



Environmental Licensing Programme
Office of Environmental Sustainability
Environmental Protection Agency
PO Box 3000
Johnstown Castle Estate
Wexford

16/12/2022

IW ref: LT0622

Dear Inspector,

Uisce Éireann
Teach Colvill
24-26 Sráid Thalbóid
Baile Átha Cliath 1
D01 NP86
Éire

Irish Water
Colvill House
24-26 Talbot Street
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Re: Ballyvourney Ballymakeery Waste Water Discharge Licence Reg. No. D0299-02

In response to the Regulation 18(3)(b) request for information notice dated 14th November 2022, please see below outstanding information;

Having regard for the Part 8 planning approval for a 1,800 p.e. WWTP, clearly state the population equivalent to which this application relates and to be considered by the Agency. Update table 10 of the application form and any other relevant parts of the application form, if necessary.

Table 10 (overleaf) of the Application form has been updated to reflect the population equivalent to which this application relates to. i.e (1,800 PE). A copy of the updated application form is appended to this repose.

The design of the new WwTP is for 2,600 p.e (design horizon to 2046). The loads generated within the agglomeration however will not exceed 2,000 p.e for the duration of the reviewed licence. At the time of submitting this WWDL review application, based on existing loads (2020), the projected 10-year load is **968 p.e**. Therefore, the agglomeration p.e. threshold is <2000 p.e. The population equivalent to which the application relates to is 1,800 PE.

Chapter 3 Waste Assimilative Capacity Calculations of the Impact Assessment Report has been updated to include a WAC Assessment for 1,800 PE loading. The assessment demonstrates that the proposed ELVs at 1,800 pe will contribute towards maintaining the High status of the Sullane_030 in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019) and will ensure that there is no environmental risk posed to the receiving water environment as a result of the discharge from the new WwTP.

The updated Impact Assessment Report is appended to this response.

Table 10 - Capacity of the Waste water Works (new WWTP)

Population Equivalent of the agglomeration to which the application relates:	1,800 PE
Maximum average weekly population equivalent of the agglomeration:	754 p.e. (Source: 2020 AER, weekly peak)
Existing Organic Capacity of the waste water treatment plant - As Constructed or nominal design (p.e.)	2,600 p.e (design, as constructed)
Proposed Organic Capacity of the waste water treatment plant - As per planning permission or design (p.e.)	2,600 p.e (design, as constructed)
Current Collected Load (p.e.):	754 p.e. (Source: 2020 AER, weekly peak)
Remaining Organic Capacity (p.e.):	1,843 p.e.
Is the plant overloaded – organic loading?	No
Current Peak Hydraulic Capacity of the waste water works–As Constructed or nominal design (m ³ /day):	1,755 m ³ /d (design, as constructed)
Proposed Peak Hydraulic Capacity of the waste water works–As per planning permission or nominal design (m ³ /day):	1,755 m ³ /d (design, as constructed)
Current and proposed dry weather flow (DWF) to the treatment plant (m ³ /day):	585 m ³ /d (design, as constructed) 169.65m ³ /d (based on current p.e)
Current average hydraulic loading to the treatment plant (m ³ /day):	169.65m ³ /d (based on current p.e)
Remaining Hydraulic Capacity (m ³ /day):	1,585.35m ³ /d
Is the plant hydraulically overloaded?	No

Provide confirmation, along with supporting evidence, of notification issued to the water services authority in accordance with Regulation 13.

Under the Water Services Acts 2007 to 2017 Irish Water is the consider to be “water service authority” in the functional area where the WWDA application takes place, and hence there is no requirement for Irish Water to notify any other authority.

Yours sincerely,

Sheelagh Flanagan

Sheelagh Flanagan
Wastewater Strategy



Waste Water Discharge Authorisation

Application Form

EPA Ref. N^o: <i>(Office use only)</i>	<input type="text"/>
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Environmental Protection Agency

PO Box 3000, Johnstown Castle Estate, Co. Wexford

Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699

Web: www.epa.ie Email: info@epa.ie

ABOUT THIS APPLICATION FORM

This Application Form is for the purpose of making an application for a Waste Water Discharge Authorisation under the European Union (Waste Water Discharge) Regulations 2007 to 2020, or for the review of an existing Waste Water Discharge authorisation. It should be completed in accordance with the Guidance Document which is available on www.epa.ie.

A valid application for a Waste Water Discharge Authorisation must contain the information prescribed in the European Union (Waste Water Discharge) Regulations 2007 to 2020. Regulations 16 and 24 set out the statutory information requirements for a Waste Water Discharge licence (WWDL) and a Certificate of Authorisation (CoA) application respectively.

Neither this Application Form nor the guidance document purport to be and should not be considered a legal interpretation of the provisions and requirements of the European Union (Waste Water Discharge) Regulations 2007 to 2020.

While every effort has been made to ensure the accuracy of the material contained in this Application Form, the EPA assumes no responsibility and gives no guarantees, undertakings or warranties concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.

Should there be any contradiction between the information requirements set out in this Application Form and any clarifying explanation contained in the Guidance Note, then the requirements in this Application Form should take precedence. The requirements of the Regulations shall take precedence over any considerations mentioned in this Application Form, the guidance document or on the website.

The Application Form comprises sections A-E as follows:

Section A:	Non-Technical Summary
Section B:	General
Section C:	Discharges & Monitoring
Section D:	Impact Assessment
Section E:	Declaration

SECTION A: NON-TECHNICAL SUMMARY

Advice on completing this section is provided in the accompanying Guidance Document.

A.1 Non-Technical Summary

This part of the Application Form collects a Non-Technical Summary which identifies all environmental impacts of significance associated with the discharge of waste water from the waste water works.

A1.1 Supporting documents

Complete the following table and submit the relevant supporting document as Attachment A1 in accordance with the guidance.

Table 1 - Non-Technical Summary Document Name

Document type	Document name
Non-technical summary	Attachment A.1.1: Non-Technical Summary Attachment A.1.2: Map 1 - Area of Interest

SECTION B: GENERAL

Advice on completing this section is provided in the accompanying Guidance Document.

B.1 Application Details

This part of the form collects contact details, the type of application, and the location and size of the agglomeration.

B.1.1 Application Type

This part of the form collects details of the type of application being made.

Table 2 – Application Type

		Tick as appropriate (✓)
A	Application for the review of an existing authorisation	✓
B	New application for a licence in respect of which the Agency has previously granted a certificate	
C	New application for a licence for discharges (>500 P.E)	
D	New application for a certificate for discharges (< 500 P.E.)	

If A or B are applicable, provide the following information:

Current EPA Authorisation Register Number(s)	D0299-01
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If A is applicable, provide the following information:

Grounds for review on which the application is being made:
<p>Following a Waste Water Discharge Authorisation examination by the EPA on 28th June 2021, it was recommended that a Waste Water Discharge Authorisation (WWDA) application was prepared and submitted to the EPA for determination. It was considered that the current WWDA, D0299-01, does not satisfy the environmental requirements of the WWDA Regulations as amended, and that a WWDA review was required.</p> <p>Since the above examination, the Ballyvourney/Ballymakeera upgrade project consisting of a new WwTP, rising main and new outfall pipeline and upgraded pumping station to serve the agglomeration of Ballyvourney/Ballymakeera has been completed. The aim of this upgrade project was to meet the current Waste Water Discharge Licence (WWDL) - Licence Register Number: D0299-01, granted to Irish Water in accordance with the Waste Water Discharge (Authorisation) Regulations (S.I. No. 684 of 2007) (now S.I. No. 214 of 2020) on the 9th October 2015.</p>

If C or D are applicable, provide the following information:

Date on which the waste water works became / becomes operational:	The new Ballyvourney/Ballymakeera WwTP upgrade has been completed and has been fully operational since the 9 th September 2021. The pumping station upgrade works were completed on 29 th March 2021.
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In the case of an application for a licence (review), confirm the agglomeration population equivalent (p.e.):

Table 3 - Agglomeration p.e. thresholds

Discharges from agglomerations with a p.e. of	Tick as appropriate (✓)
more than 10,000	
2,001 to 10,000	
1,001 to 2,000	✓ *
500 to 1,000	

* The design of the new WwTP is for 2,600 p.e (design horizon to 2046). The loads generated in agglomeration however will not exceed 2,000 p.e for the duration of the reviewed licence. At the time of submitting this WWDL review application, based on existing loads (2020), the projected 10-year load is 968 p.e. Therefore, the agglomeration p.e. threshold is <2000 p.e.

B.1.2 Applicant’s Details

Provide the following information:

Table 4 - Name and Address of Applicant

Name*:	Irish Water
Address:	Colvill House 24-26 Talbot Street Dublin 1
CRO Number:	530363
Tel:	+353 1 8925000
e-mail:	WasteWaterLicensingSouthern@water.ie

**This should be the name of the water services authority in whose ownership or control the waste water works is vested.*

Note that only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Table 5 – Name and Address for Correspondence

Name*:	Ken Conroy
Address:	Colvill House 24-26 Talbot Street Dublin 1
Tel:	+353 1 8925000
e-mail:	WasteWaterLicensingSouthern@water.ie

**This should be the name of person nominated by the water services authority for the purposes of the application.*

B.2. Agglomeration Details

This part of the form collects details of the agglomeration, the waste water works and any associated waste water treatment plant, capacity details and waste water inputs.

B.2.1 Agglomeration name and Geographical Location

Table 6 - Agglomeration Name and Location

Name of Agglomeration:	Ballyvourney/Ballymakeera
Name of townland or townlands of the agglomeration served by a waste water works to which the application relates:	Shanacloon, Flats, Cappagh East, Killeen, Slievereagh, Gortnatubbrid, Cappagh West, Ballymakeera
Included on EPA Waste Water Priority List?	No
Included on European Commission infringement list?	No

B.2.2 Waste water works and associated Waste Water Treatment Plant(s)

Table 7 - Waste Water Works

<p>Description of the existing waste water works (as per D0299-01):</p>	<p>Ballyvourney and Ballymakeera are two contiguous settlements located approximately 15 km northwest of Macroom on the main N22 Cork to Killarney Road and are the largest settlements located within the Muskerry Gaeltacht region.</p> <p>Prior to the WwTW upgrade, which was completed in September 2021, the sewerage collection system serving Ballyvourney and Ballymakeera villages conveyed flows to a septic tank located at NGR 121370E, 076407N in Ballymakeera Village. Primary treated effluent discharged to the River Sullane <i>via</i> a 250mm open end concrete pipe at NGR 121490E, 076158N. The septic tank was built at a time when the p.e. contributing to it was far less than the present p.e. (i.e., 754 p.e (peak weekly collected load), 2020 AER). The wastewater was not receiving proper treatment as the septic tank system was inadequate to serve the current needs of the agglomeration in terms of capacity, operation, efficiency and treated effluent quality.</p> <p>In 2007 the sewer network was upgraded, new foul lines were laid and the original foul sewer operated as a storm water system. The wastewater from the west of the agglomeration gravitated to the septic tank and the wastewater from the east of the agglomeration gravitated to the Pumping Station at the old Dairygold Creamery site (NGR 121295E, 076419N) from where it was pumped to the septic tank <i>via</i> a rising main. This Pumping Station had an existing Dual Function Overflow (i.e., overflow which operated in storm events and/or electric failure events) from the wet well which discharged flows to an adjacent culvert to the Sullane River at NGR 121225E, 076310N. This overflow did not operate in compliance with the criteria for storm water overflows, as set out in the DoEHLG Procedures and Criteria in Relation to Storm Water Overflows 1995.</p>
<p>Description of proposed development, if any, to which the application relates:</p>	<p>The project involved upgrading the existing Ballymakeera Pumping Station and the construction of the new WwTP (tertiary treatment), based on activated sludge process, to treat a future population of 2,600 p.e (design</p>

	<p>horizon to 2046), and to relocate the effluent discharge location to the River Sullane.</p> <p>The new WwTP located at NGR 121316E, 076048N consists of:</p> <ul style="list-style-type: none"> • New Inlet Works <ul style="list-style-type: none"> ○ Fine Screens ○ Coarse Screened Bypass ○ Vortex Grit Removal ○ Flow Measurement ○ Storm Overflow ○ Storm Holding Tank • Secondary Treatment from 2No. Oxidation Ditches • Secondary Settlement by 2No. Radial Flow FSTs • Chemical Dosing for Phosphorus Removal • Tertiary Treatment by Disk Filter • Picket Fence Thickener including Sludge Storage • New Outfall <p>The performance standards (<i>as per D0299-01 ELVs</i>) for final effluent quality are as follows:</p> <ul style="list-style-type: none"> • Biological Oxygen Demand (BOD) – 25mg/l • Chemical Oxygen Demand (COD) – 125 mg/l • Suspended Solids (SS) – 35mg/l • Ammonia- Total (as N) – 1.5mg/l • Ortho-Phosphate (as P) – 0.8mg/l <p>The upgraded Ballymakeera Pumping Station receives all flows from the agglomeration by gravity. The previous pumps were replaced by pumps each capable of transferring the 10-year Formula A flow of 39l/s to the new WwTP site. A new 225mm rising main, sized to carry the 30-year Formula A flow of 47.4l/s, was installed from the Pumping Station to the new WwTP. The previous overflow from the Pumping Station was retained but was fitted with a new 6mm screen fitted to the outlet to protect the River Sullane from rags. It has been designed to spill only when the incoming flow exceeds the 10-year Formula A flow of 39l/s.</p> <p>The SWOs at the Pumping Station and at the WwTP have been designed to operate in compliance with the definition of ‘<i>Storm Water Overflow</i>’ as per Regulation 3 of the Waste Water</p>
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	<p>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.</p> <p>The new Ballyvourney/Ballymakeera WwTP upgrade has been completed and has been fully operational since the 9th September 2021. The pumping station upgrade works were completed on 29th March 2021.</p>
<p>Number and type of waste water discharges from the waste water works including proposed waste water discharges:</p>	<p><u>Discharge Scenario as per D0299-01</u></p> <p><i><u>Primary Discharge (previously SW001):</u></i> Treated effluent from the septic tank discharged directly to the Sullane River at NGR 121490E, 076158N via a 250mm outlet pipe.</p> <p><i><u>Secondary Discharges:</u></i> There were no secondary discharge points from the agglomeration.</p> <p><i><u>Storm Water Overflow from Pumping Station:</u></i> There was 1 no. Storm Water Overflow from the Pumping Station which was connected to a combined sewer that discharges to the Sullane River at NGR 121225E, 076310N. This was not licenced under D0299-01.</p> <p><i><u>Emergency Overflow from Pumping Station:</u></i> There was 1 no. Emergency Overflow from the Pumping Station which is connected to a combined sewer that discharges to the Sullane River at NGR 121225E, 076310N. This was not licenced under D0299-01.</p> <p><u>Discharges as per Subject Matter of Licence Review</u></p> <p><i><u>New Primary Discharge (SW001):</u></i> The primary discharge from the new WwTP discharges to the Sullane River at NGR 121449E, 076147N via a 280mm outlet pipe. The primary discharge is monitored continuously and recorded at the electromagnetic flowmeters which are installed at the WwTP.</p> <p><i><u>Secondary Discharges:</u></i> There are no secondary discharge points associated with the agglomeration.</p>

	<p><u>Storm Water Overflows (SW002 & SW003)</u></p> <p>There is 1 no. SWO from the new WwTP (SW002). Upon activation this will discharge to the Sullane River via the primary discharge outfall at NGR 121449E, 076147N.</p> <p>There is 1 no. SWO (SW003) from the Pumping Station which is connected to a combined sewer that discharges to the Sullane River at NGR 121225E, 076310N.</p> <p>Both overflows have been designed in compliance with 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.</p> <p>Any overflow event will be monitored and recorded at the electromagnetic flowmeters which have been installed at the WwTP and Pumping Station.</p> <p><u>Emergency Overflows (SW004):</u></p> <p>SW004 from the Pumping Station will only operate in an emergency event (e.g., prolonged power outage). SW004, when activated, will discharge via the same combined sewer as SW003 (NGR 121225E, 076310N).</p> <p>The design of the overflows from the WwTP and Pumping Station will significantly reduce the likelihood of untreated water entering the receiving watercourse.</p>
Is the network assessment complete?	Yes
If the answer above is no, in what year is the assessment expected to be complete?	Not applicable

Table 8 - Waste water treatment plant associated with the waste water works

Site contact Name*:	Claire Cremin (Regional Wastewater Compliance Specialist)
Address of waste water treatment plant (including Eircode):	Ballyvourney/Ballymakeera WwTP Fair Green Ballymakeera Co. Cork
Telephone Number:	01-8925000
e-mail:	WasteWaterComplianceSouthern@water.ie
Grid ref (6E, 6N)	121316E, 076048N
Description of the treatment process	Tertiary Treatment
Primary discharge point reference ID:	SW001

**This should be the name of the person responsible for the supervision of the waste water treatment plant.*

B.2.3 Supporting documents

Complete the following table and submit the relevant supporting documents in accordance with the Guidance Document:

Table 9 - Supporting Document Names

Document type	Document name
B.2 .1 Agglomeration map	Attachment B.2.1: Map 2 – Agglomeration Plan
B.2-2 Site map including discharge and monitoring points.	Attachment B.2.2: Map 3 – WwTP Site Location Plan Attachment B.2.2: Map 4 – Location Primary Discharge Point Attachment B.2.2: Map 5 – Location Storm Water Overflows Attachment B.2.2: Map 6 – Location of Emergency Overflow Attachment B.2.2: Map 7 – Location of Ambient Monitoring Points
B.2.3 Waste water process flow	Attachment B.2.3: Waste Water Process Flow Diagram

B.2.4 Capacity of the waste water works

Table 10 - Capacity of the Waste water Works (new WWTP)

Population Equivalent of the agglomeration to which the application relates:	1,800 PE
Maximum average weekly population equivalent of the agglomeration:	754 p.e. (Source: 2020 AER, weekly peak)
Existing Organic Capacity of the waste water treatment plant - As Constructed or nominal design (p.e.)	2,600 p.e (design, as constructed)
Proposed Organic Capacity of the waste water treatment plant - As per planning permission or design (p.e.)	2,600 p.e (design, as constructed)
Current Collected Load (p.e.):	754 p.e. (Source: 2020 AER, weekly peak)
Remaining Organic Capacity (p.e.):	1,843 p.e.
Is the plant overloaded – organic loading?	No
Current Peak Hydraulic Capacity of the waste water works–As Constructed or nominal design (m ³ /day):	1,755 m ³ /d (design, as constructed)
Proposed Peak Hydraulic Capacity of the waste water works–As per planning permission or nominal design (m ³ /day):	1,755 m ³ /d (design, as constructed)
Current and proposed dry weather flow (DWF) to the treatment plant (m ³ /day):	585 m ³ /d (design, as constructed) 169.65m ³ /d (based on current p.e)
Current average hydraulic loading to the treatment plant (m ³ /day):	169.65m ³ /d (based on current p.e)
Remaining Hydraulic Capacity (m ³ /day):	1,585.35m ³ /d
Is the plant hydraulically overloaded?	No

* The design of the new WwTP is for 2,600 p.e (design horizon to 2046). The loads generated within the agglomeration however will not exceed 2,000 p.e for the duration of the reviewed licence. At the time of submitting this WWDL review application, based on existing loads (2020), the projected 10-year load is **968 p.e**. Therefore, the agglomeration p.e. threshold is <2000 p.e. The Application relates to 1,800 PE.

B.2.5 Waste Water Inputs

Table 11 - Waste Water Inputs to Waste Water Works

Inputs	P.E.	% of total PE
Domestic waste water load (<i>includes commercial, amenities, educational facilities</i>)	588 p.e	78%
Industrial waste water load	166 ^b	22%
Leachate	0	0%
Waste water to be conveyed and discharged only (i.e.by pass the WWTP)	0	0%
Total	754 p.e^a	100%

^aSource: 2020 AER

^b Source: The estimated industrial load to Ballyvourney/Ballymakeera WwTP is based on the 22 PE Section 16 licenced discharges and the 140 PE IPC licensed discharges.

Where industrial waste water is relevant to this application, provide the following information:

Table 12 - Industrial waste water pre-treatment

A	Is the requirement for pre-treatment (Article 9 of the urban waste water treatment regulations 2001 as amended) met?	Yes
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If 'No' was answered to A, provide details of the measures to be taken to comply:

Not applicable

B.3 Planning documentation

B.3.1 Planning information

This part of the application form collects planning information relating to development or proposed development relevant to which the application relates.

Table 13 - Planning Status

	Planning Authority name:	Cork County Council
A	Is planning permission required for development or proposed development to which the application relates?	Yes
B	If 'Yes', has planning permission been granted?	Yes, Part 8
C	If planning permission is not required at A above, is the proposed development, if any, to which the application relates exempted development?	Not Applicable

If 'Yes' was answered to A and B, above, the following 'Planning Granted' table should be completed.

Table 14 - Planning granted

Planning File Reference Number:	Part 8 – File Ref Not Available
Planning Appeal Reference Number (if relevant):	Not applicable
Planning Authority Name / An Bord Pleanála:	Cork County Council
Date of Planning Decision (Final Grant):	25 th March 2013
Brief description:	In December 2012 Cork County Council applied to the Planning Authority through Part 8 of the Planning and Development Regulations for a waste water treatment plant at Ballymakeera. The application was approved in March 2013.
EIAR required with Planning Application?	No
Confirm that the supporting documentation is provided:	Yes – Refer to Attachment B.3 – Part 8 Planning Approval

If 'Yes' was answered to A and 'No' was answered to B, above, the following Planning under Consideration table should be completed.

Table 15 - Planning under Consideration

Planning File Reference Number:	Not applicable
Planning Appeal Reference Number (if relevant):	
Planning Authority Name / An Bord Pleanála:	
Date of application:	
Brief description:	
EIAR required with Planning Application?	
Confirm that the supporting documentation is provided:	

If 'No' was answered to A and 'Yes' was answered to C, the following Exempted Development table should be completed.

Table 16 - Exempted Development

Reason for exemption:	Not applicable
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B.3.2 Supporting documents

The document names for all supporting documentation should be provided in the following table.

Table 17 - Supporting Documents

	Document type	Document name
Planning granted	- planners letter confirming EIA is not required (if relevant)	Not applicable
	- a copy of relevant grant of planning permission AND planners report	Attachment B.3 – Part 8 Planning Approval
Planning under consideration	- confirmation from a planning authority or An Bord Pleanála (as applicable) that an application for permission comprising or for the purposes of the waste water discharge to which the application relates, is currently under consideration by the planning authority concerned or An Bord Pleanála	Not applicable
	- Planners letter confirming EIA not required (if relevant)	Not applicable
Exempted development	- Planners letter confirming development is exempted or reference to the specific legislation for exemption	Not applicable

B.4 Notices and Advertisements

This part of the form collects evidence of stakeholder engagement prior to making this application. The location of the site notice should be provided in the following table.

Table 18 - Site notice location

Grid co-ordinates (6E, 6N)	121327E	076085N
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B.4.1 Supporting documents

The document names for all supporting documentation should be provided in the following table:

Table 19 - Names of Supporting Document(s) on Notices and Advertisements

Document type	Document name
Newspaper notice:	Attachment B.4.1: Newspaper Notice
Site notice:	Attachment B.4.2: Site Notice
Map of site notice location:	Attachment B.4.3: Map 8 – Site Notice Location
Water Services Authority notice:	Not applicable
EIA Portal Confirmation notice:	Not applicable

B.5 Preliminary examination/EIA Screening/EIAR

This part of the application form collects information in relation to EIA and the development /proposed development comprising or for the purposes of the waste water discharge.

Table 20 - EIA related information.

A	Having regard to B.3, is this application accompanied by an EIAR?	No
B	Is the application in respect of the waste water discharge from a waste water treatment plant with a capacity of greater than 10,000 population equivalents as defined in Article 2, point (6), of the Urban Water Water Treatment Directive	No
C	Are there other competent authorities conducting EIA for the development or proposed development to which this application relates?	No
D	If 'Yes' to C, provide the name of the competent authority and consent reference	Not applicable

If the answer to either A or B is 'Yes', the EIAR must accompany the application.

Preliminary Environmental Impact Assessment (EIA) Screening:

The subject matter of this application falls well below the threshold of Regulation 17 (i) of S.I No. 214 of 2020 and is not a WwTP specified in accordance with paragraph (6)(c) or (8)(b)(ii) of Regulation 18 or paragraph (3)(c) or (5)(b)(ii) of Regulation 25.

Based on the above, it can be confidently concluded that the subject matter of this application (*i.e.*, operational discharges of the agglomeration), due to its size, scale, location, and nature, would have no real likelihood of significant effects on the environment, and therefore an Environmental Impact Assessment (EIA) and the production of an Environmental Impact Assessment Report (EIAR) is not required to support this application.

B.5.1 Supporting documents

The names assigned to the documents should be provided in the following table:

Table 21 - Names of Supporting Document(s) on EIA

Document type	Document name
EIAR	Not applicable
Preliminary examination / EIA screening report	Attachment B.5: Preliminary EIA Screening Report

B.6. Compliance with EU Directives & National Regulations

This part of the application form collects details on compliance with relevant EU Directives and national Regulations.

B.6.1 Supporting document

The EPA template provided should be completed. The name assigned to the document should be provided in the following table:

Table 22 - Names of Supporting Document on Compliance with EU Directives and National Regulations

Document type	Document name
Compliance with EU Directives & National Regulations	Attachment B.6: Compliance with EU Directives & National Regulations

B.7 Foreshore Act Licences.

This part of the application form collects information relating to Foreshore Act Licences where relevant.

Is Foreshore Act Licence required for development or proposed development the subject of this application?	Not applicable
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If yes, and the Foreshore Act Licence is relevant to this application, provide the following information:

Table 23 -Foreshore Act Licence

	Foreshore Act Licence Competent Authority name:	Not applicable
A	Has a Foreshore Act Licence being granted?	
B	If no to A, is a Foreshore Act Licence application under consideration by the relevant competent authority?	
C	Was EIA carried out or will be carried out by the Foreshore Act Licence competent authority?	
D	If 'Yes' to C, confirm that the same EIAR was submitted to Foreshore competent authority as accompanied this WWDA application:	
E	If 'Yes' to A, provide: <ul style="list-style-type: none"> - Licence Reference Number; and - date of grant of consent: 	
G	If 'Yes' to B, provide application reference number	

B.7.1 Supporting documents

The name(s) assigned to all supporting documentation should be provided in the following table:

Table B22 - Supporting documents

	Document type	Document name
If 'Yes' to A	Foreshore Act Licence:	Not applicable
If 'Yes' to C	Foreshore Act Licence report:	Not applicable

B.8 Programme of Improvements

For licence review applications, provide information on current licence requirements with respect to specified improvement works (B.8.1) and Condition 5 improvement programme (B.8.2).

For all applications, provide information on planned improvements (B.8.3). Supporting information can be uploaded / attached to this part of the application form.

B.8.1 Specified Improvement Programme

In the case of a licence review are there specified improvement works in Schedule A and C of current licence?	Yes
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If 'Yes', the following table should be completed for each specified improvement works.

Table 23 - Schedule A & C Improvement Programme

Specified Improvement Programmes: (under Schedule A and C of WWDL)	D0299-SIP:01 - Appropriate treatment to ensure emission limit values are achieved.
Date for completion of Improvement Programme in the licence:	31 st December 2015
Has the date for completion expired? (Enter N, N/A or Y)	Yes
Status of works: <i>e.g. (i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning phase; (v) Completed; (vi) Delayed</i>	Completed
Irish Water's expected timeframe for completing the work	The new Ballyvourney/Ballymakeera WwTP upgrade has been completed and has been fully operational since the 9 th September 2021. The Pumping Station upgrade works were completed on 29 th March 2021.
Comments: Not applicable	

B.8.2 Condition 5 Improvement programme

Provide details of the Condition 5 improvement programme by completing the following table:

Table 24 - Condition 5 Improvement Programme

Improvement identifier:	Not applicable
Improvement description:	Not applicable
Improvement source: <i>(e.g. WWTP assessment, Sewer assessments, Secondary discharges assessment SWO assessment, Drinking Water Abstraction Risk Assessment, Shellfish Impact Risk Assessment, Pearl Mussel Impact Assessment, Improved Operational Control, Incident Reduction, Elimination/Reduction of Priority Substances, Process Optimisation)</i>	Not applicable
Status of works:	Not applicable
Expected Completion date:	Not applicable
Comments: Not applicable	

B.8.3 Planned programme of improvements

Provide information on planned programme of improvements by completing the following table:

Table 25 -Planned Programme of Improvements

Waste water discharge reference code:	Not applicable
Type: <i>(primary discharge / secondary discharge/ storm water overflow)</i>	Not applicable
Improvement works description:	Not applicable
Expected completion date:	Not applicable
Planning status: <i>(grant of permission / exempted development)</i>	Not applicable

Prioritised for funding:	Not applicable
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B.8.4 Supporting documents

Attachment B8 should be submitted in accordance with the Guidance Document as supporting information and the name assigned to it provided in the following table:

Table 26 - Supporting documents

Document type	Document name
Improvement programme	Attachment B.8: Improvement Programme

B.9 Fees

State the appropriate fee as per Columns 2 or 3 of the Third Schedule of the European Union (Waste Water Discharge) Regulations 2007 to 2020.

Table 27 - Fee

Class of Waste Water Discharge		Fee accompanying application / review application (in €)
Discharges from agglomerations with a population equivalent of:	(tick [✓] one as appropriate)	
- more than 10,000		€12,000
- 2,001 to 10,000		
- 1,001 to 2,000	✓	
- 500 to 1,000		
- less than 500		

* Although the design of the new WwTP is 2,600 p.e. The p.e. for the duration of the reviewed licence will not exceed 2000 p.e.

SECTION C: DISCHARGES & MONITORING

C.1. Discharges & Monitoring

The Discharges & Monitoring template should be downloaded from the EPA website (www.epa.ie), completed and submitted in accordance with the Guidance Document.

C.1.1 Supporting document

Attachment C.1 should be submitted in accordance with the Guidance Document as supporting information and the name assigned to it provided in the following table:

Table 28 - Discharges & Monitoring

Document type	Document name
Discharges & Monitoring	Attachment C.1: Discharges and Monitoring

C.2. Measures to Prevent Unintended Discharges

Existing and proposed measures should be identified in the table below. Additional measures may be added to this table as required.

Table 29 -Prevention Measures & Monitoring

Measures to prevent unintended discharges	Existing (Y/N)	Proposed (Y/N)	Applicability	Surveillance measure
Accident prevention procedure:	N	Y	-	Level sensor in PS. Auto switch-over of pumps. Connection for temporary generator. Uninterruptible Power Supply (UPS) backup for telemetry/plant controllers.
Emergency Response Plan and Procedures:	N	Y	-	Alarms for pump and level in PS and WWTP to be fed to SCADA with alarms sent to operators.
Waste water treatment plant				
Measures to prevent unintended discharges	Existing (Y/N)	Proposed (Y/N)	Applicability	Surveillance measure
Alarms / telemetry on waste water treatment plant:	N	Y	-	Alarms for WWTP fed to SCADA with alarms sent to operators

Standby pumps at waste water treatment plant:	N	N	N/A	WWTP hydraulically fed by gravity
Standby equipment or provisions in the event of interruption of the power supply such as a portable generator or equipment with automatic switchover:	N	Y	-	Connection provided for connecting mobile generator. Uninterruptible Power Supply (UPS) backup for telemetry/plant controllers.
Storage capacity at intake to the waste water treatment plant (SWO tank):	N	Y	-	195m ³ storm storage provided
Groundwater monitoring:	N	N	-	-
Network				
Measures to prevent unintended discharges	Existing (Y/N)	Proposed (Y/N)	Applicability	Surveillance measure
Alarms / telemetry on pumping stations:	N	Y	-	Alarms for pump and level in PS to be fed to SCADA with alarms sent to operators
Alarms / telemetry on emergency overflows:	N	Y	-	High level alarm
Standby pumps at pumping stations:	N	Y	-	Auto change-over of pumps
Standby equipment or provisions in the event of interruption of the power supply:	N	Y	-	Connection provided for connecting mobile generator. Uninterruptible Power Supply (UPS) backup for telemetry/plant controllers.
Storage capacity at pump stations:	N	Y	-	12.4m ³ storm storage provided
Monitoring telemetry on SWOs:	N	Y	-	High level alarm
Additional measures:	N	N	-	-

C.2.1 Supporting documents

Attachment C2 should be submitted (in accordance with the Guidance Document) as supporting information and the name assigned to it provided in the following table:

Table 30 - Supporting documents

Document type	Document name
Measures to prevent unintended discharges	Attachment C.2: Measures to Prevent Unintended Discharges

SECTION D: IMPACT ASSESSMENT

D.1. Receiving Waters

Complete the tables, below, as appropriate, for primary discharge, secondary discharge and storm water overflow(s) (SWO).

Table 31 - Receiving waters of Primary Discharge

Type (river, lake, groundwater, coastal, transitional):	River
Name and WFD reference:	Sullane River (SULLANE_030)
WFD Risk:	Not at Risk
WFD Status & year:	High (2013-2018)
WFD Objective & timeframe for achievement:	High Status Objective (2027)
Is the agglomeration identified as a significant pressure?	No
Has the discharges contributed to a deterioration in the quality of the water body?	<p>Prior to the completion of the Ballyvourney/Ballymakeera WwTW project, the discharges from the agglomeration may have been having a negative impact on the Water Framework Directive status as the primary discharge was not fully compliant with the WWDL Ammonia-Total and Ortho-P ELVs. However, it should be noted that the 2013-2018 WFD status is Good upstream (Sullane_020) of the WwTP and High downstream (Sullane_030).</p> <p>Given the requirement of the Sullane River to achieve High status, and due to the presence of the Freshwater Pearl Mussel upstream and downstream of the WwTP, it is considered that this upgrade project will help maintain the High status of the River Sullane (Sullane_030).</p>
Protected areas in the vicinity of the discharges:	<p>The Sullane River is not designated a salmonid waterbody. The Sullane River (below the agglomeration discharge point) has achieved a Q value of 4-5 (High, Unpolluted) status since 1990 and there is no indication that the water quality of the Lee River/Reservoir is negatively impacted by the input from the Sullane River.</p> <p>There are populations of Freshwater Pearl Mussel directly upstream and downstream of the existing discharge.</p>
Are there drinking water abstraction points downstream of waste water discharge points?	No downstream drinking water abstraction points on the River Sullane. The closest designated drinking water river is >12.5 km downstream; the Sullane_060.

European sites hydrologically connected:	The Ballyvourney/Ballymakeery WwTP does not discharge directly into any SAC or SPA. The Cork Harbour SPA is located <i>ca.</i> 68 km downstream of the primary discharge point. This site is designated as a SPA under the Birds Directive for the conservation of wild birds. The WwTP has no other hydrological connectivity to any other European sites.
Trophic status of transitional / coastal waters:	Not Applicable
Is there a groundwater protection scheme in place or to be provided in the vicinity of such discharge?	Not Applicable
Status of adjacent waterbodies: (e.g. upstream and downstream of the receiving waterbody)	<u>U/S</u> Sullane_020 (Good) <u>D/S</u> Sullane_040 (Good)
95%ile River Flow upstream of primary discharge point: (if applicable)	0.26m ³ /s
Receiving water monitoring stations: (code and distance from primary discharge point)	<u>U/S</u> RS19S020170 – <i>ca.</i> 1.5 km <u>D/S</u> RS19S020200 – <i>ca.</i> 1.5 km

Refer to **Attachment D.1: Map 9** which displays the receiving water designations in proximity to the primary discharge (SW001), Storm Water Overflows (SW002 & SW003) and Emergency Overflows (SW004).

Table 32 - Receiving waters of secondary discharges

Type (freshwater, lake etc.)	Not applicable
Name and WFD Ref.	Not applicable
WFD Risk	Not applicable
WFD Status (year)	Not applicable
WFD Objective (year)	Not applicable
Is the agglomeration identified as a significant pressure?	Not applicable
Have the discharges contributed to a deterioration in the quality of the water body?	Not applicable

Protected areas downstream	Not applicable
Are there drinking water abstraction points downstream of waste water discharge points?	Not applicable
European sites hydrologically connected	Not applicable
Trophic status of transitional / coastal waters	Not applicable
Is there a groundwater protection scheme in place or to be provided in the vicinity of such discharge?	Not applicable
Status of adjacent waterbodies (e.g. upstream and downstream of the receiving waterbody)	Not applicable
95%ile River Flow upstream of secondary discharge point (if applicable)	Not applicable
Receiving water monitoring stations upstream and downstream (code and distance from secondary discharge point)	Not applicable

Table 33- Receiving waters of discharges from SWOs (1 no. new SWO from new WwTP; 1 no. SWO from Pumping Station)

Receiving Waters name and code	WFD status	No. of compliant SWOs ¹	No. of SWOs under assessment or remediation	Is the SWOs identified as a significant pressure?	WFD objective and date
Sullane_030	High	2	0	No	High Status Objective (2027)

¹ Compliant with DoECLG criteria set out in 'Procedures and Criteria in Relation to Storm Water Overflows'.

Table 34 - Ambient monitoring – upstream monitoring point

EDEN Code (where applicable):	RS19S020170	
Licence Code:	aSW1u	
Monitoring Location:	120212E	076947N
Point Type:	River	
Name of Receiving Water	Sullane River (Sullane_020)	

Table 35 - Ambient Monitoring – upstream monitoring results¹ (Data: 2019-June 2021: Source: Data Source: EDEN Compliance Data)

Parameter	pH (pH Unit)	BOD (mg/l)	Ortho-phosphate (mg/l)	Total Ammonia (mg/l)	DO (mg/l)	DO (%sat)	Total Nitrogen (mg/l)	Temp (°C)
Number of Samples	11	11	11	11	11	11	11	11
Max result	7.5	2.5	0.026	0.029	42	107.3	20.2	7.5
Min result	7.1	0.5	0.004	0.006	1.25	96.1	6.7	7.1
Average result	7.36	1.318	0.010	0.0144	7.95	101.2	12.8	7.36
Mean EQS as per S.I. No. 77/2019 *		≤1.3	≤ 0.025	≤0.04				
Overall compliance with relevant EQS *		No	Yes	Yes				

*Mean High status under S.I. No. 77 of 2019

Note: Where data was reported as less than the limit of detection, LOD/2 was applied

Table 36 - Ambient monitoring results – downstream

EDEN Code (where applicable):	RS19S020200	
Licence Code:	aSW1d	
Monitoring Location:	122720E	075581N
Point Type:	River	
Name of Receiving Water	Sullane River (Sullane_030)	

Table 37 – Ambient Monitoring – downstream monitoring results¹ (Data 2019-June 2021: Source: Data Source: EDEN Compliance Data)

Parameter	pH (pH Unit)	BOD (mg/l)	Ortho-phosphate (mg/l)	Total Ammonia (mg/l)	DO (mg/l)	DO (%sat)	Total Nitrogen (mg/l)	Temp (°C)
Number of Samples	11	11	11	11	11	11	11	11
Max result	7.6	2.7	0.019	0.055	13	103.1	19.9	7.6

Parameter	pH (pH Unit)	BOD (mg/l)	Ortho-phosphate (mg/l)	Total Ammonia (mg/l)	DO (mg/l)	DO (%sat)	Total Nitrogen (mg/l)	Temp (°C)
Min result	6.5	0.5	0.006	0.015	1.25	92.4	6.7	6.5
Average result	7.35	1.25	0.010	0.0270	5.16	99.9	12.6	7.35
Mean EQS as per S.I. No. 77/2019 *		≤1.3	≤ 0.025	≤0.04				
Overall compliance with relevant EQS *		Yes	Yes	Yes				

*Mean High status under S.I. No. 77 of 2019

Note: Where data was reported as less than the limit of detection, LOD/2 was applied

Table 38 - Proposed Receiving Water Monitoring

EDEN Code (where applicable)	Licence Code	Monitoring Location		Point Type	Name of Receiving Water
RS19S020170	aSW1u	120212E	076947N	River	Sullane_020
RS19S020200	aSW1d	122720E	075581N	River	Sullane_030

Table 39 - Proposed Monitoring Regime (as per D0299-01)

Parameter	Units	Monitoring Frequency	Analysis method/Technique
pH	pH units	Quarterly	pH meter and Recorder
cBOD	mg/l	Quarterly	Standard method
COD	mg/l	Quarterly	Standard method
Suspended Solids	mg/l	Quarterly	Standard method
Ammonia – Total (as N)	mg/l	Quarterly	Standard method
Ortho-Phosphate (as P) unspecified	mg/l	Quarterly	Standard method
Visual inspection	-	Daily	For colour and odour

D.2 Assessment of impact on receiving waters

This part of the application form collects reports on the assessment of the impact of existing and proposed waste water discharges on the environment including any environmental medium other than that into which the discharges take place or are to take place. The impact assessment reports address at least the impact on the quality of receiving waters (surface water or groundwater) and may, as appropriate, address European sites.

Where a Natura Impact Statement (NIS) does not accompany the application, you are required to provide an Appropriate Assessment (AA) screening report.

Is this application accompanied by an NIS?	No
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D.2.1 Supporting document

The impact Assessment Report should be submitted (as Attachment D2) in accordance with the guidance and the name assigned to the attachment(s) provided in the table below.

Table 40 - Assessment Reports.

Document type	Document name
Impact assessment report	Attachment D.2.1: Impact Assessment Report
Natura Impact Statement	Not applicable
AA Screening Report	Attachment D.2.2: AA Screening Report
Waste Assimilative Capacity	Attachment D.2.3: Waste Assimilative Capacity (WAC)
Priority Substance Assessment Report	Attachment D.2.4: Priority Substance Assessment Report

D.3 Closing Remarks

This part of the application form is a short statement summarising the environmental outcome of your application and assessment.

State the environmental outcome of your application and assessment and reasons for same:

Answer here:

The objective of the of the Ballyvourney/Ballymakeera upgrade project was to meet the current Waste Water Discharge Licence (WWDL) - Licence Register Number: D0299-01, issued by the EPA in accordance with the Waste Water Discharge (Authorisation) Regulations (S.I. No. 684 of 2007) (now S.I. No. 214 of 2020) on the 9th October 2015.

The Ballyvourney/Ballymakeera WwTW has been designed to ensure that emissions from the plant will not result in the contravention of EU Directives and National Regulations.

The proposed effluent standards for the new Ballyvourney/Ballymakeera WwTP, in compliance with the WWDL D0299-01 ELVs, gives 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 of the receiving waterbody, the Sullane River.

The BOD, Ortho-P and Ammonia ELVs were set by the EPA taking account of the sensitivity of the receiving River Sullane with particular reference to the Freshwater Pearl Mussel (*Margaritifera margaritifera*).

The 2 no. SWOs within the agglomeration have been designed in compliance with 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.

Based on the above, and the updated WAC calculations (*based on 2046 design horizon*), along with the conclusions of the AA Screening Report, Priority Substances Assessment Report and Impact Assessment Report, which support this review application, it is considered that the operational discharges from the Ballyvourney/Ballymakeera agglomeration will have no significant effects on the receiving aquatic environment, alone or in combination with other plans and projects.

In summary, Irish Water is committed to ensuring that the Ballyvourney/Ballymakeera WwTW operates in a manner that supports the achievement of the water body objectives under the Water Framework Directive, and their obligations under the Birds and Habitats Directives and all applicable Directives and National Regulations.

The effluent discharge standards (*i.e.*, ELVs as per D0299-01) and the operational design of the overflows from the upgraded Pumping Station and new WwTP, will ensure that the discharges from the agglomeration contribute towards maintaining the High WFD status of the Sullane River (Sullane_030) in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019) and will ensure that there is no environmental risk posed to the receiving water environment as a result of the discharges from the agglomeration.

SECTION E: DECLARATION

E.1. Declaration

The Signed Declaration template should be downloaded from the EPA website (www.epa.ie), completed and submitted in accordance with the Guidance Document.

E.1.1 Supporting documentation

The name assigned to the Signed Declaration document should be provided in the following table:

Table 41 - Signed Declaration document name

Document type	Document name
Declaration	Attachment E.1: Signed Declaration

END

ATTACHMENT D.2.1: Impact Assessment Report

1. Introduction

This Report provides a summary of the Impact Assessments prepared to determine the impact of the discharges from the Ballyvourney/Ballymakeera agglomeration on the receiving waterbody, Sullane River (Sullane_030), and its associated designations, and also addresses the criteria as outlined in **Section D.2** of the EPA guidance document.

2. Water Environment

Ballyvourney/Ballymakeera WwTP discharges to the Sullane River (Sullane_030). Sullane_030 is within the Lee Cork Harbour and Youghal Bay Catchment (Hydrometric Area 19). This catchment includes the area drained by the River Lee and all streams entering tidal water in Cork Harbour and Youghal Bay and between Knockaverry and Templebreedy Battery, Co. Cork, draining a total area of 2,153 km². The largest urban centre in the catchment is Cork City. The other main urban centres in this catchment are Ballincollig, Macroom, Carrigaline, Crosshaven, Blarney, Glanmire, Midleton, Carrigtohill, Cobh, Passage West and Belvelly.

The draft 3rd cycle Catchment Report (2021) for this hydrometric area, determined that for river waterbodies excess nutrients remain the most prevalent issue, along with morphology, organic pollution, and hydrology. Pressures identified affecting the greatest number of waterbodies within hydrometric Area 19 include hydromorphology, followed by agriculture, urban run-off, urban wastewater, domestic waste water, forestry, mines and quarries and industry.

The Sullane_030 is High Status and Not at Risk. There are no identified significant pressures for the Sullane_030.

The Biological quality rating (Q Value - 2004 to 2020) within this stretch of the Sullane_030 (RS19S020200, SULLANE - Br d/s Douglas R confl) is also High (Q4-5).

The Sullane_030 waterbody trends (at Br d/s Douglas R confl, downstream of the operational discharges) for Ortho-P for 2013-2018 are Downwards (*i.e.*, decreasing concentrations); however, for Ammonia no trend is noted (*i.e.*, approximately maintaining concentration levels). For 2013-2018, both Ammonium and Ortho-P are noted as High under WFD status.

Recent ambient monitoring data (Jan 2019-July 2021) for Sullane_020 upstream and Sullane_030 downstream is shown in the Tables below.

Table D.2.1 - Ambient Monitoring – Upstream of the Primary Discharge Location at RS19S020170 (*Data Source: EDEN Compliance Data*)

Parameter	pH	BOD	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (mg/l)	DO(%sat)	Temp (°C)
Number of Samples	11	11	11	11	11	11	11
Max result	7.5	2.5	0.026	0.029	42	107.3	20.2

Parameter	pH	BOD	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (mg/l)	DO(%sat)	Temp (°C)
Min result	7.1	0.5	0.004	0.006	1.25	96.1	6.7
Average result	7.36	1.318	0.010	0.0144	7.95	101.2	12.8
Mean High EQS *		≤1.3	≤ 0.025	≤0.04			
Overall compliance with relevant EQS (High Status)		No	Yes	Yes			

*Mean High status under S.I. No. 77 of 2019

Note: Where data was reported as less than the limit of detection, LOD/2 was applied.

Table D.2.2 - Ambient Monitoring – Downstream of the Primary Discharge Location at RS19S020200

Parameter	pH	BOD	Ortho-P (mg/l)	Total Ammonia (mg/l)	DO (mg/l)	DO(%sat)	Temp (°C)
Number of Samples	11	11	11	11	11	11	11
Max result	7.6	2.7	0.019	0.055	13	103.1	19.9
Min result	6.5	0.5	0.006	0.015	1.25	92.4	6.7
Average result	7.35	1.25	0.010	0.0270	5.16	99.9	12.6
Mean High EQS *		≤1.3	≤ 0.025	≤0.04			
Overall compliance with relevant EQS (High Status)		Yes	Yes	Yes			

*Mean High status 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 ambient monitoring results upstream and downstream of the discharge for the period between January 2019 to July 2021, the mean concentration for Ammonia and Ortho-P are within the required EQSs for High status. In terms of BOD, the upstream mean concentration is slightly above mean EQS, however the downstream concentration is below the required mean EQS for High status. The operational standards (as per D0299-01 ELVs) will ensure that the operational discharges from the agglomeration contribute towards maintaining High status of the River Sullane in accordance with the European Union

Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019) (see **Section 3** below).

Although the Sullane River is not designated as a *Margaritifera* First Order River, Freshwater Pearl Mussel (*Margaritifera margaritifera*) have been recorded, both upstream and downstream of the discharge. ELVs of 0.8 mg/l for Ortho-P, 1.5 mg/l for Ammonia and 25 mg/l for BOD have been put in place to ensure compliance with the High status standards set in European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019). These ELVs have been set by the EPA taking account the sensitivity of the receiving River with particular reference to the Freshwater Pearl Mussel (*Margaritifera margaritifera*) and came into effect on the 31st December 2015 under D0299-01. To inform this licence review, using the ELVs as per D0299-01, a WAC calculation was completed using the actual background concentration based on January 2019 to June 2021 ambient monitoring data and the EPA Flow Estimation of 0.26 m³/s (EPA Estimated 95thile Flow at Station 19055 (Up to 2018)) and the maximum WwTP design p.e. of 2,600 (rather than the projected 10-year load of 968 p.e) (see **Section 3** below). The calculations confirmed that there would be sufficient assimilative capacity in the receiving water, the Sullane River, to receive the flows and loads associated with the new WwTP and to ensure that the discharge from the WwTP contributes towards maintaining High status of the Sullane_030 in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019).

There are no salmonid waterbodies, nutrient sensitive waters or drinking water abstraction points within the region of or relevance to the Ballyvourney/Ballymakeera agglomeration.

There are no European sites immediately downstream of the operational discharges. The nearest European site downstream is the Cork Harbour SPA which is located *ca.* 68 km downstream of the agglomeration. Due the distance of this site from the operational discharges, and the large dilution capacity of downstream waterbodies, it is considered that there is no likelihood of significant effects from the operation discharges on the Qualifying Interests of this sites (including *ex-situ* species).

St Gobnet's Wood SAC (Site Code: 000106) and Mullaghanish to Musheramore Mountains SPA (Site Code: 004162) are located *ca.* 1.5 km to the northwest, and *ca.* 1.3 km northeast of the discharge points respectively. The operational discharges have no hydrological connectivity with these two sites.

The Gearagh SAC and SPA are both approximately 9.8 km away from the operational discharges. They are located on the River Lee, but upstream of the confluence with the River Sullane.

The Blackwater River SAC and Killarney National Park, Maggillycuddy's Reeks and Caragh River Catchment SAC are approximately 11.9 km and 8.5 km north of the operational discharges, respectively. These sites are not hydrologically connected to the Ballyvourney/Ballymakeera operational discharges.

There are 9 pNHAs and 1 NHA within 15 km of the WwTP, the closest of which is St. Gobnet's Wood (*ca.* 1.5 km north-east of the WwTP). The St. Gobnet's Wood pNHA comprises terrestrial woodland habitat that is located on the Sullane River upstream from the discharge and as such there is no pathway for potential impacts. No potential ecological pathway exists by which any other NHA or pNHA could be affected by the operational discharges.

Based on the above it is considered that there is no environmental risk posed to the receiving water environment as a result of the discharges from the agglomeration.

3. Waste Assimilative Capacity Calculations

A WAC calculation was carried out by the EPA inspector in 2015 using the mean background concentration of each parameter in the receiving water and the design capacity of 1,600 p.e. ELVs of 0.8 mg/l for Ortho-P, 1.5 mg/l for Ammonia and 25 mg/l for BOD were set to ensure compliance with the High status standards set in European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019). These ELVs take of account the sensitivity of the receiving River with particular reference to the Freshwater Pearl Mussel (*Margaritifera margaritifera*). These limits came into effect from the 31/12/2015, as per D0299-01.

To inform this licence review, using the ELVs as per D0299-01, a WAC calculation was completed using the actual background concentration based on January 2019 to June 2021 ambient monitoring data and the EPA Flow Estimation of 0.26 m³/s (EPA Estimated 95%ile Flow at Station 19055 (Up to 2018)).

Based on the actual background concentration, the WAC calculations, carried out using the maximum WwTP design p.e. of 2,600 (rather than the projected 10-year load of 968 p.e), showed that there would be sufficient assimilative capacity in the receiving water, the Sullane River, to receive the flows and loads associated with the new WwTP.

Table 1.0 - WAC for 2,600 p.e (WwTP Design – Design Horizon to 2046)

Parameter	Upstream River Conc <small>Note 1</small>	ELV	Contribution from Primary Discharge (mg/l)	Predicted D/S Conc (mg/l)	Relevant Standard (mg/l) (High Status)
BOD	1.318	25	0.635	1.919	<2.2 <small>Note 2</small>
Ortho-P (MRP)	0.0144	0.8	0.020	0.030	<0.045 <small>Note 2</small>
Total Ammonia	0.0100	1.5	0.038	0.052	<0.09 <small>Note 2</small>

Note 1: Based on grab sampling carried out between 2019-2021.

Note 2: European Union Environmental Objectives (Surface Waters) (Amendment). Regulations 2019 (S.I. No. 77 of 2019)

For completeness **Table 2** below provides the WAC calculations based on the population equivalent to which this application relates (1,800) at average flow of 506 m³/day.

Table 2.0 - WAC for 1,800 p.e.

Parameter	Upstream River Conc <small>Note 1</small>	ELV	Contribution from Primary Discharge (mg/l)	Predicted D/S Conc (mg/l)	Relevant Standard (mg/l) (High Status)
BOD	1.318	25	0.443	1.738	<2.2 <small>Note 2</small>
Ortho-P (MRP)	0.0144	0.8	0.027	0.024	<0.045 <small>Note 2</small>
Total Ammonia	0.0100	1.5	0.014	0.041	<0.09 <small>Note 2</small>

Note 1: Based on grab sampling carried out between 2019-2021.

Note 2: European Union Environmental Objectives (Surface Waters) (Amendment). Regulations 2019 (S.I. No. 77 of 2019)

In summary, achieving the ELVs as D0299-01 will ensure that the discharge from the WwTP contributes towards maintaining High status of the Sullane_030 in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019) and will ensure that there is no environmental risk posed to the receiving water environment as a result of the discharge from the new WwTP.

Refer to **Attachment D.2.3** for the WAC calculations.

4. Appropriate Assessment

An Appropriate Assessment (AA) Screening Report of the operational discharges from the Ballyvourney/Ballymakeera agglomeration was prepared to inform this WWDL review process (see **Attachment D.2.2**). It assessed whether the discharges, alone or in combination with other plans and projects, are likely to have significant effects on a European Site(s) in view of best scientific knowledge and the conservation objectives of the site(s).

There are no European sites immediately downstream of the operational discharges. The nearest downstream European site is the Cork Harbour SPA which is *ca.* 68 km downstream of the operational discharges. Due to the distance of this site from the operational discharges and the large dilution capacity of downstream River Lee, it is considered that there is no likelihood of significant effects from the operation discharges on the Qualifying Interests of these sites (including *ex-situ* species).

St Gobnet's Wood SAC and Mullaghanish to Musheramore Mountains SPA are located *ca.* 1.5 km to the northwest, and *ca.* 1.3 km northeast of the discharge points respectively. The operational discharges have no hydrological connectivity with these two sites.

The Mullaghanish Bog SAC is located *ca.* 5.3 km north of the operational discharges. There is no hydrological connectivity however between the discharges and this site.

The Gearagh SAC and SPA are both *ca.* 9.8 km away from the operational discharges. They are located on the River Lee, but upstream of the confluence with the River Sullane.

The Blackwater River SAC and Killarney National Park, Maggilycuddy's Reeks and Caragh River Catchment SAC are approximately 11.9 km and 8.5 km north of the operational discharges, respectively. These sites are not hydrologically connected to the Ballyvourney/Ballymakeera operational discharges.

The screening assessment undertaken demonstrates that the operational discharges are not likely to have significant effects, in terms of maintaining favourable conservation status of the qualifying interests, on any European Sites having regard to their conservation objectives, for the following reasons.

- The nearest downstream European site, is the Cork Harbour SPA which is *ca.* 68 km downstream of the operational discharges.
- The absence of hydrological connectivity between the discharges from the agglomeration and the St. Gobnet's Wood SAC, Mullaghanish Bog SAC, Mullaghanish to Musheramore Mountains SPA, Blackwater River SAC, Killarney National Park, Maggilycuddy's Reeks and Caragh River Catchment SAC and the Gearagh SAC and SPA.
- The High water quality status assigned to the receiving water (Sullane River).

- The Ballyvourney/Ballymakeera WwTP and its primary effluent discharge (SW001) have been designed to meet the standards to satisfy all relevant regulatory requirements including the Surface Water Regulations (S.I. No. 77 of 2019) and the Urban Wastewater Treatment Regulations (S.I. No. 254 of 2001).
- The capacity of the receiving water to assimilate the discharges from the agglomeration.
- The design of the Storm Water Overflows (SW002, SW003 and SW004) in compliance with 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.
- Current monitoring of the Sullane River indicates that current discharge is not impacting on the ecological status of the Sullane River.

Based on the above, it has been concluded following screening, that the operational discharges from the Ballyvourney/Ballymakeera agglomeration are not directly connected with or necessary to the management of any European Site and that it can therefore be excluded, on the basis of objective information, that the operational discharges, individually or in combination with other plans or projects, will have a significant effect on any European Site. Therefore, it is concluded that an Appropriate Assessment and the production of a Natura Impact Statement is not required.

5. Priority Substance Assessment

An assessment of the potential for impacts on receiving waters from priority substances in the primary discharge has been carried out to inform this WWDL application. Estimated data from the PRTR reporting tool was used to inform this desktop assessment. The assessment considered the primary discharge relevant to EQSs for priority substances in surface waters, as set out in the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as amended (now S.I No. 77 of 2019).

It was concluded that none of the substances listed in the Specific Pollutants, Priority and Priority Hazardous Substances are likely to be present in the effluent discharge to the Sullane River, at concentrations above the standards in S.I No. 77 of 2019, as amended.

This Report is contained in **Attachment D.2.4**: Priority Substance Assessment.

6. Shellfish Water Assessment

There are no designated shellfish waters located in the downstream in the vicinity of the discharges.

7. Bathing Waters

There are no designated bathing waters on any of the receiving waters downstream of the agglomeration.

8. River Flow Estimation

The 95%ile flow for the receiving waterbody, Sullane_030, is 0.26 m³/s. The source of this data is directly from the EPA Hydrometric & Groundwater Section calculation. Flow was calculated based on estimated flow at Station 19055 (Oct 2011 – Sept 2018).

9. Combined Approach

The Waste Water Discharge Authorisation under the European Union (Waste Water Discharge) Regulations 2007 to 2020, specify that a '*combined approach*' in relation to licensing of waste water works must be taken, whereby the emission limits for the discharge are established on the basis of the stricter of either or both, the limits and controls required under the Urban Waste Water Treatment Regulations, 2001, as amended, and the limits determined under statute or Directive for the purpose of achieving the environmental objectives established for surface waters, groundwater or protected areas for the water body into which the discharge is made.

The effluent standards for the new WwTP are in compliance with the WWDL D0299-01 ELVs and 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 relevant status/designations of the receiving waterbody, the Sullane River.

10. Compliance with Relevant National or EU Legislation

As per **Attachment B.6**, the Ballyvourney/Ballymakeera WwTP has been designed to ensure that the emissions from the agglomeration will comply with, and will not result in the contravention of, EU Legislation and National Regulations.

The operation of the new WwTP is expected to have a positive impact in terms of reduction in the levels of nutrients being discharged into the Sullane River. The discharge activities will not cause a deterioration in the chemical status in the relevant receiving waterbody and will not compromise the achievement of the objectives and EQSs established for the European sites (*e.g.*, Cork Harbour SPA, St Gobnet's Wood SAC, Mullaghanish Bog SAC, The Gearagh SAC, Blackwater River SAC, Killarney National Park, Maggilycuddy's Reeks and Caragh River Catchment SAC, Mullaghanish to Musheramore Mountains SPA and The Gearagh SPA), water dependant species and natural habitats, or any other designations.

11. Data Sources

The following data sources were used to complete this application.

- Online data available on held by the NPWS, the EPA, NIEA and Irish Water:
 - www.npws.ie
 - epawebapp.epa.ie
 - gis.epa.ie/EPAMaps
 - <https://gis.daera-ni.gov.uk/arcgis/apps/webappviewer/>
 - catchments.ie
- GIS data for European site boundaries obtained in digital format online from European Environmental Agency
- Irish Water/Cork County Council Monitoring & Sampling Data

12. Cumulative and In Combination Effects

The Appropriate Assessment Screening Report addresses in combination effects. Refer to **Attachments D.2.2**.

13. Mixing zone or transitional areas of exceedance

Based on the 95%ile River flow (0.26 m³/s), and the Ballyvourney/Ballymakeera WwTP DWF (design as constructed of 585 m³/d), there are 38 dilutions estimated immediately in the proximity of the discharge point.

14. Dilutions and retention times for lakes

Not applicable. No discharges to lakes.

15. The impact of the discharges on any environmental media other than those into which the emissions are to be made

Not applicable. No other relevant media into which the emissions are to be made.

16. Groundwater Details

Not applicable. No discharge to ground waters.

17. High Status Waterbodies

The Ballyvourney/Ballymakeera WwTP discharges to the Sullane River Sullane_030. The Sullane_030 is classified as High status WFD Waterbody. The downstream Sullane_050, is also classified as High WFD status (2013-2018). The new WwTP provides tertiary treatment including nutrient removal. The operation of the WwTP will result in an improved wastewater discharge to the receiving waterbody. The effluent discharge standards have been set to ensure that the operational discharges from the agglomeration contribute towards maintaining the High status of the River Sullane in accordance with the European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 (S.I. No. 77 of 2019).

18. Fresh Water Pearl Mussels

Freshwater Pearl Mussel (*Margaritifera margaritifera*) have been noted upstream and downstream of the WwTP discharge point (Moorkens, 2007). The Pearl Mussel is listed under Annex II and V of the Habitats Directive (92:43: EEC). It is legally protected in Ireland under Schedule 1 of the Wildlife Act (1976 (Protection of Wild Animals) (Statutory Instrument No. 112, 1990) and the European Communities (Natural Habitats) Regulations (Statutory Instrument No. 94, 1997). This part of the Sullane River is not a designated Freshwater Pearl Mussel habitat under the Environmental Objectives (Freshwater Pearl Mussel) Regulations, S.I. No. 296 of 2009. There is no Freshwater Pearl Mussel Sub Basin Management Plan for the Sullane River catchment, however, NPWS have indicated that it is an important population. Accordingly, the ELVs set for the WwTP primary discharge (*i.e.*, 0.8 mg/l for Ortho-P, 1.5 mg/l for Ammonia and 25 mg/l for BOD) are based on the High status standards as laid down in the European Union Environmental Objectives (Surface Waters) (Amendment). Regulations 2019 (S.I. No. 77 of 2019) and have been put in place by the EPA in D0299-01 taking account of the sensitivity of the receiving River with particular reference to the Freshwater Pearl Mussel (*Margaritifera margaritifera*).

19. For waste water treatment plants with coastal discharges, provide evidence that the end of the discharge pipe is below the mean spring tide low water line

Not applicable. Discharge is not to coastal water.