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

04/04/2023

IW ref: LT0634

Dear Inspector,

Re: Mallow Waste Water Discharge Licence Review Application D0052-02 - Unsolicited Response

We refer to the above Waste Water Discharge Licence (WWDL) Review Application D0052-02 for Mallow agglomeration that was lodged with the EPA in December 2022.

Since lodging the application, further information has come to light.

In the original WWDL Review Application, we stated that the Mallow WW Agglomeration had 1 No. unlicenced Storm Water Overflow (SWO) at Quarterstown (NGR 154984E 097847N). The application proposed the removal of the 8 No. existing licensed SWOs (as per D0052-01) and the above 1 No. unlicensed SWO at Quarterstown.

It has since been determined by the contractors onsite that there is no unlicensed SWO at Quarterstown. Thus decommissioning at this location was discounted.

The following application documentation has been amended to reflect the above information:

- WWDL Review Application Form;
- Attachment A.1 – Non-Technical Summary.

These updated documents (showing tracked changes) are attached.

The following application documentation also refers to the 1 No. unlicensed SWO at Quarterstown, which has now been discounted.

- Attachment B.5 – EIAR Non-Technical Summary & EIAR
  Refers to Mallow Networks Upgrade Contract to include removal of 9 No. SWOs. This should read 8 SWOs.
- Attachment B.6 – Compliance with Regulations
  Refers to removal of 1 No. unlicensed SWO at Quarterstown.
- Attachment B.8 – Improvement Programme
  Refers to removal of 1 No. unlicensed SWO at Quarterstown.
- Attachment D.2 – Impact Assessment
  Refers to Mallow Upgrade Contract to include removal of 9 No. SWOs. This should read 8 SWOs.
- Attachment D.2.2 – AA Screening & NIS Report
  Refers to Mallow Upgrade Contract to include removal of 9 No. SWOs. This should read 8 SWOs.

Enclosed/Attachment:

- WWDL Review Application Form REV 2 04/04/23;
- Attachment A.1 – Non-Technical Summary REV 2 04/04/23.

Yours sincerely,

Sheelagh Flanagan

_____

Sheelagh Flanagan
Wastewater Strategy

Waste Water Discharge Authorisation

Application Form

EPA Ref. Nº: *(Office use only)*	

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)	D0052-01

If A is applicable, provide the following information:

Grounds for review on which the application is being made:
Following a Waste Water Discharge Authorisation examination by the EPA on 30th 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, D0052-01, does not satisfy the environmental requirements of the WWDA 2007 Regulations as amended, and that a WWDA review was required. The reasons for this conclusion and recommendation are summarised as follows: 1. The licence was granted over 3 years ago. 2. Planning permission has been granted for proposed development works associated with the licence. 3. The agglomeration is included in Irish Water's investment plan. 4. Non-compliance with:

- Upgrade of the sewerage network, as set out in Schedule C: Specified Improvement Programme, by 01/06/2016
- Installation of a pumping station overflow holding tank, as set out in Schedule C: Specified Improvement Programme, by 01/06/2016 and
- Discontinuation of storm water overflow discharges, as set out in Schedule C: Specified Improvement Programme, of this licence, by 01/06/2016.

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

Date on which the waste water works became / becomes operational:	The Networks Upgrade Contract commenced on site in April 2021 and works are ongoing with an estimated completion date of Janaury 2023. The Mallow WwTP Upgrade and new Bridge Street Pumping Station Contract commenced in May 2021 and works are ongoing with an estimated completion date of December 2023.

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	

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*:	WWDA Management Specialist
Address:	Colvill House 24-26 Talbot Street Dublin 1
Tel:	01 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:	Mallow
Name of townland or townlands of the agglomeration served by a waste water works to which the application relates:	Mallow, Annabella, Lackanalooha, Kilknockan, Spaglen, Ballydahin, Quartertown Lower, Killetra, Gooldshill, and Carhookeal
Included on EPA Waste Water Priority List?	Yes
Included on European Commission infringement list?	Yes

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

Table 7 - Waste Water Works

Description of the existing waste water works	Mallow is a town in County Cork, approximately 30km north of Cork City and West of Fermoy. The town falls at the intersect of the N20 and N72. The River Blackwater runs through the town. The agglomeration is spread over 10 no. townlands namely, Mallow, Annabella, Lackanalooha, Kilknockan, Spaglen, Ballydahin, Quartertown Lower, Killetra, Gooldshill, and Carhookeal. Mallow agglomeration is currently served by a combined sewer, with separated foul and storm drainage in newer developments on the outskirts of town. The wastewater drains from the town to a Pumping Station at Bridge Street where it is then pumped to the WwTP for treatment. The agglomeration is currently in breach of Articles 3, 4(1), 5(1) and 12 of the Urban Wastewater Treatment Directive (UWWTD) (91/271/EEC) and as such is the subject of an infringement notice from the European Court of Justice (ECJ). The effluent from the agglomeration arises from mainly from domestic, commercial and education sources. There are 2 no licensed Trade Effluent activities (i.e., IW-DTS-914910-01 and IW-FOG-683679-01) discharging to the agglomeration sewers under Section 16 of the Local Government (Water Pollution) Acts 1977 and 1990. *WwTP* The WwTP at Ballyellis, Mallow is located at NGR 157318E, 097988N, and currently provides Secondary Treatment with Phosphorous Removal to the Mallow agglomeration. There is currently no N removal. The WwTP has a current operational plant capacity of 10,500 p.e. The current design capacity of the WwTP is 18,000 p.e, however only 1 no. process stream is operational, thereby limiting the capacity of the plant. In its' current configuration and setup, the plant is organically overloaded and cannot cater for the existing loads (current collected load (peak week) *ca.* 14,648 p.e. (2021 AER)). Treated effluent from the WwTP discharges directly to the Blackwater River (Blackwater (Munster)_140)

	at 157530E, 098140N which is part of the Blackwater (Munster) catchment area (HA 18). There is a sludge acceptance unit and holding tank at the at the WwTP site, however no imports from Irish Water treatment plants are currently being received at this unit. Small volumes of imports of domestic and septic tanks sludges are received but these are discharged directly to the WwTP inlets works. It was report in the 2021 AER, that these inputs represented *ca*. 0.37% of the total load of the WwTP. *Network Pumping Station* Currently, there is 1 no. Pumping Station (PS) at Bridge Street which has 1 no. Storm Water Overflow (SWO) associated with it (SW002). This discharges to the Blackwater River (Blackwater (Munster)_140) at NGR 156235, 097966. *Mallow Agglomeration Overflows* There are currently 8 no. licenced overflows within the agglomeration of which 7 no. are SWOs on the network and 1 no. SWO from the existing Bridge Street Pumping Station. ~~There is also 1 no. SWO at Quarterstown (NGR 154984E 097847N) which is unlicensed.~~ Refer to *Discharge Scenario as per D0052-01* below for further details.
Description of proposed development, if any, to which the application relates:	*Mallow Sewerage Scheme Upgrade Project* The Mallow agglomeration (D0052-01) is currently served by a sewerage system which comprises mainly combined sewers in the Town Centre area, with separated foul and storm drainage in newer developments on the outskirts of the town. A number of streets in the town have separate surface water sewers which discharge to local streams or to the River Blackwater. The existing sewer network in Mallow contains a number of Storm Water Overflows (SWOs) which frequently discharge untreated wastewater to the River Blackwater in the absence of any stormwater storage. The existing network is also insufficient to comply with Irish Water's design criterion for no flooding from the network in a 1:20 year return period storm event.

	The WwTP has a current operational plant capacity of 10,500 p.e. The current design capacity of the WwTP is 18,000 p.e, however only 1 no. process stream is operational, thereby limiting the capacity of the plant. In its' current configuration and setup, the plant is organically overloaded and cannot cater for the existing loads (current collected load (peak week) ca. 14,648 p.e. (2021 AER)). As noted above the agglomeration is currently in breach of Articles 3, 4(1), 5(1) and 12 of the Urban Wastewater Treatment Directive (UWWTD) (91/271/EEC) and as such is the subject of an infringement notice from the European Court of Justice (ECJ). In April 2019, Irish Water applied to Cork County Council Planning Authority under Section 34 of the Planning and Development Act, 2000 (as amended) for the Mallow Sewerage Scheme Upgrade Project (Ref. Planning Register Number: 195078). A final grant of planning was obtained on the 13th January 2020, subject to 41 no. conditions. The main objectives of the Mallow Sewerage Scheme Upgrade Project are to ensure compliance with the WWDL - Licence Register Number: D0052-01 issued by the EPA in accordance with the Waste Water Discharge (Authorisation) Regulations (S.I. No. 684 of 2007) on the 18th December 2012 (now S.I. No. 214 of 2020), and subsequent Technical Amendments A and B, and to ensure compliance with Irish Water's Water Services Strategic Plan (WSSP) which includes an objective to target capital investment to progressively achieve compliance with the UWWTD and the Water Framework Directive (WFD). The Mallow Sewerage Scheme Upgrade Project, which consists of 2 no. contracts, namely the Networks Upgrade Contract and the Mallow WwTP Upgrade and new Mallow Bridge Pumping Station Contract, consists of the following: • Removal of 8 no. existing SWOs as per D0052-01~~, and 1 no. unlicensed SWO at Quarterstown.~~ • Increase the capacity of the network to convey a 1:20 year return period storm for the 30-year design horizon without causing flooding.

	• A new pumping station to replace the existing Bridge Street Pumping Station at Bearforest Lower. • Provision of a stormwater storage tank (2,400m^3) at the Bridge Street Pumping Station and interconnecting pipework and overflow to the River Blackwater (Overflow NGR 156636E, 097862N). The SWO at the new Pumping Station (*i.e.*, SW010 at NGR 156636E, 097862N) has been designed to operate to meet the definition of '*Storm Water Overflow*' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007 to 2020 and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995. • Provision of additional forward pumping capacity to the WwTP. Forward flow to the WwTP from new Bridge St. Pumping station will be limited to 3 times Dry Weather Flow (DWF). Flows in excess of 3DWF will spill into the storm sump at the Pumping Station and will then be pumped to the new storm tank. • Replacement sewers on the foul/combined sewer network in Mallow to provide for increased flows arising from elimination of SWOs on the network and to cater for future development growth in the agglomeration. • New rising mains to connect this Pumping Station to the sewer network at Cois na hAbhainn, Ballyellis. • An increase in treatment capacity at Mallow WwTP to 22,000 p.e. • Upgrade of sludge import facilities at Mallow WwTP to provide for sludge import volumes in line with National Wastewater Sludge Management Plan. • Provision for a standby power supply will be made at the Mallow WwTP to provide for continued operation of the wastewater treatment equipment in the event of an interruption in the power supply. • Provision for a standby power supply will be made at Bridge Street Pumping station to provide for continued operation of the pumping equipment in the event of an interruption in the power supply.

Works will also include new SCADA and telemetry systems to ensure full compliance and compatibility as per Irish Water Design Specifications.

All flows will be monitored continuously and recorded with flowmeters at the upgraded WwTP.

The design flows for the upgraded WwTP are provided below:

Parameter	Design Flow Rate
Dry Weather Flow (DWF)	5,435m^3/d
Average Daily Flow (1.25DWF)	6,794m^3/d
Flow to Full Treatment (FFT)	13,905m^3/d
Formula A Flow	36,125m^3/day

The proposed ELV's for the upgraded WWTP .

Parameter	Design Standards
cBOD	25mg/l
COD	125mg/l
Suspended Solids	25mg/l
Total Ammonia (as N)	3mg/l
Ortho-P (as P)	1mg/l
Total P (as P)	2mg/l
pH	6.0 - 9.0

A Waste Assimilative Capacity (WAC) calculation based on the proposed primary discharge ELVs at DWF for 22,000 p.e shows that the receiving waterbody has the capacity to accommodate the proposed discharge from the upgraded WwTP without causing a breach in the relevant standards as outlined in National and European legislation. This includes ensuring compliance with the relevant standards set out in the European Communities Environmental Objectives (Surface Water) Regulations, 2009, as amended (now S.I. No. 77 of 2019).

All flows arriving at the upgraded WwTP will receive secondary treatment with Phosphorus and Nitrogen removal to comply with the proposed ELVs.

Refer to **Attachment B.8** *Improvement Programme* for further details on the Mallow Sewerage Scheme Upgrade Project.

Number and type of waste water discharges from the waste water works including proposed waste water discharges:	**Discharge Scenario as per D0052-01** *Primary Discharge (SW001):* The primary discharge discharges treated effluent to the Blackwater River at NGR 157530E, 098140N. *Secondary Discharges:* There are no secondary discharge points associated with the waste water works. *Combined Storm Water Overflows/Emergency Overflows:* Currently, there is 1 no. Pumping Station (PS) at Bridge Street which has 1 no. licensed SWO associated with it (SW002). There are 7 no. licensed SWOs on the network~~. and also 1 no. SWO at Quarterstown which is unlicensed~~. None of these SWOs 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.

Overflow	Asset	Type	Coords as per D0052-01
SW002*	Bridge Street PS	SWO	156235E, 097966N
SW003*	Network SWO	SWO	156245E, 097642N
SW004*	Network SWO	SWO	156455E, 099655N
SW005*	Network SWO	SWO	155067E, 097871N
SW006*	Network SWO	SWO	155491E, 098920N
SW007*	Network SWO	SWO	156218E, 097978N
SW008*	Network SWO	SWO	155530E, 098572N
SW009*	Network SWO	SWO	156028E, 098037N
~~Unlicenced SWO **~~	~~Network SWO~~	~~SWO~~	~~154984E, 097847N~~

**To be decommissioned under the Mallow Networks Project*

~~*** Not licensed under D0052-01 (see 2021 AER) but to be also decommissioned under the Mallow Sewerage Scheme*~~

Discharges as per Subject Matter of Licence Review

Primary Discharge (SW001):
The primary discharge from the WwTP will remain at the existing primary discharge location at NGR 157530E, 098140N, into the River Blackwater (Blackwater (Munster)_140).

Secondary Discharges:
There will be no secondary discharge points associated with the waste water works.

Dual Function Overflow (SW010) at Bridge Street Pumping Station:
There will be one Dual Function Overflow (SW010) at the new Bridge Street Pumping Station *i.e.*, an overflow which can act as a Storm Water Overflow (SWO) or as an Emergency Overflow (EO) depending on the event.

In the event that the storm water tank is at capacity (>2,400m^3), an overflow from the storm tank will be discharged to the Blackwater (Munster)_140 *via* a new SWO (SW010 – NGR 156636E, 097862N). Level probes will control the flow in and out of the storm tank. This high-level overflow will be capable of conveying the full storm flow of 3,500 l/s and will not permit backflow from the storm tank to the storm sump. Overflows to the storm water storage tank will be screened *via* a self-cleaning mechanical screen with a maximum passage of 6mm.

This SWO has 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.

Provision for a standby power supply will be made at new Bridge Street Pumping Station to provide for continued operation of the pumping equipment in the event of an interruption in the power supply. In the unlikely event where the backup generator fails and where there is a prolonged power failure, the wastewater will begin to fill the stormwater tank until it reaches its capacity and will then be discharged to the Blackwater (Munster)_140 *via* an Emergency Overflow (SW010) at NGR 156636E, 097862N.

	All flows at the WwTP and Pumping Station will be monitored continuously and recorded with flowmeters.
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*:	Regional Compliance Specialist
Address of waste water treatment plant (including Eircode):	Mallow WwTP, Ballyellis, Mallow, Co Cork (No Eircode)
Telephone Number:	01 - 8925000
e-mail:	WasteWaterComplianceSouthern@water.ie
Grid ref (6E, 6N)	157318E, 097988N
Description of the treatment process	Secondary Treatment with Phosphorous and Nitrogen Removal
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 & Layout **Attachment B.2.2:** Map 4 – Location of Primary Discharge Point & Effluent Sampling Point **Attachment B.2.2:** Map 5 – Location of Overflows **Attachment B.2.2**: Map 6 – 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

Population Equivalent of the agglomeration to which the application relates:	22,000 p.e. (Design)
Maximum average weekly population equivalent of the agglomeration:	14,486 p.e. (2021 collected loads)
Existing Organic Capacity of the waste water treatment plant - As Constructed or nominal design (p.e.)	18,000 p.e. (Current as Constructed) 10,500 p.e. (Current capacity – Stream A not working) 22,000 p.e. (Proposed WwTP Design)
Proposed Organic Capacity of the waste water treatment plant - As per planning permission or design (p.e.)	22,000 p.e. (Proposed WwTP Design)
Current Collected Load (p.e.):	14,468 p.e. (2021 AER, peak week collected load)
Remaining Organic Capacity (p.e.):	Current Capacity : 0 p.e.
Is the plant overloaded – organic loading?	Yes, based on current capacity
Current Peak Hydraulic Capacity of the waste water works–As Constructed or nominal design (m^3/day):	13,125 m^3/day (Current as Constructed) 11,631 m^3/day (Current Hydraulic Loading - annual max (2021 AER))
Proposed Peak Hydraulic Capacity of the waste water works–As per planning permission or nominal design (m^3/day):	13,905 m^3/d (Proposed WwTP Design)
Current and proposed dry weather flow (DWF) to the treatment plant (m^3/day):	5,250 m^3/day - Current 5,435m^3/day – Proposed Design
Current average hydraulic loading to the treatment plant (m^3/day):	5,449 m^3/day - Current (2021 AER)
Remaining Hydraulic Capacity (m^3/day):	Current Remaining - 7,676 m^3/day (Source: AER 2021)
Is the plant hydraulically overloaded?	No

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 (incl. Commercial & Educational)	22,000	100
Industrial / Commercial Sludge	0	
Leachate	0	
Waste water to be conveyed and discharged only (i.e.by pass the WWTP)	0	
Total	22,000	100

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?	Not applicable

If 'No' was answered to A, provide details of the measures to be taken to comply:

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 - In April 2019, Irish Water applied to Cork County Council Planning Authority under Section 34 of the Planning and Development Act, 2000 (as amended) for the Mallow Sewerage Scheme Upgrade Project (Ref. Planning Register Number: 195078). A final grant of planning was obtained on the 13th January 2020, subject to 41 no. conditions.
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:	19/05078
Planning Appeal Reference Number (if relevant):	Not Applicable
Planning Authority Name / An Bord Pleanála:	Cork County Council
Date of Planning Decision (Final Grant):	13/01/2020
Brief description:	On the 25th of April 2019 T.J. O'Connor & Associates, on behalf of Irish Water applied for Planning Permission to Cork County Council for the upgrade of the sewer network and wastewater treatment facilities in the town of Mallow, Co. Cork
EIAR required with Planning Application?	No - As part of their planning determination, Cork County Council, as the Competent Authority, carried out an EIA screening and they concluded that neither a mandatory or sub-threshold EIA was required for the

	Mallow Sewerage Scheme Upgrade Project – See **Attachment B.3.2 –** Planner's Report, June 2019.
Confirm that the supporting documentation is provided:	Yes – Refer to: • **Attachment B.3.1 –** Planning Consent, January 2020 • **Attachment B.3.2 –** Planner's Report, June 2019

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

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)	**Attachment B.3.2 –** Planner's Report states that neither a mandatory EIA or subthreshold EIA is required in this case.

	- a copy of relevant grant of planning permission AND planners report	**Attachment B.3.1** – Planning Consent, January 2020 **Attachment B.3.2** - Planner's Report, June 2019
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

Entrance from Main Road Grid co-ordinates (6E, 6N)	157448E	097806N
Entrance to WwTP Grid co-ordinates (6E, 6N)	157417E	097977N

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 7- Site Notice Location
Water Services Authority notice:	Not applicable
EIA Portal Confirmation notice:	**Attachment B.4.4**: EIA Portal Confirmation Notice

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?	Yes, the Mallow WwTP has a capacity of greater than 10,000 population equivalents as defined in Article 2, point (6), of the Urban Waste Water Treatment Directive (*i.e,* Mallow 22,000 p.e). Therefore, a mandatory EIA, and the preparation of an EIAR is required to inform the WWDA process. See **Attachment B.5 –** Environmental Impact Assessment Report, November 2022.
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	Yes
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.

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	**Attachment B.5**: Environmental Impact Assessment Report, November 2022
Preliminary examination / EIA screening report	Not applicable

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

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: - 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

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)	D0052-SIP:01 – D0052-SIP:10
Date for completion of Improvement Programme in the licence:	01/06/2016
Has the date for completion expired? (Enter N, N/A or Y)	Y
Status of works: *e.g. (i) Not Started; (ii) At planning stage; (iii) Work ongoing on-site; (iv) Commissioning phase; (v) Completed; (vi) Delayed*	(iii) Work ongoing on-site
Irish Water's expected timeframe for completing the work	The Networks Upgrade Contract commenced on site in April 2021 and works are ongoing with an estimated completion date of Janaury 2023. The Mallow WwTP Upgrade and new Bridge Street Pumping Station Contract commenced in May 2021 and works are ongoing with an estimated completion date of December 2023
Comments: Refer to **Attachment B.8:** Improvement Programme.	

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:	
Improvement source: (*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)*	
Status of works:	
Expected Completion date:	
Comments:	

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:	SW001
Type: (primary discharge / secondary discharge/ storm water overflow)	Primary Discharge
Improvement works description:	The Networks Upgrade Contract commenced on site in April 2021 and works are ongoing with an estimated completion date of Janaury 2023. The Mallow WwTP Upgrade and new Bridge Street Pumping Station Contract commenced in May 2021 and works are ongoing with an estimated completion date of December 2023
Expected completion date:	Janaury 2023 and December 2023

Planning status: (grant of permission / exempted development)	Granted
Prioritised for funding:	Yes

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	✓	€22,500
- 2,001 to 10,000		
- 1,001 to 2,000		
- 500 to 1,000		
- less than 500		

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:	Y	Y	Bridge St. Pumping Station and WwTP	*New Bridge St. Pumping Station* – Level pump control with alarms. Flow Monitoring with alarms, D/S rising main. D/A Standby/Standby Foul Pumps, D/S Sumps, D/S/A storm pumps. General High Levels monitored and alarms with text alarms of SCADA. Storm water return function available in accordance with IW Specs. Provision for a standby power

				supply will be made for continued operation of the pumping equipment in the event of an interruption in the power supply. *Upgraded WwTP* Level pump control with alarms. Flow Monitoring with text alarms. Provision for a standby power supply will be made to provide for continued operation of the pumping equipment in the event of an interruption in the power supply.
Emergency Response Plan and Procedures:	Y	Y	Bridge St. Pumping Station and WwTP	Phased escalation measures, controlled and monitored *via* SCADA. Storm overflow storage, screening and measure of discharges and storm return as per IW specs. Allowance for connections for generators and supplementary ESB supply at PS and allowance for generator connection at WwTP. All equipment at the WwTP is Duty/Standby with fault and high-level alarms, however only pump sump A discharges screened untreated sewage.

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:	No	Yes	WwTP	Level switch in pump sump A at WwTP
Standby pumps at waste water treatment plant:	No	Yes	WwTP	Provision for a backup pump at Pump Sump A at WwTP only which will switched over in the event of a power outage or pump failure to allow for the continued operation of the water treatment equipment in the event of an interruption in the power supply.
Standby equipment or provisions in the event of interruption of the power supply such as a portable generator or equipment with automatic switchover:	No	Yes	WwTP	Generator switch for connection of mobile generator only to be provided - mobile generator not provided under the contract
Storage capacity at intake to the waste water treatment plant (SWO tank):	No	No	Not appliable	FFT only forwarded to WwTP
Groundwater monitoring:	Not applicable	Not applicable	Not applicable	Not applicable
Network				
Measures to prevent unintended discharges	Existing (Y/N)	Proposed (Y/N)	Applicability	Surveillance measure
Alarms / telemetry on pumping stations:	Yes	Yes	Bridge St. Pumping Station Storm tank outfall (All storm/emergency overflows from Bridge St. Pumping Station	Level pump control with alarms. Flow Monitoring with text alarms.

			go through storm tank outfall.)	
Alarms / telemetry on emergency overflows:	Yes	Yes	Bridge St. Pumping Station Storm tank outfall	Level pump control with alarms. Flow Monitoring with text alarms.
Standby pumps at pumping stations:	Yes	Yes	Bridge St. Pumping Station	Standby foul pumps and standby storm pumps provided. Pump changeover automatically triggered upon detection of a pump failure (overcurrent, low flow, *etc*.)
Standby equipment or provisions in the event of interruption of the power supply:	No	Yes	Bridge St. Pumping Station	Generator switch for connection of mobile generator to be provided
Storage capacity at pump stations:	Yes	Yes	Bridge St. Pumping Station	2,400m^3 storm tank provided at new Pumping Station to limit spillage frequency.
Monitoring telemetry on SWOs:	Yes	Yes	Bridge St. Pumping Station Storm tank outfall	Level pump control with alarms. Flow Monitoring with alarms. General High Levels monitored and alarms with text alarms to SCADA.
Additional measures:	Not Applicable	Not Applicable	Not Applicable	Not Applicable

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:	Blackwater (Munster)_140 (IE_SW_18B021720)
WFD Risk:	Not At Risk
WFD Status & year:	Good (2013-2018 & 2016-2021)
WFD Objective & timeframe for achievement:	Maintain Good Status (2027)
Is the agglomeration identified as a significant pressure?	No
Has the discharges contributed to a deterioration in the quality of the water body?	No. Based on the Irish Water Compliance Data for 2020 – 2022 at Station RS18B021600 which lies upstream of the primary discharge, and the downstream ambient monitoring location RS18B021720 which is downstream of all operational discharges, it is noted that the operational discharges do not have an observable impact on the water quality of the receiving waterbody. Refer to **Tables 35** and **37** below.
Protected areas in the vicinity of the discharges:	The operational discharges are direct into the Blackwater River (Cork/Waterford) SAC. Further downstream of the operational discharges *(ca*. 27km), the next closest European site is the Blackwater Callows SPA (Site code: 004094) and then the Blackwater Estuary SPA (Site code: 004028) which is located > 50km downstream. The Kilcoman Bog SPA is located *ca*. 11km north of the agglomeration, and although not hydrologically connected the is the potential pathway for *ex-situ* bird species. The Blackwater Valley (Killavulllen) pNHA is located *ca*. 9km downstream of Mallow primary discharge point and the Blackwater Valley (Ballinvurrig Wood) pNHA location *ca*. 12km downstream of the primary discharge point along the River Blackwater.

	The Blackwater River is also designated as a Salmonid River (Blackwater [Munster) under the European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I. No. 293 of 1988). The River Blackwater (Munster) is a designated Freshwater Pearl Mussel (*Margaritifera Margaritifera*) catchment under the First Schedule of the European Communities Environmental Objectives (Fresh Water Pearl Mussel) Regulations (S.I. No. 296 of 2009). The Blackwater (Munster)_140 is designated as a nutrient sensitive area in accordance with the Urban Waste Water Treatment (UWWT) Directive 91/271/EEC on Urban Waste Water Treatment and S.I. No. 254 of 2001, S.I. No. 440 of 2004 and S.I. No. 48 of 2010, with P being the limiting nutrient in this waterbody.
Are there drinking water abstraction points downstream of waste water discharge points?	There are no drinking water abstraction points downstream of the waste water discharge point
European sites hydrologically connected:	The Mallow WwTP discharges directly into the Blackwater River (Cork/Waterford) SAC. The Blackwater Callows SPA (*ca.* 27km) is downstream of the operational discharges of the WwTP and the Blackwater flows into Youghal Bay at the Blackwater Estuary SPA (>50km downstream).
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)	Upstream: Blackwater(Munster)_130 – Good Status Downstream: Blackwater(Munster)_150 - Good Status
95%ile River Flow upstream of primary discharge point: (if applicable)	4.87 m^3/s (Source: EPA Estimated 95%ile flow (up to 2018 data))
Receiving water monitoring stations: (code and distance from primary discharge point)	U/S RS18B021600 – *ca.* 1.5m u/s of primary discharge point (**aSW1u**) D/S RS18B021720 – *ca.* 560m downstream of primary discharge point (**aSW1d**)

Refer to **Attachment D.1: Map 8** which displays the receiving water designations in proximity to the discharges from the new WwTP

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 - Proposed SWOs as per subject matter of licence review

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
Blackwater(Munster)_140	Good	1	0	No	Maintain Good Status (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 **(as per D0052-01)**

EDEN Code (where applicable):	RS18B021600	
Licence Code:	aSW1u	
Monitoring Location:	156117E	098008N
Point Type:	River	
Name of Receiving Water	Blackwater(Munster)_130	

Table 35 - Ambient Monitoring – upstream monitoring results[1] (Data Source: catchment.ie, samples taken at RS18B021600 from Jan 2020 – July 2022)

Parameter	Total Ammonia	BOD	DO	pH	Total Nitrogen	Ortho-P
Unit	mg/l	mg/l	%sat	pH Unit	mg/l	mg/l
Number of Samples	32	31	32	32	32	32
Maximum	0.22	3.70	113	8.2	3.9	0.106
Minimum	0.007	0.10	85	6.9	1.8	0.005
Mean Value	**0.047**	**1.207**	**97.7**	**7.7**	**2.31**	**0.031**
*Mean EQS as per S.I. No. 77/2019 Good Status **	*≤0.065*	*≤1.5*		*4.5-9*		*≤ 0.035*
*Mean EQS as per S.I. No. 77/2019 High Status **	*≤0.040*	*≤1.3*		*4.5-9*		*≤ 0.025*

Parameter	Total Ammonia	BOD	DO	pH	Total Nitrogen	Ortho-P
Unit	mg/l	mg/l	%sat	pH Unit	mg/l	mg/l
*95%ile EQS as per S.I. No. 77/2019 Good Status **	*≤0.14*	*≤2.6*		*4.5-9*		*≤ 0.075*
*95%ile EQS as per S.I. No. 77/2019 High Status **	*≤0.09*	*≤2.2*		*4.5-9*		*≤ 0.045*
*Overall compliance with relevant **Mean EQS Good Status** **	*Yes*	*Yes*		*Yes*		*Yes*
*Overall compliance with relevant **Mean EQS High Status** **	***No***	*Yes*		*Yes*		***No***
*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/SQRT2 was applied

Table 36 - Ambient monitoring results – downstream (as per D0052-01)

EDEN Code (where applicable):	RS18B021720	
Licence Code:	aSW1d	
Monitoring Location:	158083E	098036N
Point Type:	River	
Name of Receiving Water	Blackwater(Munster)_140	

Table 37 - Ambient Monitoring – downstream monitoring results[1] (Data Source: catchment.ie, taken from RS18B021720 from Feb 2020 – August 2022)

Parameter	Ammonia	BOD	DO	pH	Total Nitrogen	Ortho-P
Unit	mg/l	mg/l	%sat	pH Unit	mg/l	mg/l
Number of Samples	23	23	23	23	22	22
Maximum	0.123	8.500	102.000	8.100	3.000	0.073
Minimum	0.0040	0.2000	86.0000	6.9000	1.7000	0.0070
Mean Value	**0.038**	**1.687**	**96.2**	**7.72**	**2.280**	**0.033**
*Mean EQS as per S.I. No. 77/2019 Good Status **	*≤0.065*	*≤1.5*		*4.5-9*		*≤ 0.035*
*Mean EQS as per S.I. No. 77/2019 High Status **	*≤0.040*	*≤1.3*		*4.5-9*		*≤ 0.025*
*95%ile EQS as per S.I. No. 77/2019 Good Status **	*≤0.14*	*≤2.6*		*4.5-9*		*≤ 0.075*
*95%ile EQS as per S.I. No. 77/2019 High Status **	*≤0.09*	*≤2.2*		*4.5-9*		*≤ 0.045*
*Overall compliance with relevant **Mean EQS Good Status ** *	*Yes*	***No***		*Yes*		*Yes*
*Overall compliance with relevant **Mean EQS High Status ** *	*Yes*	***No***		*Yes*		***No***
*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/SQRT2 was applied

Table 38 - Proposed Receiving Water Monitoring

EDEN Code (where applicable)	Licence Code	Monitoring Location		Point Type	Name of Receiving Water
RS18B021600	aSW1u	156117E	098008N	River	Blackwater(Munster)_140
RS18B021720	aSW1d	158083E	098036N	River	Blackwater(Munster)_140

Table 39 - Proposed Monitoring Regime **(as per D0052-01)**

Parameter	Units	Monitoring Frequency	Analysis method/Technique
pH	pH Unit	Ten Samples/Year	Electrode
BOD	mg/l	Ten Samples/Year	Standard Method
DO	% O2	Ten Samples/Year	Electrode
Orthophosphate (as P)	mg/l	Ten Samples/Year	Standard Method
Total Ammonia	mg/l	Ten Samples/Year	Standard Method
Total Nitrogen	mg/l	Ten Samples/Year	Standard Method
Temperature	˚C	Ten Samples/Year	Thermometer
Visual inspections	Descriptive	Weekly	Standard Method

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?	Yes, **Attachment D.2.2:** AA Screening & Natura Impact Statement, November 2022

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, November 2022
Natura Impact Statement	**Attachment D.2.2:** AA Screening & Natura Impact Statement, November 2022
EIAR	**Attachment B.5:** Environmental Impact Assessment Report, November 2022
Waste Assimilative Capacity	**Attachment D.2.3**: Waste Assimilative Capacity, October 2022
Priority Substance Assessment Report	**Attachment D.2.5**: Priority Substance Assessment Report, November 2022

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 main objective of the Mallow Sewerage Scheme Upgrade Project is to upgrade the WwTP and network to ensure compliance with the Irish Water's design criterion for a 1:20 year return period storm event, Urban Waste Water Treatment Directive (91/271/EEC) and ensure compliance with the WWDL - Licence Register Number: D0052-01, 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 18th of December 2012.

The Mallow WwTW has been designed to ensure that emissions from the agglomeration will not result in the contravention of EU Directives and National Regulations.

The overflow at the new Bridge Street Pumping Station has 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. Provision has been made for a standby power supply to provide for continued operation of the pumping equipment in the event of an interruption in the power supply. The above, along with the removal of 8 licenced SWOs ~~and 1 unlicensed SWO~~ in the current Mallow agglomeration, will ensure for the protection of the sensitive receiving aquatic environment.

The proposed effluent standards for the Mallow 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 WFD status and the various sensitive designation s (*e.g.*, Salmonid River, SAC, Nutrient Sensitive Area, Freshwater Pearl Mussel (*Margaritifera Margaritifera*) site), of the receiving waterbody, the Blackwater(Munster)_140.

Based on the above, and the WAC calculations, along with the conclusions of the EIAR, NIS, Priority Substances Assessment Report and Impact Assessment Report, which support this review application, it is considered that the operational discharges from the Mallow 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 Mallow WwTW operates in a manner that supports the achievement of the water body objectives under the WFD, and their obligations under the Birds and Habitats Directives, and all applicable Directives and National Regulations.

The upgrade works to the WwTP and associated effluent discharge standards (*i.e.,* BOD 25mg/l, COD 125mg/l, Suspended Solids 25mg/l, Total Ammonia 3mg/l, Total Phosphorous 2mg/l, and Ortho-P 1mg/l) and the operational design of the Dual Function Overflow from the new Bridge Street Pumping Station will ensure that the operational discharges from the agglomeration (i) contribute towards maintaining at least Good status of the Blackwater(Munster)_140 and the High WFD status of Ammonium and Ortho-P and (ii) will ensure that there is no environmental risk posed to the receiving water environment and its associated designation 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 A.1.1 NON-TECHNICAL SUMMARY

1. Introduction

Mallow is a town in County Cork, approximately 30km north of Cork City and West of Fermoy. The town falls at the intersect of the N20 and N72. The River Blackwater runs through the town. The agglomeration is spread over 10 no. townlands namely, Mallow, Annabella, Lackanalooha, Kilknockan, Spaglen, Ballydahin, Quartertown Lower, Killetra, Gooldshill, and Carhookeal.

The Mallow agglomeration (D0052-01) is currently served by a sewerage system which comprises mainly combined sewers in the Town Centre area, with separated foul and storm drainage in newer developments on the outskirts of the town. A number of streets in the town have separate surface water sewers which discharge to local streams or to the River Blackwater.

The effluent from the agglomeration arises from mainly from domestic, commercial and education sources.

There are 2 no. licensed Trade Effluent activities (*i.e.*, IW-DTS-914910-01 and IW-FOG-683679-01) discharging to the agglomeration sewers under Section 16 of the Local Government (Water Pollution) Acts 1977 and 1990.

The existing sewer network in Mallow contains a number of Storm Water Overflows (SWOs) which frequently discharge untreated wastewater to the River Blackwater in the absence of any stormwater storage. The existing network is also insufficient to comply with Irish Water's design criterion for no flooding from the network in a 1:20 year return period storm event.

The WwTP at Ballyellis, Mallow is located at NGR 157318E, 097988N, and currently provides Secondary Treatment with Phosphorous Removal to the Mallow agglomeration. There is currently no Nitrogen removal at the plant. The WwTP has a current operational plant capacity of 10,500 p.e. The current design capacity of the WwTP is 18,000 p.e, however only 1 no. process stream is operational, thereby limiting the capacity of the plant. In its current configuration and setup, the plant is organically overloaded and cannot cater for the existing loads (current collected load (peak week) *ca*. 14,648 p.e. (2021 AER).

Discharges from the Mallow agglomeration are currently authorised under Waste Water Discharge Licence (WWDL) D0052-01. Following a Waste Water Discharge Authorisation examination by the EPA on the 30th 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: D0052-01, does not satisfy the environmental requirements of the WWDA Regulations as amended, and that a WWDA review was required.

The Mallow agglomeration is currently in breach of Articles 3, 4(1), 5(1) and 12 of the Urban Wastewater Treatment Directive (UWWTD) (91/271/EEC) and as such is the subject of an infringement notice from the European Court of Justice (ECJ).

In April 2019, Irish Water applied to Cork County Council Planning Authority under Section 34 of the Planning and Development Act, 2000 (as amended) for the Mallow Sewerage Scheme Upgrade Project (Ref. Planning Register Number: 195078). A final grant of planning was obtained on the 13th January 2020, subject to 41 no. conditions.

The main objectives of the Mallow Sewerage Scheme Upgrade Project are to ensure compliance with the WWDL - Licence Register Number: D0052-01; issued by the EPA in accordance with the Waste Water Discharge (Authorisation) Regulations (S.I. No. 684 of 2007) on the 18th December 2012 (now S.I. No. 214 of 2020), and subsequent Technical Amendments A and B, and to ensure compliance with Irish Water's Water Services Strategic Plan (WSSP) which includes an objective to target capital investment to progressively achieve compliance with the UWWTD and the Water Framework Directive (WFD).

The Mallow Sewerage Scheme Upgrade Project, which consists of 2 no. contracts, namely the Networks Upgrade Contract and the Mallow WwTP Upgrade and new Mallow Bridge Pumping Station Contract. Refer to **Section 3** below for details on these projects.

Refer to **Attachment A.1.2** for the area of interest and **Attachment B.2.1** for a map of the Mallow agglomeration.

2. Description of the waste water discharges from the waste water works serving the agglomeration

Discharge Scenario as per D0052-01

Primary Discharge (SW001):

The primary discharge discharges treated effluent to the Blackwater River (Blackwater (Munster)_140) at NGR 157530E, 098140N.

Secondary Discharges:

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

Agglomeration Overflows:

There are currently 8 licenced SWOs associated with the agglomeration ~~and 1 unlicensed SWO~~. None of these SWOs 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.

Overflow	Asset	Type	Coords as per D0052-01
SW002*	Bridge Street Pumping Station	SWO	156235E, 097966N
SW003*	Network SWO	SWO	156245E, 097642N
SW004*	Network SWO	SWO	156455E, 099655N
SW005*	Network SWO	SWO	155067E, 097871N
SW006*	Network SWO	SWO	155491E, 098920N
SW007*	Network SWO	SWO	156218E, 097978N
SW008*	Network SWO	SWO	155530E, 098572N
SW009*	Network SWO	SWO	156028E, 098037N

Overflow	Asset	Type	Coords as per D0052-01
~~Unlicenced SWO **~~	~~Network SWO~~	~~SWO~~	~~154984E, 097847~~N

**To be decommissioned under the Mallow Networks Project*

*~~** Not licensed under D0052-01 (see 2021 AER) but to be also decommissioned under the Mallow Sewerage Scheme~~*

Discharges as per Subject Matter of Licence Review

Primary Discharge (SW001):

The primary discharge from the WwTP will remain at the existing primary discharge location at NGR 157530E, 098140N.

Secondary Discharges:

There are no secondary discharge points associated with the waste water works. Existing secondary discharge to be discontinued.

Dual Function Overflow (SW010):

There will be one Dual Function Overflow (SW010) at the new Bridge Street Pumping Station *i.e.*, an overflow which can act as a Storm Water Overflow (SWO) or as an Emergency Overflow (EO) depending on the event.

In the event that the storm water tank is at capacity (>2,400m^3), an overflow from the storm tank will be discharged to the River Blackwater *via* a new SWO (SW010 – NGR 156636E, 097862N). Level probes will control the flow in and out of the storm tank. This high-level overflow will be capable of conveying the full storm flow of 3,500 l/s and will not permit backflow from the storm tank to the storm sump. Overflows to the storm water storage tank will be screened *via* a self-cleaning mechanical screen with a maximum passage of 6mm.

This SWO has 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.

Provision for a standby power supply will be made at new Bridge Street Pumping Station to provide for continued operation of the pumping equipment in the event of an interruption in the power supply. In the unlikely event where the backup generator fails and where there is a prolonged power failure, the wastewater will begin to fill the stormwater tank until it reaches its capacity and will then be discharged to the Blackwater River *via* an Emergency Overflow (SW010) at NGR 156636E, 097862N.

All flows at the WwTP and Pumping Station will be monitored continuously and recorded with flowmeters.

Refer to **Attachment B.2.2: Map 4** and **Map 5** for the location of the proposed discharges.

3. Description of the wastewater works and associated waste water treatment plant

Works as per D0052-01

The WwTP is located at NGR 157318E, 097988N, and currently provides secondary treatment with Phosphorous removal to the Mallow agglomeration. The WwTP is also currently organically overloaded with a p.e. of 10,500 and an annual organic load of 14,648 p.e.

Treated effluent from the WwTP discharges directly to the Blackwater River at NGR 157530E, 098140N which is part of the Blackwater (Munster) Catchment (Hydrometric Area 18).

There is 1 no. Pumping Stations within the agglomeration at Bridge Street (NGR 156253E, 097916N) which has 1 no. Storm Water Overflow (SWO) associated with it (SW002). This discharges to the Blackwater River at NGR 156235, 097966.

As mentioned above, the Mallow agglomeration has 8 licensed SWOs ~~and 1 unlicensed SWO~~ which frequently discharges untreated effluent into the Blackwater River. The existing network also is non-compliant with Irish Water's design criterion. The Mallow agglomeration is also in breach of Articles 3, 4(1), 5(1) and 12 of the Urban Wastewater Treatment Directive (UWWTD) (91/271/EEC).

Details of all overflows licensed under D0052-01 are provided in **Section 2** above.

Works as per Subject Matter of Licence Review

The Mallow waste water works under this WWDL review will consist of an upgraded WwTP (design capacity 22,000 p.e.) at Ballyellis Townland (NGR 157318E, 097988N); an existing Primary Discharge (SW001) which discharges to the Blackwater River and a new Dual Function Overflow (*i.e.,* SW010 which can act as a Storm Water Overflow or Emergency Overflow depending on the event) at the new Bridge Street Pumping Station and associated sewer network.

The upgraded WwTP has been designed to meet the ELVs as per WWDL D0052-01 (Tech A), with the exception of Ortho-P, where a more onerous ELV of 1mg/l is now proposed, as provided in **Table A.1.1** below.

Table A.1.1 Proposed ELVs

Parameter	Design Standards
pH	6 - 9
BOD	25mg/l
COD	125mg/l
Suspended Solids	25mg/l
Ammonia – Total (as N)	3mg/l
Total Phosphate (as P)	2 mg/l
Ortho-Phosphate (as P)	1 mg/l

Since planning was obtained for the Mallow Sewerage Scheme Upgrade Project in 2019, a Waste Assimilative Capacity calculation was completed in 2022 to inform this WWDA review application in order to ensure that the ELVs as per D0052-01 were fit for purpose based on the latest data available (refer to **Attachment D.2.3**: Waste Assimilative Capacity (WAC), October 2022)). It was concluded that a more onerous Ortho-P ELV of 1mg/l was required in order to meet the High-status 95%ile EQS downstream of the primary discharge.

These standards 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, the Blackwater River.

The design of the upgraded WwTP is greater than 2,000 p.e. and therefore in line Article 4 of the Urban Waste Water Treatment Directive, "*Member States shall ensure that urban waste water entering a collecting system shall before discharge be subject to secondary treatment or an equivalent treatment […] for discharges to freshwater from agglomerations of between 2,000 and 10,000 pe*". In line with the above, the upgraded WwTP provides for secondary treatment, with P and also N removal.

Details of the new Dual Function Overflow (SW010) at the new Bridge Street Pumping Station are provided on **Section 2** above.

As mentioned above, all flows at the WwTP and Pumping Station will be monitored continuously and recorded with flowmeters.

Mallow Sewerage Scheme Upgrade Project

The Mallow Sewerage Scheme Upgrade Project has been designed to ensure that emissions from the works will not result in the contravention of any relevant EU Directives and National Regulations. The Project consists of 2 no. contracts, namely the Networks Upgrade Contract and the Mallow WwTP Upgrade and new Mallow Bridge Pumping Station Contract. Details of the works under each contract are provided below:

- Removal of 8 no. existing SWOs as per D0052-01.~~, and 1 no. unlicensed SWO at Quarterstown.~~
- Increase the capacity of the network to convey a 1:20 year return period storm for the 30-year design horizon without causing flooding.
- A new pumping station to replace the existing Bridge Street Pumping Station at Bearforest Lower.
- Provision of a stormwater storage tank (2,400m^3) at the Bridge Street Pumping Station and interconnecting pipework and overflow to the River Blackwater (Overflow NGR 156636E, 097862N). The SWO at the new Pumping Station (*i.e.*, SW010 at NGR 156636E, 097862N) has been designed to operate to meet the definition of '*Storm Water Overflow'* as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007 to 2020 and the criteria as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows'*, 1995.
- Provision of additional forward pumping capacity to the WwTP. Forward flow to the WwTP from new Bridge St. Pumping station will be limited to 3 times Dry Weather Flow (DWF). Flows in excess of 3DWF will spill into the storm sump at the Pumping Station and will then be pumped to the new storm tank.

- Replacement sewers on the foul/combined sewer network in Mallow to provide for increased flows arising from elimination of SWOs on the network and to cater for future development growth in the agglomeration.
- New rising mains to connect this Pumping Station to the sewer network at Cois na hAbhainn, Ballyellis.
- An increase in treatment capacity at Mallow WwTP to 22,000 p.e.
- Upgrade of sludge import facilities at Mallow WwTP to provide for sludge import volumes in line with National Wastewater Sludge Management Plan.
- Provision for a standby power supply will be made at the Mallow WwTP to provide for continued operation of the wastewater treatment equipment in the event of an interruption in the power supply.
- Provision for a standby power supply will be made at Bridge Street Pumping station to provide for continued operation of the pumping equipment in the event of an interruption in the power supply.
- Works will also include new SCADA and telemetry systems to ensure full compliance and compatibility as per Irish Water Design Specifications.
- All flows will be monitored continuously and recorded with flowmeters at the upgraded WwTP.

The Mallow Sewerage Scheme Upgrade Project will ensure compliance with the WWDL - Licence Register Number: D0052-01 and Irish Water's Water Services Strategic Plan (WSSP) which includes an objective to target capital investment to progressively achieve compliance with the UWWTD and the Water Framework Directive (WFD).

4. Description of the features and measures, if any, envisaged to avoid, prevent, or reduce and, if possible, offset the significant adverse effects on the environment

Irish Water are committed to ensuring that water services infrastructure 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.

The WwTP upgrade works have been designed to cater for a biological load of 22,000 p.e. Secondary Treatment with Phosphorous and Nitrogen Removal is provided to ensure that the treated effluent discharge does not have a significant adverse effect on the receiving aquatic environment, and that all relevant legislative requirements are complied with (see **Attachment D.2.1**: Impact Assessment Report, November 2022 and **Attachment D.2.3**: Waste Assimilative Capacity (WAC), October 2022).

Design measures to prevent deleterious discharges from the agglomeration include the below:

- The Dual Function Storm Water Overflow/Emergency Overflow (SW010) has 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.
- A 2,400m^3 Stormwater Holding Tank will be provided at the new Pumping Station, flows in excess of the Stormwater Tanks capacity will overflow to the Blackwater River.

- Overflows from the Storm Water Holding Tank will be screened by a self-cleaning mechanical screens with a maximum passage of 6mm.
- The works will include the installation of a new SCADA and telemetry system, this system will ensure compliance and compatibility with Irish Water's Design Specifications.
- Full formal training will be provided to the plant operators during the last 30 days of the Operation Service Period in order to ensure operators are capable of running the works safely and successfully.
- Provision for a standby power supply will be made at Bridge Street Pumping station to provide for continued operation of the pumping equipment in the event of an interruption in the power supply.
- Provision for a standby power supply will be made at the Mallow WwTP to provide for continued operation of the wastewater treatment equipment in the event of an interruption in the power supply.
- All flows will be monitored continuously and recorded by flowmeters which will be installed at the WwTP.

Refer also to **Section C.2** for further details of the proposed robust measures to prevent any unintended discharges to the Blackwater River.

5. The proposed technology and other techniques for preventing or, where this is not possible, reducing discharges from the wastewater works

The Mallow WwTW's has been designed, and will be operated, to ensure that the operational discharges from the agglomeration do not cause a deterioration in the quality of the receiving waters *i.e.*, Blackwater (Munster)_140.

Refer to **Section C.2** for details of the proposed measures to prevent any unintended discharges to the Blackwater (Munster)_140.

6. Description of the receiving waterbody

Mallow WwTP discharges to the Blackwater River (Blackwater (Munster)_140). The Blackwater(Munster)_140 is within the Blackwater (Munster) Catchment (Hydrometric Area 18). This catchment includes the area drained by the River Blackwater and all streams entering tidal water between East Point and Knockaverry, Youghal, Co. Cork, draining a total area of 3,310km^2. Mallow is the largest urban centre within the catchment.

The draft 3rd Cycle Catchment Report (2021) for this Hydrometric Area (HA), determined that for the At Risk waterbodies within the agglomeration Agriculture remains the most prevalent significant pressure, along with forestry, hydromorphology, industry, urban waste water, urban run-off, domestic waste water, mines and quarries, and other significant pressures such as abstractions, historically polluted sites, and windfarm construction. The Mallow agglomeration is not listed as a significant pressure in At Risk waterbodies in the draft 3rd cycle catchment assessment. The Blackwater (Munster)_140 and further downstream water bodies (Blackwater (Munster)_150 – Blackwater (Munster)_190) are listed as a nutrient sensitive area within the catchment downstream of large urban waste water discharges. By providing additional nutrient removal to the waste water the objective of providing tertiary treatment has been met.

The Blackwater (Munster)_140 is not listed as an area for action under the 3rd Cycle or the 2nd Cycle. The WFD Status (2013-2018 & 2016-2021) for the Blackwater (Munster)_140

is Good, and Not At Risk of achieving Good Water Quality Status by 2027. There were no significant pressures for the Blackwater (Munster)_140 identified.

The EPA monitor biological water quality at Station RS18B021500 (Rly Br Mallow LHS) which is *ca*. 1.5km upstream of SW010. This station was assigned a Q4 score in 2021 indicating Good water quality conditions. The station RS18B021510 (Rly Bridge, Mallow) just downstream of RS18B021500 was assigned Q3-4 – Moderate Status at the last measurement (2021). The next Q value monitoring point downstream is RS18B021800 (NE of Ballymagooly) *ca*. 2.5km downstream of SW001, which was monitored in 2020 and also assigned a Q4 score.

The Blackwater (Munster)_140 waterbody trend at Station RS18B021720 (downstream of the operational discharges) for Ammonium is Downwards (*i.e.*, decreasing concentrations) and for Ortho-P is Upwards (*i.e*., increasing concentrations).

There are two ambient monitoring river stations upstream and downstream of the WwTP primary discharge location. The upstream river station (RS18B021600) is located 1.5km upstream and the downstream river station (RS18B021720) is located 560m downstream. Based on the Irish Water Compliance Data for the time period of January 2020 – July 2022 the mean concentrations of Ortho-P and Ammonia at upstream RS18B021600 station fails to meet the High Status EQS (mean) for both parameters. However, the 95%ile EQSs for High status are met. In terms of BOD, the mean and 95%ile EQSs are met for High and Good status. In terms of the downstream station, RS18B021720, for Ammonia, the mean and 95%ile EQSs are met for High and Good status. In terms of Ortho-P, the mean High status EQS is not met. Finally in terms of BOD, the mean and 95%ile Good status EQS are met, but the mean and 95%le EQSs are not met.

There are no designated shellfish areas, designated bathing waters, drinking water abstraction points, or groundwater protection schemes within the vicinity of the primary discharge. There are a number of other designations within the wider surrounding environment (refer to **Attachment D.1: Map 8** - Receiving Water Designations). These are detailed below.

The Blackwater (Munster)_140 is designated as a nutrient sensitive area in accordance with the Urban Waste Water Treatment (UWWT) Directive 91/271/EEC on Urban Waste Water Treatment and S.I. No. 254 of 2001, S.I. No. 440 of 2004 and S.I. No. 48 of 2010, with P being the limiting nutrient in this waterbody. One completed the upgraded WwTP will be compliant with the Urban Wastewater Treatment Directive and will provide for P and also N removal.

The Blackwater River is designated as a Salmonid River (Blackwater [Munster) under the Salmonid River Regulations (S.I. No. 293 of 1988). The completion of the upgrade works at the WwTP to meet the ELVs as per D0052-01, including a more onerous Ortho-P ELV, 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 maintain the Good WFD Status of the waterbody, and also in maintaining the current High status for both Ammonium and Ortho-P. This will provide a high level of protection to the Blackwater (Munster)_140 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.

The River Blackwater (Munster) is a designated Freshwater Pearl Mussel (*Margaritifera Margaritifera*) site listed under the first Schedule of the European Communities Environmental Objectives (Fresh Water Pearl Mussel) Regulations (S.I. No. 296 of 2009). The assimilative capacity calculations completed to inform this WWDA review, indicate that under low flow conditions (worst case scenario), that High status water chemistry conditions can be achieved by the primary discharge in the receiving waterbody even in the context of background/upstream pressures. Given the proposed stringent ELV's and the network upgrades, the operational discharges will support appropriate water chemistry conditions and will therefore not hinder the restoration of the conservation objectives (and FPM Regulation standards) for macroinvertebrates, filamentous algae, phytobenthos, macrophytes and siltation. Thereby ensuring that the Ecological Quality Objectives as set out in the fourth schedule of the European Communities Environmental Objectives (Fresh Water Pearl Mussel) Regulations (S.I. No. 296 of 2009) can be maintained.

The Blackwater Valley (Killavulllen) pNHA is located *ca*. 9km downstream of Mallow primary discharge point and the Blackwater Valley (Ballinvurrig Wood) pNHA is located *ca.* 12km downstream along the River Blackwater.

The operational discharges are direct into the Blackwater River (Cork/Waterford) SAC. Further downstream of the operational discharges (*ca*. 27km) the next closest European site is the Blackwater Callows SPA (Site code: 004094) and then the Blackwater Estuary SPA (Site code: 004028) which is located > 50km downstream. The Kilcoman Bog SPA is located *ca*. 11km north of the agglomeration, and although not hydrologically connected there is the potential pathway for *ex-situ* bird species.

The Blackwater River (Cork/Waterford) SAC is a Special Area of Conservation (SAC) selected for many habitats and/or species listed on Annex I / II of the E.U. Habitats Directive, this includes water dependent species such as Freshwater Pearl Mussel (*Margaritifera margaritifera*), [1092] White-clawed Crayfish (*Austropotamobius pallipes*), [1095] Sea Lamprey (*Petromyzon marinus*), [1096] Brook Lamprey (*Lampetra planeri*), [1099] River Lamprey (*Lampetra fluviatilis*), [1103] Twaite Shad (*Alosa fallax*), [1106] Atlantic Salmon (*Salmo salar*), [1355] Otter (*Lutra lutra*), and [1421] Killarney Fern (*Trichomanes speciosum*). The Blackwater Callows SPA's qualifying interests are Whooper Swan (*Cygnus cygnus*) [A038], Wigeon (*Anas penelope*) [A050], Teal (*Anas crecca*) [A052], Black-tailed Godwit (*Limosa limosa*) [A156] and Wetland and Waterbirds [A999].The Blackwater Estuary SPA qualifying interests are Wigeon (*Anas penelope*) [A050], Golden Plover (*Pluvialis apricaria*) [A140], Lapwing (*Vanellus vanellus*) [A142], Dunlin (*Calidris alpina*) [A149], Black-tailed Godwit (*Limosa limosa*) [A156] Bar-tailed Godwit (*Limosa lapponica*) [A157], Curlew (*Numenius arquata*) [A160], Redshank (*Tringa totanus*) [A162] and Wetland and Waterbirds [A999]. The Kilcoman Bog SPA's qualifying interests are the Whooper Swan (*Cygnus cygnus*) [A038], Teal (*Anas crecca*) [A052], Shoveler (*Anas clypeata*) [A056] and Wetland and Waterbirds [A999].

Refer to **Attachment B.5** for a copy of the Environmental Impact Assessment Report and **Attachment D.2.2** for a copy of the combined AA Screening Report & Natura Impact Statement for further details on the receiving environment.

7. Description of the likely significant effects of the discharges on the environment

Based on the proposed effluent discharge standards (see **Table A.1.1** above) and the WAC calculations carried out for same (see **Attachment D.2.3**), it is considered that the operational discharges from the Mallow agglomeration would have no real likelihood of significant adverse effects on the receiving aquatic environment, alone or in combination with other plans and projects.

The effluent discharge standards will ensure that the discharge from the Mallow WwTP contributes towards maintaining the Good WFD status of the Blackwater (Munster)_140 and in 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 discharges from the agglomeration.

Refer to **Attachment B.5** for a copy of the Environmental Impact Assessment Report and **Attachment D.2.2** for a copy of the combined AA Screening Report & Natura Impact Statement for further details on likely significant effects of the discharges on the environment.

8. Measures planned to monitor discharges into the environment

Effluent Monitoring:

It is proposed that effluent from Mallow WwTP will be sampled and analysed (using the standard method of analysis) as follows:

Table A.1.4 – Proposed Effluent Monitoring Regime (as per D0052-01 Technical Amendment A)

Parameter	Units	Monitoring Frequency	Sampling Method	Analysis method / Technique
pH	pH Unit	Daily	Composite	Electrode
BOD	mg/l	Monthly	Composite	Standard Method
COD	mg/l	Monthly	Composite	Standard Method
Suspended Solids	mg/l	Monthly	Composite	Standard Method
Total Phosphorus (as P)	mg/l	Monthly	Composite	Standard Method
Orthophosphate (as P)	mg/l	Monthly	Composite	Standard Method
Ammonia	mg/l	Monthly	Composite	Standard Method
Tributyltin	ug/l	Biennially	Composite	Thermometer
Visual inspections	Descriptive	Daily	Grab	Standard Method

Ambient Monitoring:

It is proposed that ambient monitoring and analysis will continue to be carried out upstream and downstream of the primary discharge, in line with any new licence requirements.

Table A.1.5 – Proposed Ambient Monitoring Locations and Parameters

Monitoring Location					Name of Receiving Water
156117	E	098008	N	Upstream aSW1u	Blackwater(Munster)_130
158083	E	098036	N	Downstream aSW1d	Blackwater(Munster)_140

Table A.1.6 – Proposed Ambient Monitoring Regime

Parameter	Units	Monitoring Frequency	Analysis method
pH	pH Unit	Ten Samples/Year	Electrode
BOD	mg/l	Ten Samples/Year	Standard Method
DO	% O2	Ten Samples/Year	Electrode
Orthophosphate (as P)	mg/l	Ten Samples/Year	Standard Method
Total Phosphorus	mg/l	Ten Samples/Year	Standard Method
Total Ammonia	mg/l	Ten Samples/Year	Standard Method
Temperature	˚C	Ten Samples/Year	Standard Method
Visual inspections	Descriptive	Weekly	Standard Method

9. Hours during which the wastewater works is supervised or manned and days per week of this supervision

The Mallow WwTP runs automatically and is capable of being monitored on a daily basis via the SCADA system. The WwTP is a manned site during normal working hours on Monday – Friday with 24 hour call out response where the amount of time spent on site will vary depending on various factors *e.g.,* weather or breakdowns in plant or maintenance works required such as cleaning of the intake screens *etc*. In general, there are 1-2 people on site during normal operation of the plant. There is also a maintenance team on site for roughly one week a month to carry out any repairs or any other scheduled larger maintenance that may be required.

10. In the event of a review application, state the grounds for which this review application is being made

Following an examination of the Mallow WWDA in June 2021, the EPA concluded that the WWDA does not satisfy the environmental requirements of the WWDA 2007 regulations, as amended. The reasoning for their conclusion and recommendation for a review of the current WWDA D0052-01 was based on the following:

1. The licence was granted over 3 years ago.

2. Planning permission has been granted for proposed development works associated with the licence.

3. The agglomeration is included in Irish Water's investment plan.

4. Non-compliance with:

- Upgrade of the sewerage network, as set out in Schedule C: Specified Improvement Programme, by 01/06/2016.
- Installation of a pumping station overflow holding tank, as set out in Schedule C: Specified Improvement Programme, by 01/06/2016 and
- Discontinuation of storm water overflow discharges, as set out in Schedule C: Specified Improvement Programme, of this licence, by 01/06/2016.