influenced by the Ballybofey-Stranorlar operational discharges. The operational discharges from the Ballybofey-Stranorlar WwTP discharge directly to the River Finn SAC (Site code:002301). The River Finn SAC has a number of water dependent Qualifying Interests *i.e.,* [3110] Oligotrophic waters containing very few minerals of sandy plains, [1106] Salmon (*Salmo salar*) and [1355] Otter (*Lutra lutra*). Further downstream (*ca*. 16km) where the UK border meets the River Finn upstream of Clady, is a SAC designated in the UK, namely the River Foyle & Tributaries SAC. This SAC includes the River Foyle and its tributaries *i.e*., that part of the River Finn which lies within Northern Ireland. The water dependent Qualifying Interests of this site includes Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation [3260], Otter (*Lutra lutra*) and Salmon (*Salmo salar*). The WAC calculations which support this application show that the receiving Finn (Donegal)_060 river has adequate assimilative capacity for the primary discharge (9,200 p.e load) based on notionally clean river background concentrations to meet the 95%ile High EQS status for BOD, Ammonia and Otho-P.

8.2 Location of Proposed Development	
	The completed upgrade works at the WwTP to meet the ELVs as per D0120-01, and the completion of the proposed Networks Projects, which includes for the upgrade of St Joseph's Pumping Station and the Navenny Pumping Station, network improvements, and the upgrade of Storm Water Overflows to meet the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995., will contribute towards compliance with the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019), and will assist in the efforts to achieve Good WFD status by 2027, and in maintaining the current High status for both Ammonium and Ortho-P. All of which will provide a high level of protection to the River Finn SAC and the downstream River Foyle & Tributaries SAC and their water dependent Qualifying Interests. An AA Screening Report which supported the 2016 planning application for the Ballybofey-Stranorlar Sewerage Scheme, and the subsequent Donegal County Council Appropriate Assessment Screening (13th September 2016), concluded and determined respectively, that it can be excluded beyond reasonable scientific doubt, in view of best scientific knowledge, on the basis of objective information and in light of the conservation objectives of the relevant European sites, that the proposed development (in this case the construction and operation of the Ballybofey-Stranorlar Sewerage Scheme), individually or in combination with other plans and projects, would be likely to have a significant effect on the River Finn SAC, or indeed any other European site. (vi) areas in which there has already been a failure to meet the environmental quality standards, laid down in Union legislation and relevant to the project, or in which it is considered that there is such a failure There are no areas which the environmental quality standards of the EU have already been exceeded. (vii) densely populated areas Not applicable. (viii) landscapes and sites of historical, cultural, or archaeological significance Not applicable.

8.3 Type and characteristics of the potential impact	
The likely significant effects of projects on the environment must be considered in relation to criteria set out in points 1 and 2 of this Annex, with regard to the impact of the project on the factors specified in Article 3(1), taking into account:	
(a) the magnitude and spatial extent of the impact (for example geographical area	Finn (Donegal)_060 and Finn (Donegal)_070 (to which the WwTP operational discharges discharge) and downstream waterbodies.

8.3 Type and characteristics of the potential impact	
and size of the population likely to be affected);	
(b) the nature of the impact;	Based on the proposed ELVs, along with design of the overflows and the measures in place to prevent unintended discharges, it is considered that the Ballybofey-Stranorlar agglomeration operational discharges will have no real likelihood of significant effects on the environment, alone or in combination with other plans and projects.
(c) the transboundary nature of the impact;	The operational discharges will not result in transboundary impacts.
(d) the intensity and complexity of the impact;	The intensity and complexity of impacts associated with the operational discharges are not considered significant within the meaning of the EIA Directive.
(e) the probability of the impact;	The proposed effluent discharge standards and the operational design of the overflows from the WwTW will ensure that there are no significant environmental impacts to the receiving water environment from the Ballybofey-Stranorlar operational discharges.
(f) the expected onset, duration, frequency, and reversibility of the impact	It is considered that the proposed effluent standards, and the design and operation of the Storm Water Overflows to meet definition of '*Storm Water Overflow'* as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995, that no indirect impacts, *via* water quality impacts, on the environmental sensitivities are anticipated from the Ballybofey-Stranorlar agglomeration operational discharges.
(g) the cumulation of the impact with the impact of other existing and/or approved projects	As noted above there are no other projects, either existing or approved, which have the potential to interact with the Ballybofey-Stranorlar agglomerations operational discharges, and result in significant cumulative impacts Based on the above, there is no potential for significant in-combination impacts, within the meaning of the EIA Directive.
(h) the possibility of effectively reducing the impact	The WwTW incorporates a number of key measures to avoid and prevent adverse effects on the receiving aquatic environment. Refer to **Section 4** of this Report.

Based on the review against the Schedule 7 criteria as detailed above, the environmental impacts associated with the operational discharges are not likely to be significant within the meaning of the Directive.

9. EIA Screening Conclusion

Based on the information as contained in this EIA Screening Report, there is no significant and realistic doubt in regard to the likelihood of significant effects on the environment arising from the proposed development (*i.e.,* the operational discharges from the Ballybofey-Stranorlar agglomeration in so far as they relate to the risk of environmental pollution of the receiving waters, the River Finn (Donegal) and it is considered that an EIA is not required by virtue of its nature, size and location. The main reasons and considerations on which this conclusion is based are as follows:

1. The load generated in agglomeration is below the mandatory 10,000p.e. (Design -. 9,200 p.e & current 6,167 p.e.)
2. The source of the waste water in the agglomeration is largely domestic in nature which is readily biodegradable.
3. The WwTW will operate in a manner to ensure that emissions from the plant will not result in the contravention of EU Directives and National Regulations.
4. There are no existing waste water discharges within the vicinity of the proposed waste water discharges with the potential to give rise to significant cumulative effects, within the meaning of the EIA Directive.
5. Cumulative effects with other existing and planned projects and/or plans are not likely to give rise to significant effects, within the meaning of the EIA Directive.
6. The effluent discharge standards as per D0120-01 will ensure that the discharge from the WwTP contributes towards the Finn (Donegal) River achieving Good WFD status and to maintaining the High WFD status of Ammonium and Ortho-P in accordance with S.I. No. 77 of 2019, and thereby will ultimately ensure that there is no environmental risk posed to the receiving water environment as a result of the operational discharges from the agglomeration.
7. The design of the Storm Water Overflows to meet the definition of '*Storm Water Overflow*' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007, as amended and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995.
8. The Waste Water Treatment Works incorporates a number of measures to avoid /prevent significant adverse effects on the receiving aquatic environment.
9. Current WFD High Status of Ortho-P and Ammonium in the River Finn (Donegal)_060).

It is therefore concluded that there is no requirement for the EPA to conduct an EIA in respect of the Ballybofey-Stranorlar WWDL review, and there is no requirement on Irish Water to either prepare or submit an EIA Report.