



Waste Water Discharge Authorisation

Application Form

EPA Ref. No.: <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

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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)	D0057-01
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If A is applicable, provide the following information:

Grounds for review on which the application is being made:

A review of D0057-01 Crosshaven, Carrigaline, Ringaskiddy (to be called Cork Lower Harbour Agglomeration going forward) licence is required in order to amalgamate a number of agglomerations (as per below) into one licenced agglomeration which will be served by the Shanbally WwTP;

- D0057-01 Crosshaven, Carrigaline, Ringaskiddy
- D0054-1 Cobh
- D0129-01 Passage/Monkstown
- D0436-01 Ringaskiddy Village

The review application is also proposing a new set of ELVs for the treated effluent from the Shanbally WwTP and amendment and removal of certain ELVs for the primary discharge from the IDA outfall as per item 2 of the Non-Technical Summary. Due to the

amalgamation of agglomerations into 1 licence, agglomeration boundaries are to be revised also along with additional Storm Water Overflows to be included.

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

Date on which the waste water works became / becomes operational:	Not Applicable
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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	

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*:	Peter Keegan
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:	Cork Lower Harbour
Name of townland or townlands of the agglomeration served by a waste water works to which the application relates:	Cobh, Carrigaline (including Crosshaven), Passage West/Monkstown (including Glenbrook) and Ringaskiddy (including Shanbally and Coolmore)
Included on EPA Waste Water Priority List?	Yes ; <ul style="list-style-type: none"> • D0057-01 Crosshaven, Carrigaline, Ringaskiddy <ul style="list-style-type: none"> ○ The need for nutrient removal under Article 5(6) to be assessed ○ It is determined as part of this application that nutrient removal is not required – refer to attachment D.2.2

	<ul style="list-style-type: none"> • D0054-1 Cobh <ul style="list-style-type: none"> ○ Absence of connection to Shanbally WwTP; ○ Cobh is now connected since Q3 2021
<p>Included on European Commission infringement list?</p>	<p>Yes;</p> <ul style="list-style-type: none"> • D0057-01 Crosshaven, Carrigaline, Ringaskiddy <ul style="list-style-type: none"> ○ Non compliance with articles 3 & 4 of the UWWTD; Absence of connection to the WWTP and absence of WWTP ○ WwTP now in place and operational • D0054-1 Cobh & D0129-01 Passage/Monkstown <ul style="list-style-type: none"> ○ Non compliance with articles 4 of the UWWTD Absence of connection to the WWTP ○ Now connected to Shanbally WwTP

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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 D0057-01):</p>	<p>The agglomeration under D0057-01 was made up of the village of Crosshaven, town of Carrigaline, and Shanbally & Ringaskiddy.</p> <p>At the time of D0057-01 application and grant of licence, there was no wastewater treatment plant and the urban wastewater discharges were untreated. There were 6 pumping stations under D0057-01 and 6 licenced SWOs</p> <p>At time of the licence (D0057-01) application it was proposed that the Cork Harbour Main Drainage Scheme also known as The Cork Lower Harbour (CLH) Sewerage Scheme for the provision of collection systems and a new WwTP at Shanbally would be provided serving Cobh, Passage West/Monkstown, Crossahaven/Carrigaline/Ringaskiddy and Ringaskiddy Village.</p> <p>The primary discharge of the wastewater works under D0057-01 is being retained i.e. SW001 via the IDA outfall into Cork Harbour at 181358E, 062521N. There were 6 SWOs licenced under D0057-01 all discharging into Owenboy River, apart from SW02RING, which discharged into Monkstown Creek, Cork Harbour as per the licence.</p> <p>Refer to Attachment B.2.7 for WwTP process flow Attachment B.2.8 for further WwTP details</p>
<p>Description of proposed development, if any, to which the application relates:</p>	<p>The proposed development is the CLH Sewerage Scheme as referenced and includes transferring the collected wastewater from Cobh (D0054-01), Passage West/Monkstown (including Glenbrook) (D0129-01), and Ringaskiddy Village (including Shanbally and Coolmore) (D0436-01) to the Cork Lower Harbour agglomeration (D0057) for treatment at the new Shanbally waste water treatment plant (WwTP), approx. 2km west of Ringaskiddy, using an existing IDA outfall off Ringaskiddy towards Carlisle Fort (towards Dognose Bank), as well as a number of new pumping stations and storm water overflows.</p> <p>This Cork Lower Harbour (CLH) Sewerage Scheme is now complete.</p>

	<p>The CLH Project consisted of :</p> <ul style="list-style-type: none">• New Shanbally WwTP at Shanbally (constructed and currently operating)• 19 New and upgraded pumping stations with Dual Function Overflows and an attenuation tank with a Storm Water Overflow (20 Pump stations in total)• 30 km of new sewers Repair work on existing sewers• A drilled crossing under the estuary <p>The newly constructed WwTP (at 175085E, 063800N), providing secondary treatment with a design capacity of 65,000 PE (expandable to 80,000 PE) completed construction in 2016 and received first flows from Carrigaline and Crosshaven in December 2016.</p> <p>The WwTP is now also treating urban wastewater from Shanbally & Coolmore, Ringaskiddy, Passage West, Glenbrook and Monkstown, and Cobh.</p> <p>The treatment works consists of preliminary treatment (Inlet screens, Grit Removal), Storm Tank and secondary treatment based on Nereda® Aerobic Granular Reactors technology prior to gravity discharge to the Cork Harbour near Dognose Bank.</p> <p>The current loading population equivalent to the WwTP is 45,269 PE. This is based on loadings for the entire Cork Lower Harbour agglomeration. The nature of the emissions are predominantly domestic in nature.</p> <p>The Cork Lower Harbour agglomeration will have a total of 22 no. overflow discharge locations (from 24 SWO devices) within the Cork Lower Harbour (including, Cobh, Passage West, Monkstown, Carrigaline, Ringaskiddy, Crosshaven and Shanbally catchments) agglomeration that are designed to discharge periodically (generally weather dependent) into receiving waterbodies.</p> <p>All Storm Water Overflows are designed in accordance with the DoEHLG <i>'Procedures and Criteria in relation to Storm Water Overflows'</i>, 1995.</p> <p>The final effluent from the Shanbally WwTP has been designed to meet the quality standards for general components (BOD, COD and SS) specified in the Urban Waste Water Treatment Regulations 2001, as amended.</p>
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The treated effluent from the WwTP complies with the following discharge limit standards, which are the new proposed ELVs for the treated effluent from the WwTP:

Parameter	Concentration (mg/l)
BOD ₅	25
COD	125
Total Suspended Solids	35
Dissolved Inorganic Nitrogen (DIN)	45
pH	6 - 9

Table A1 – Proposed ELVs from the WwTP

Effluent from the Shanbally WwTP is discharged to the harbour, using an IDA owned outfall, at Dog Nose Point. Several large industrial companies operating under individual licenses, discharge directly to this IDA outfall downstream of the Shanbally WwTP discharge. Their flows are not, or will not be treated, at the Shanbally WwTP and are not considered to be part of the agglomeration load entering the Shanbally WwTP. For this reason, a different set of ELVs are proposed for the discharge from the IDA outfall Pipe (SW001)

Proposed ELVs for combined effluent from the Primary Discharge (SW001):

Parameter	Concentration (mg/l)
BOD ₅	245
Dissolved Inorganic Nitrogen	95

Table A2 – Proposed ELVs from the IDA Outfall (primary discharge)

The modelling assessment (Attachment D.2.2) has demonstrated that the proposed ELVs at the WwTP and the combined concentrations at the end of the IDA outfall pipe are compatible with the achievement of WFD objectives for the receiving waters and would have no perceptible effect on the level of eutrophication in Lough Mahon or North Channel Great Island.

Refer to **Attachment B.2.7** for WwTP process flow **Attachment B.2.8** for further WwTP details

<p>Number and type of waste water discharges from the waste water works including proposed waste water discharges:</p>	<p><u>Primary Discharge (SW001):</u> Treated effluent from Shanbally WwTP discharges via the IDA outfall into Cork Harbour at 181358E, 062521N</p> <p><u>Secondary Discharges:</u> There are no secondary discharge points from the agglomeration.</p> <p><u>Storm Water/Emergency Overflows</u> There is a total of 24 no. overflows within the Cork Lower Harbour (including, Cobh, Passage West, Monkstown, Carrigaline, Ringaskiddy, Crosshaven and Shanbally catchments) foul/combined sewer network that discharge periodically (generally weather dependent) into receiving waterbodies.</p> <p>Of the 24 no. overflows, 20 are from Dual Function Overflows associated with pumping stations (<i>i.e.</i> acts as a Storm Water or Emergency Overflow depending on the event) and 3 no. are network Storm Water Overflows and 1 no. SWO at WwTP.</p> <p>All storm water 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>The design of the overflows from the WwTP and Pumping Stations will significantly reduce the likelihood of untreated water entering the receiving watercourse.</p>
<p>Is the network assessment complete?</p>	<p>Yes</p>
<p>If the answer above is no, in what year is the assessment expected to be complete?</p>	<p><i>Not Applicable</i></p>

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):	Shanbally WwTP Cork Lower Harbour Shanbally Co. Cork
Telephone Number:	01-8925000
e-mail:	WasteWaterComplianceSouthern@water.ie
Grid ref (6E, 6N)	175085E, 063800N
Description of the treatment process	Secondary 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.2.3: Map 4 –Primary Discharge point & ambient sampling locations Attachment B.2.4: Map 5 WwTP treated effluent & primary discharge sampling locations Attachment B.2.5: Maps 6 – 23 Storm Water Overflow locations
B.2.3 Waste water process flow	Attachment B.2.6 WwTP site layout Attachment B.2.7: Waste Water Process Flow Diagram Attachment B.2.8: Details of WwTP

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:	<p>274,250 (made up 80,000 from Shanbally WwTP + 194,250¹ p.e. from industrial loads discharging directly into IDA outfall (based on IW interim methodology)</p> <p>259,250PE (based on current design capacity of WwTP (65,000PE) + 194,250¹ p.e. from industrial loads discharging directly into IDA outfall (based on IW interim methodology)</p> <p>Note: 80,000 PE – as per planning permission (collected load at plant) and what was assessed in modelling report – this is expandable capacity</p> <p>65,000 PE as per current design capacity of the WwTP</p>
Maximum average weekly population equivalent of the agglomeration:	45,269 (collected loads at WwTP)
Existing Organic Capacity of the waste water treatment plant - As Constructed or nominal design (p.e.)	65,0000 (as constructed) and expandable to 80,000 p.e.
Proposed Organic Capacity of the waste water treatment plant - As per planning permission or design (p.e.)	80,000 as per planning permission 65,000 (as constructed) – current design capacity

1

IE Licence/S16	Novartis P006-04	Hov_Pfizer P0010-04	Pfizer P0013-05	Recordati P0476-02	Centocor_ Janss P0778-02	Du Puy WP S 14-04	Du Puy WP S 09-13 bis
Discharge (m ³ /day) limit	900	1,800	2,900	100	1,200	100	100
BOD (mg/l) limit	250	2,000		300	40		
COD (mg/l) limit			5,500			1,000	1,000
Unadjusted PE load (using licence limits) based on IW interim PE methodology (BOD factor 0.06; COD factor 0.125 applied in absence of bod limit)	3,750	60,000	127,600	500	800	800	800

Current Collected Load (p.e.):	45,269 (based on 2020 – includes 14,472 PE from Cobh)
Remaining Organic Capacity (p.e.):	19,731 (based on as constructed design))
Is the plant overloaded – organic loading?	No
Current Peak Hydraulic Capacity of the waste water works–As Constructed or nominal design (m ³ /day):	43,875 (design, as constructed)
Proposed Peak Hydraulic Capacity of the waste water works–As per planning permission or nominal design (m ³ /day):	43,872 (design, as constructed)
Current and proposed dry weather flow (DWF) to the treatment plant (m ³ /day):	10,186 (based on 2020 collected loads – 45269PE) 14,625 (current design, as constructed (based on 65,000PE))
Current average hydraulic loading to the treatment plant (m ³ /day):	14,759
Remaining Hydraulic Capacity (m ³ /day):	29,113
Is the plant hydraulically overloaded?	No

The first phase of the WwTP at Shanbally, providing new sewers and secondary treatment with a design capacity of 65,000 PE (expandable to 80,000 PE) was completed in 2016.

Based on the design capacity of the waste water works the projected extra hydraulic and organic loading to the works, over the lifetime of the licence, will not pose an environmental risk to the receiving water habitat as the plant currently has sufficient capacity to provide secondary treatment up to 65,000 PE.

B.2.5 Waste Water Inputs

Table 11 - Waste Water Inputs to Waste Water Works (based on current collected loads and measured results from industry)

Inputs	P.E.	% of total PE
Domestic waste water load (currently collected)	44,183 (Collected at WwTP)	98%; (based on collected loads at WwTP) 35%; (based on collected loads at WwTP and loads directly to IDA outfall)
Industrial waste water load (as measured)	1,086 ² (Collected at WwTP)	2% ; (based on collected loads at WwTP) 0.9%; (based on collected loads at WwTP and loads directly to IDA outfall)
Leachate	0	0
Waste water to be conveyed and discharged only (i.e.by pass the WWTP)	79,878 ³	64%
Total	45,269 (total collected load) 125,147 (total collected load + loads directly into IDA outfall from industry)	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?	Yes
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If 'No' was answered to A, provide details of the measures to be taken to comply:

Not applicable

² IED Facility under licence P0864-01 contributes ca. 482 PE , based on 2021 measured data (equates to 44% of the industrial loadings to WwTP), with 5 S16 facilities contributing ca. 604 PE based on measure data

³ Based on approx. measured data from industry (note 1 above & based on 2020-2021 data – these are PE loadings directly into IDA outfall – i.e. not collected at WwTP

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:	An Bord Pleanála
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
C	If planning permission is not required at A above, is the proposed development, if any, to which the application relates exempted development?	No

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:	04YA0005 146B – YM0001 146B – YM0003
Planning Appeal Reference Number (if relevant):	Not applicable
Planning Authority Name / An Bord Pleanála:	An Bord Pleanála
Date of Planning Decision (Final Grant):	04YA0005 – 19 th June 2009 146B – YM0001 – 28 th July 2015 146B – YM0003 – 20 th March 2017
Brief description:	04YA0005 - application by Cork County Council to ABP for the Construction of a wastewater treatment plant as part of the development of Cork Lower Harbour Sewerage Scheme which includes upgrading of the existing waste water collection systems in the lower harbour area and construction of a marine pipeline crossing at Shanbally, Carrigaline, County Cork. 146B – YM0001 – application by IW requesting alteration to 04YA0005 e.g. changes to number of pumping stations

	146B – YM0003 - application by IW requesting changes in the locations / removal of the pumping stations and alteration to estuary pipeline crossing
EIAR required with Planning Application?	Yes
Confirm that the supporting documentation is provided:	Yes

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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):	Not Applicable
Planning Authority Name / An Bord Pleanála:	Not Applicable
Date of application:	Not Applicable
Brief description:	Not Applicable
EIAR required with Planning Application?	Not Applicable
Confirm that the supporting documentation is provided:	Not Applicable

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 – refer to section B.5 for EIS/EIAR
	- a copy of relevant grant of planning permission AND planners report	Attachment B.3.1 Planning Documentation
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)	174381E	063760N
	174560E	064685N

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 24 – Site Notice Locations
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
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 Treatment Directive	Yes
C	Are there other competent authorities conducting EIA for the development or proposed development to which this application relates?	Yes
D	If 'Yes' to C, provide the name of the competent authority and consent reference	An Bord Pleanála

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; EIS February 2008
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

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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?	Yes
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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:	Department of Housing, Local Government and Heritage
A	Has a Foreshore Act Licence being granted?	Yes - 2 No – 1 (FS 006685)
B	If no to A, is a Foreshore Act Licence application under consideration by the relevant competent authority?	Yes - Foreshore licence (FsL) application for the outfall is currently under revision and to be updated. Please see licences granted to date relating to the project
C	Was EIA carried out or will be carried out by the Foreshore Act Licence competent authority?	Yes
D	If 'Yes' to C, confirm that the same EIAR was submitted to Foreshore competent authority as accompanied this WWDA application.	Yes
E	If 'Yes' to A, provide: - Licence Reference Number; and - date of grant of consent:	FS006470 – 14/02/2017 FS006657 – 26/02/2019
G	If 'Yes' to B, provide application reference number	FS 006685 (under revision)

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:	Attachment B.7 Foreshore licence FS006470 Attachment B.7 Foreshore licence FS006657

		<p>FS006470 (2015) Irish Water - Cork Lower Harbour Main Drainage Project - https://www.gov.ie/en/foreshore-notice/bdfc6-irish-water-cork-lower-harbour-main-drainage-project/#determination</p> <p>FS006657 (2016) Irish Water – Cobh - https://www.gov.ie/en/foreshore-notice/c692e-irish-water-cobh/?referrer=http://www.gov.ie/en/publication/b96e5-irish-water-cobh/</p>
<p>If 'Yes' to C</p>	<p>Foreshore Act Licence report:</p>	<p>Attachment B.7 MLVC Report FS006470 Attachment B.7 MLVC Report FS006657</p>

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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)	Description	Licence Schedule	Licence Completion Date	Date Expired? (N/NA/Y)	Status of Works
D0057-SIP:01	SW 02 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed
D0057-SIP:02	Infiltration programme	C	01/01/2015	Yes	Works Completed
D0057-SIP:03	Installations of rising mains, gravity sewers, pumping stations and marine pipeline including upgrading of existing facilities	C	01/01/2015	Yes	Works Completed
D0057-SIP:04	SW 03 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed
D0057-SIP:05	SW 04 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed
D0057-SIP:06	SW 05 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed
D0057-SIP:07	SW 06 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed

D0057-SIP:08	SW 07 Ring to meet criteria set out in DoEHLG Procedures and Criteria....	C	01/01/2015	Yes	Works Completed
D0057-SIP:09	WWTP and ancillary works to provide secondary treatment	C	01/01/2015	Yes	Works Completed
Comments	Refer to Attachment B.8 for details of the extent and type of work undertaken under the Cork Lower Harbour Main Drainage Project . All of the works have been completed and there are no further improvements proposed.				

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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

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

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; CLH Programme of Improvements

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.1.1: Discharges and Monitoring Tabular Data Attachment C.1.2 SW001:Primary Discharge & SW100:WwTP effluent 2021 Results

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		CLH Agglomeration	Reviewed/test at least annually
Emergency Response Plan and Procedures:	Y		CLH Agglomeration	Reviewed/test at least annually
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:	Y		WwTP	Alarms for WWTP fed to SCADA with alarms sent to operators (level, flow) – Remote access to SCADA also
Standby pumps at waste water treatment plant:	Y		WwTP	Auto switch-over of pumps.

				Alarms for pump and level fed to SCADA with alarms sent to operators.
Standby equipment or provisions in the event of interruption of the power supply such as a portable generator or equipment with automatic switchover:	Y		WwTP	Connection provided for connecting mobile generator. Uninterruptible Power Supply (UPS) backup for telemetry/plant controllers (PLCs).
Storage capacity at intake to the waste water treatment plant (SWO tank):	Y		WwTP	4,500m3
Groundwater monitoring:	N	N	Not Applicable	Not Applicable
Network				
Measures to prevent unintended discharges	Existing (Y/N)	Proposed (Y/N)	Applicability	Surveillance measure
Alarms / telemetry on pumping stations:	Y	-		Alarms for pump and level in PSs fed to SCADA with alarms sent to operators.
Alarms / telemetry on emergency overflows:	Y	-		Alarms on EOs (all overflows serve a dual function i.e. EO's and SWO's)
Standby pumps at pumping stations:		-	-	All PS have standby pumps - all have at least 1 standby pump Auto change-over of pumps.
Standby equipment or provisions in the event of interruption of the power supply:	Y	-	-	Connection provided for connecting mobile generator. Uninterruptible 30 mins Power Supply (UPS) backup for following telemetry/plant controllers: PLC & HMI; <ul style="list-style-type: none"> • Level Instruments; • Data Storage System; • RTU (remote terminal unit) • Fire System; • Security System; • Gas Monitoring.
Storage capacity at pump stations:	Y	-	-	Dockyard (DY)PS and Old Town Hall (OTH)PSs have storage tanks

				<ul style="list-style-type: none"> • Dockyard – 740m³ (total storage volume i.e. tank, wet well and online) • OTH – 670m³ (as above) <p>All pump stations are designed to provide at least 2hours DWF storage.</p>
Monitoring telemetry on SWOs:	Y	-	-	<p>Monitoring of storm overflow at pump stations (flow, volume pumped, pump starts) e.g.; FM104(Station Car Park; LT202 (Old Town Hall), FM303(RushBrook), FM403(Dockyard Cottages), FM601(Dockyard)</p> <p>Data is fed to scada with inspections completed also (Visual Display Units (VDUs) in place)</p>
Additional measures:	Y		-	<p>Screened Overflows; redundancy in Dockyard PS screens (and inlet channels); redundancy in Dockyard PS Rising Main to Monkstown (2x Estuary Crossing Mains)</p>

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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 WwTP Emergency Plan

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):	Coastal
Name and WFD reference:	Cork Harbour IW_SW_060_0000
WFD Risk:	Review (WFD cycle 2) At Risk (Cycle 3)
WFD Status & year:	Moderate ecological status (2013-2018) Good chemical surface status (2013-2018)
WFD Objective & timeframe for achievement:	Expected Good Status (2027) Protected Area Shellfish Area – Rostellan North, South & West; Protected Area Water Dependent Habitat – SPA – Cork Harbour SPA
Is the agglomeration identified as a significant pressure?	<i>No; D0057 is not consider a significant pressure Note; Cobh (D0054-01) was identified as a significant pressure under WFD Cycle 3 on Cork Harbour but this has since been connected to Shanbally treatment plant (Sept 2021) .</i>
Has the discharges contributed to a deterioration in the quality of the water body?	<i>No the discharges from CLH agglomeration have not contributed to the deterioration in water quality</i>
Protected areas in the vicinity of the discharges:	<p><u>Nutrient Sensitive Areas</u></p> <p>Lough Mahon transitional waterbody has been assigned Moderate ecological status under the Water Framework Directive (WFD) 2013-2018 and Good chemical surface water status. Lough Mahon is categorised as being is At Risk of not achieving its objectives under the WFD. It should be noted that the IDA outfall and discharge point are not located within the Lough Mahon transitional waterbody, and thus, Shanbally WwTP does not discharge to the Lough Mahon transitional waterbody.</p> <p>Owennacurra Estuary/North Channel is a nutrient sensitive area within the greater Cork Harbour and is located ca. 6.4 km north east of the primary discharge location.</p> <p>Lee Estuary/Lough Mahon is a nutrient sensitive area within greater Cork Harbour and is located ca. 4.7 km north west of the primary discharge outfall location.</p>

Based on modelling completed which supports this application review (see **Attachment D.2.2**) the new Shanbally WwTP is unlikely to impact on the above nutrient sensitive areas.

European Sites

As the Shanbally WwTP discharges into a coastal waterbody via the IDA outfall, in the first instance, all European Sites which could potentially interact with this waterbody, or immediately adjoining waterbodies, are considered for source-pathway-receptor connectivity in order to establish the potential zone of influence of the discharges. This zone of influence encompasses European sites within any potential dilution/dispersion zone or those with mobile species for which any potential ex-situ effects must be considered. These sites are presented below;

Table D.1. European sites

Site Name	Distance and Pathway
Great Island Channel SAC	Ca. 8km north of the IDA outfall and situated within the North Great Island Channel within the transitional Lough Mahon waterbody. Connectivity is via transitional and coastal waters.
Cork Harbour SPA	The closest area of the SPA (Lough Beg) is located ca. 1.6km to the west of the IDA outfall. Lough Beg lies within the coastal Cork Harbour waterbody. Connectivity is via transitional and coastal waters.
Ballycotton Bay SPA	Ca. 17km east of the IDA outfall. Connectivity is via coastal waters along the Co. Cork coastline.
Ballymacoda (Clonpriest & Pillmore) SAC	Ca. 25km east of the IDA outfall. Connectivity is via coastal waters along the Co. Cork coastline.
Ballymacoda SPA	Ca. 26km east of the IDA outfall. Connectivity is via coastal waters along the Co. Cork coastline.
Sovereign Islands SPA	Ca. 19km south-west of the IDA outfall, off the coastline of Co. Cork. Connectivity is via coastal waters along the Co. Cork coastline.
Old Head of Kinsale SPA	Ca. 28km south-west of the IDA outfall. Connectivity is via coastal waters along the Co. Cork coastline.

	<p><u>Bathing Waters</u></p> <p>Fountainstown Beach is the only designated bathing beach within greater Cork Harbour and is located ca. 5.25 km south west of the primary discharge outfall. It has been classified as having “Excellent” water quality for the year 2020. There are six designated, classified or licensed shellfisheries in Cork Harbour; North Channel West, North Channel East, Rostellan, Rostellan West, Rostellan North, Rostellan South. Three of these locations are “Classified Production Areas” (SFPA, March 2018) for shellfish i.e. North Channel West, North Channel East. North Channel West, North Channel East and Rostellan have been classified as Class B for oysters.</p> <p>Maps of the relevant designations in relation to the receiving water are contained in Attachments D.2.5 & D.2.6</p> <p><u>Shellfish</u></p> <p>There are 4 designated shellfisheries in Cork Harbour; the Cork Great Island North Channel; Rostellan West, Rostellan North, Rostellan South. Rostellan West is the nearest shellfish area to the primary discharge point, ca. 5.5 km north east of the primary discharge point.</p> <p>The modelling assessment has demonstrated that the combined discharge will meet all interim and regulatory bacterial water quality targets and that the combined discharge is compatible with the achievement of WFD objectives for the Designated Shellfish Waters in both Rostellan and the North Channel and the Designated Bathing Waters at Fountainstown Beach.</p> <p><u>Drinking Water Designations</u></p> <p>There are no drinking water designations in proximity to the discharges from the agglomeration</p> <p><u>Proposed Natural Heritage Areas (pNHA)</u></p> <p>There are six pNHAs within or adjacent to the Cork Harbour (Coastal Waterbody) and the Owenboy Estuary, namely, Lough Beg (Cork) pNHA (ca. 1.6 km west of the primary discharge), Monkstown Creek pNHA (ca. 5 km north west of the primary discharge), Owenboy River pNHA (ca. 4.8 km south west of the primary discharge), Whitegate Bay pNHA (ca. 1.8 km north east of the primary discharge), Rostellan Lough, Aghada Shore and Poul nabibe Inlet pNHA and Cuskinny Marsh pNHA (ca. 3.7 km north east of the primary discharge).</p> <p>All the above sites apart from Cuskinny Marsh are also designated as part of the Cork Harbour SPA. As such, these pNHAs are covered as per the conservation objectives of the SPA.</p> <p>Cuskinny Marsh is of interest because it contains a mix of habitats, within a small area, and supports locally important numbers of wildfowl.</p> <p>The improvement in the effluent discharges from the proposed project will have a positive impact on Cork Harbour aquatic environment. Any improvement in the aquatic environment will have a beneficial impact on the water dependent interests of the above pNHA</p>
<p>Are there drinking water abstraction points</p>	<p>No</p>

downstream of waste water discharge points?																																				
European sites hydrologically connected:	<p>Of the sites listed above in table D.1, the nearest hydrologically connected designated site is Cork Harbour SPA. The nearest subsite of this SPA (i.e. Lough Beg) is located ca. 1.6 km from the discharge location. The nearest SAC is the Great Channel Island SAC which stretches from Little Island to Midleton, with its southern boundary being formed by Great Island and is located ca. 8 km from the primary discharge location. Both Cork Harbour SPA and Great Channel Island SAC are within the potential zone of influence of Shanbally WwTP and the IDA outfall.</p> <p>Ballymacoda (Clonpriest and Pillmore) SAC, while hydrologically connected via coastal waters, is designated for habitats such as estuaries, mudflats and sandflats, estuarine vegetation colonising mud and sandflats, and salt meadows within estuarine areas of the Womanagh River and the western area of Youghal Bay. The SAC is not designated for any mobile qualifying species. Due to the nature of the hydrological connectivity across extensive open coastal water, there is no realistic pathway for effects between the Shanbally WwTP and IDA outfall and the qualifying habitats of Ballymacoda (Clonpriest and Pillmore) SAC.</p>																																			
Trophic status of transitional / coastal waters:	<table border="1"> <thead> <tr> <th data-bbox="496 853 687 981">Waterbody Name</th> <th data-bbox="687 853 903 981">WFD Code</th> <th data-bbox="903 853 1098 981">Waterbody Type</th> <th data-bbox="1098 853 1267 981">WFD Status (2013-2018)</th> <th data-bbox="1267 853 1469 981">Trophic Status</th> </tr> </thead> <tbody> <tr> <td data-bbox="496 981 687 1048">Cork Harbour</td> <td data-bbox="687 981 903 1048">IW_SW_060_0000</td> <td data-bbox="903 981 1098 1048">Coastal</td> <td data-bbox="1098 981 1267 1048">Moderate</td> <td data-bbox="1267 981 1469 1048">Intermediate</td> </tr> <tr> <td data-bbox="496 1048 687 1115">Outer Cork Harbour</td> <td data-bbox="687 1048 903 1115">IE_SW_050_0000</td> <td data-bbox="903 1048 1098 1115">Coastal</td> <td data-bbox="1098 1048 1267 1115">Good</td> <td data-bbox="1267 1048 1469 1115">Unpolluted</td> </tr> <tr> <td data-bbox="496 1115 687 1182">Lough Mahon</td> <td data-bbox="687 1115 903 1182">IE_SW_060_0750</td> <td data-bbox="903 1115 1098 1182">Transitional</td> <td data-bbox="1098 1115 1267 1182">Moderate</td> <td data-bbox="1267 1115 1469 1182">Eutrophic</td> </tr> <tr> <td data-bbox="496 1182 687 1279">North Channel Great Island</td> <td data-bbox="687 1182 903 1279">IE_SW_060_0300</td> <td data-bbox="903 1182 1098 1279">Transitional</td> <td data-bbox="1098 1182 1267 1279">Moderate</td> <td data-bbox="1267 1182 1469 1279">Intermediate</td> </tr> <tr> <td data-bbox="496 1279 687 1346">Owenacurra Estuary</td> <td data-bbox="687 1279 903 1346">IE_SW_060_0400</td> <td data-bbox="903 1279 1098 1346">Transitional</td> <td data-bbox="1098 1279 1267 1346">Moderate</td> <td data-bbox="1267 1279 1469 1346">Potentially Eutrophic</td> </tr> </tbody> </table>						Waterbody Name	WFD Code	Waterbody Type	WFD Status (2013-2018)	Trophic Status	Cork Harbour	IW_SW_060_0000	Coastal	Moderate	Intermediate	Outer Cork Harbour	IE_SW_050_0000	Coastal	Good	Unpolluted	Lough Mahon	IE_SW_060_0750	Transitional	Moderate	Eutrophic	North Channel Great Island	IE_SW_060_0300	Transitional	Moderate	Intermediate	Owenacurra Estuary	IE_SW_060_0400	Transitional	Moderate	Potentially Eutrophic
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Owenacurra Estuary	IE_SW_060_0400	Transitional	Moderate	Potentially Eutrophic																																
Is there a groundwater protection scheme in place or to be provided in the vicinity of such discharge?	No																																			
Status of adjacent waterbodies: (e.g. upstream and downstream of the receiving waterbody)	<table border="1"> <thead> <tr> <th data-bbox="496 1554 687 1621">Waterbody Name</th> <th data-bbox="687 1554 903 1621">WFD Code</th> <th data-bbox="903 1554 1098 1621">Waterbody Type</th> <th data-bbox="1098 1554 1267 1621">WFD Status (2013-2018)</th> </tr> </thead> <tbody> <tr> <td data-bbox="496 1621 687 1666">Cork Harbour</td> <td data-bbox="687 1621 903 1666">IW_SW_060_0000</td> <td data-bbox="903 1621 1098 1666">Coastal</td> <td data-bbox="1098 1621 1267 1666">Moderate</td> </tr> <tr> <td data-bbox="496 1666 687 1733">Outer Cork Harbour</td> <td data-bbox="687 1666 903 1733">IE_SW_050_0000</td> <td data-bbox="903 1666 1098 1733">Coastal</td> <td data-bbox="1098 1666 1267 1733">Good</td> </tr> <tr> <td data-bbox="496 1733 687 1778">Lough Mahon</td> <td data-bbox="687 1733 903 1778">IE_SW_060_0750</td> <td data-bbox="903 1733 1098 1778">Transitional</td> <td data-bbox="1098 1733 1267 1778">Moderate</td> </tr> <tr> <td data-bbox="496 1778 687 1883">North Channel Great Island</td> <td data-bbox="687 1778 903 1883">IE_SW_060_0300</td> <td data-bbox="903 1778 1098 1883">Transitional</td> <td data-bbox="1098 1778 1267 1883">Moderate</td> </tr> <tr> <td data-bbox="496 1883 687 1951">Owenboy Estuary</td> <td data-bbox="687 1883 903 1951">IE_SW_060_1200</td> <td data-bbox="903 1883 1098 1951">Transitional</td> <td data-bbox="1098 1883 1267 1951">Unassigned</td> </tr> <tr> <td data-bbox="496 1951 687 2024">Owenacurra Estuary</td> <td data-bbox="687 1951 903 2024">IE_SW_060_0400</td> <td data-bbox="903 1951 1098 2024">Transitional</td> <td data-bbox="1098 1951 1267 2024">Moderate</td> </tr> </tbody> </table>						Waterbody Name	WFD Code	Waterbody Type	WFD Status (2013-2018)	Cork Harbour	IW_SW_060_0000	Coastal	Moderate	Outer Cork Harbour	IE_SW_050_0000	Coastal	Good	Lough Mahon	IE_SW_060_0750	Transitional	Moderate	North Channel Great Island	IE_SW_060_0300	Transitional	Moderate	Owenboy Estuary	IE_SW_060_1200	Transitional	Unassigned	Owenacurra Estuary	IE_SW_060_0400	Transitional	Moderate		
Waterbody Name	WFD Code	Waterbody Type	WFD Status (2013-2018)																																	
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Owenboy Estuary	IE_SW_060_1200	Transitional	Unassigned																																	
Owenacurra Estuary	IE_SW_060_0400	Transitional	Moderate																																	

95%ile River Flow upstream of primary discharge point: (if applicable)	Not Applicable – Coastal Waterbody				
Receiving water monitoring stations: (code and distance from primary discharge point)	The EPA, as part of the TraC monitoring programme, conduct sampling at various locations in Cork Harbour.				
	Proposed licence code	Receiving Water Monitoring Points (EPA TraC points)	Waterbody Name	Distance From discharge pt (SW001)	Coordinates (ING)
	Cork Harbour (Receiving Waterbody) Monitoring Stations				
	aSW1a (proposed)	LE380 - CW05003150LE8001	Cork Harbour - Ringaskiddy	Approx. 4-4.5km	178456E, 065093N
	Not Applicable	LE620 - CW05003150LE8003	Cork Harbour – E-Spike Island	Approx. 2.5Km	181853E, 064946N
	Not Applicable	LE610 - CW05003150LE8002	Cork Harbour - Adjacent to Aghada	Approx. 3.9Km	183315E, 65375N
	Outer Cork Harbour (IE SW_050_0000)				
	aSW1b (proposed)	LE630 - CW05003149LE9001	Outer Cork Harbour – adjacent to Carlisle Fort	Approx. 0.5KM	181449E, 62044N
	aSW1c (proposed)	LE810 - CW05003149LE9002	Outer Cork Harbour – Roches Pt	Approx. 3km	181702E, 059752N
	Not Applicable	LE820 - CW05003149LE9003	Outer Cork Harbour Myrtleville	Approx 4 Km	181104E, 058028N
Note – No data available in 2018-2020 EPA TSAS for Station LE610 (Cork Harbour adjacent to Aghada)					

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?	Yes / No
Have the discharges contributed to a deterioration in the quality of the water body?	Yes / No (If 'Yes' provide explanation)
Protected areas downstream	Not Applicable
Are there drinking water abstraction points downstream of waste water discharge points?	Yes / No (If 'Yes', provide distance downstream)
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)	Upstream Downstream

Table 33- Receiving waters of discharges from SWOs

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
Lough Mahon - IE_SW_060_0750	Moderate	7	0	No	Good status objective (2027);
Cork Harbour - IW_SW_060_0000	Moderate	6	0	No	Good status objective (2027);
Owenboy Estuary - IE_SW_060_1200	Unassigned	11	0	No	Good 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**Table 34 (i) - LE380 – Ringaskiddy**

EDEN Code (where applicable):	Not Applicable	
Licence Code (proposed):	aSW1a	
Station/CRM code	LE380 – Ringaskiddy - CW05003150LE8001	
Monitoring Location:	178456E	065093N
Point Type:	Coastal Surveillance Monitoring Station	
Name of Receiving Water	Cork Harbour (IE_SW_060_000)	

Table 35 - Ambient Monitoring – upstream monitoring results (Cork Harbour)

Table 35 (i) below is based on 2018-2020 EPA TSAS report. The EPA, as part of the TraC monitoring programme, conduct sampling at various locations in Cork Harbour.

See **Attachment D.2.7** for the 2018-2020 monitoring results (data from the EPA used as part of TSAS) for Stations: LE620 (E-Spike Island) LE380 (Ringaskiddy); Station LE630 (Adjacent to Carlisle Fort) for Cork Harbour; and Stations LE630, LE810 and LE820 for Outer Cork Harbour.

Table 35 (i) TSAS Summary for Entire Waterbody for 2018-2020 period

	CORK HARBOUR			OUTER CORK HARBOUR		
	TSAS Threshold	Result	Pass/Fail	TSAS Threshold	Result	Pass/Fail
Salinity (%)	33.1 (Summer) 31.0 (Winter)			34 (Summer) 33.1 (Winter)		
DIN- mg/l N (Summer median)	0.378	0.056	PASS	0.314	0.041	PASS
DIN- mg/l N (Winter median)	0.506	0.421	PASS	0.378	0.223	PASS
MRP (ug/l) (Summer median)	42	2.50	PASS	41	2.50	PASS
MRP (ug/l) (Winter median)	44	26.0	PASS	42	16.0	PASS
Chloro. Median	10.6	3.65	PASS	10.3	1.40	PASS
Chloro 90 percentile	21.1	7.70	PASS	20.6	4.31	PASS
DO%sat 5 percentile	79	94.93	PASS	79	93.35	PASS
DO%sat 95 percentile	121	129.5	FAIL	121	120.3	PASS
BOD	4	3.35	PASS	4	2.14	PASS

Tables 35 (ii) - 2018-2020 EPA TSAS Ambient Monitoring Data at Stations LE 620 & LE380 (Cork Harbour)

	TSAS Threshold for Waterbody	LE620 – E-Spike Island (Cork Harbour)		LE380 - Cork Harbour Ringaskiddy	
Salinity (%)	33.1 (Summer) 31.0 (Winter)				
DIN- mg/l N (Summer median)	0.378	0.04	PASS	0.09	PASS
DIN- mg/l N (Winter median)	0.506	0.348	PASS	0.743	FAIL
MRP (ug/l) (Summer median)	42	2.50	PASS	5.35	PASS
MRP (ug/l) (Winter median)	44	21.5	PASS	29	PASS
Chloro. Median	10.6	2.90	PASS	3.90	PASS
Chloro 90 percentile	21.1	7.12	PASS	9.61	PASS
DO%sat 5 percentile	79	94.74	PASS	96.70	PASS
DO%sat 95 percentile	121	125.24	FAIL	131.54	FAIL

Table 35(iii) – Data based on 2021 results for Station LE380 - Ringaskiddy. (ref; Catchments.ie Jan' 2022)

Parameter	pH	BOD mg/l	PO ₄ µg/l P	Total Ammonia mg/l	TON mg/l	DO %
Number of Samples	8	7	8	8	8	8
Max result	8.200	1.200	0.040	0.170	1.300	114
Min result	7.800	0.500	0.003	0.031	0.063	88
Average result	8.088	0.871	0.011	0.079	0.282	103
Overall compliance with relevant EQS	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Compliant (95%ile >80% & 95%ile <120%)

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Table 36 Ambient monitoring – upstream monitoring points – Outer Cork Harbour

Table 36 (i) - LE630 - Adjacent to Carlisle Fort

EDEN Code (where applicable):	CW05003149LE9001	
Licence Code (proposed):	aSW1b	
	LE630 - Adjacent to Carlisle Fort CW05003149LE9001	
Monitoring Location:	181449E	62044N
Point Type:	EPA Coastal Operational Monitoring Station	
Name of Receiving Water	Outer Cork Harbour	

Table 36 (ii) - L E810 – Roches Point

EDEN Code (where applicable):	CW05003149LE9002	
Licence Code (proposed):	aSW1c	
Station/CRM Code	LE810 – Roches Point CW05003149LE9002	
Monitoring Location:	181702E	059752N
Point Type:	Coastal Operational Monitoring Station	
Name of Receiving Water	Outer Cork Harbour	

Table 37 - Ambient Monitoring – downstream monitoring results

Table 37 (i) below is based on 2018-2020 EPA TSAS report. The EPA, as part of the TraC monitoring programme, conduct sampling at various locations in Cork Harbour.

See **Attachment D.2.7** for the 2018-2020 monitoring results (data from the EPA used as part of TSAS) for Stations: LE620 (E-Spike Island) LE380 (Ringaskiddy); Station LE630 (Adjacent to Carlisle Fort) for Cork Harbour; and Stations LE630, LE810 and LE820 for Outer Cork Harbour.

Table 37 (i) - 2018-2020 EPA TSAS Ambient Monitoring Data at Stations LE630 and LE810 (Outer Cork Harbour)

	TSAS Threshold for Waterbody	LE630 - Outer Cork Harbour – adjacent to Carlisle Fort		LE810 – Roches Point - Outer Cork Harbour	
Salinity (%)	34 (Summer) 33.1 (Winter)				
DIN- mg/l N (Summer median)	0.314	0.04	PASS	0.05	PASS
DIN- mg/l N (Winter median)	0.378	0.254	PASS	0.213	PASS
MRP (ug/l) (Summer median)	41	2.50	PASS	2.5	PASS
MRP (ug/l) (Winter median)	42	21	PASS	16	PASS
Chloro. Median	10.3	1.90	PASS	1.15	PASS
Chloro 90 percentile	20.6	5.30	PASS	4.64	PASS
DO%sat 5 percentile	79	93.39	PASS	95.95	PASS
DO%sat 95 percentile	121	120.95	PASS	118.93	PASS

Table 37 (ii) - Ambient Monitoring – downstream monitoring results from LE630 - Adjacent to Carlisle Fort – based on 2018-2020 EPA TSAS

Parameter	pH	BOD mg/l O ₂	PO ₄ µg/l P	DIN mg/l	NH ₃ mg/l	TON mg/l
Number of Samples	24	12	18	18	18	18
Summer						
Number of Samples			6	6	6	6
Winter						
Max result	8.20	2.10	17	0.09	0.05	0.04
Summer						
Max result			25.0	0.34	0.06	0.28
Winter						
Min result	7.90	0.50	2.50	0.02	0.01	0.01
Summer						

Min result			12.0	0.11	0.02	0.09
Winter						
Average result	8.08	0.95	6.63	0.04	0.03	0.01
Summer						
Average result			19.67	0.25	0.04	0.21
Winter						
Median result	8.1	0.5	2.5	0.039	0.0285	0.005
Summer						
Median result			21	0.25	0.04	0.21
Winter						
EQS ⁴ – Summer (TSAS Threshold 2018-2020)	Not Applicable	4	41	0.314	Not Applicable	Not Applicable
EQS ² – Winter (TSAS Threshold 2018-2020)	Not Applicable		42	0.378	Not Applicable	Not Applicable
Monitoring point % compliance with relevant EQS/TSAS Threshold for Waterbody	Not Applicable	100%	100%	100%	Not Applicable	Not Applicable

Table 37(iii) – Data based on 2021 results for Station L630 – Adjacent to Carlisle Fort. (ref; Catchments.ie Jan' 22)

Parameter	pH	BOD mg/l	ortho-Phosphate (as P) – unspecified mg/l	Total Ammonia mg/l	TON mg/l	DO %
Number of Samples	8	7	8	8	8	8
Max result	8.200	0.5	0.019	0.068	0.160	111
Min result	7.900	0.5	0.003	0.012	0.005	77 (Winter) 97 (Summer)
Average result	8.063	0.5	0.007	0.032	0.045	96.5
Overall compliance with relevant EQS	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Compliant Sumer (95%ile >80% & 95%ile <120%

⁴ EQS based on TSAS Threshold for Cork Harbour using median Salinity – refer to Attachment D.2.7; EPA TSAS 2018-2020

Table 37(iv) – Data based on 2021 results for Station L810 – Roches Point (ref; Catchments.ie Jan’ 22)

Parameter	pH	BOD mg/l	ortho-Phosphate (as P) – unspecified mg/l	Total Ammonia mg/l	TON mg/l	DO %
Number of Samples	4	4	4	4	4	4
Max result	8.200	0.50	0.016	0.043	0.180	101
Min result	7.900	0.50	0.003	0.014	0.005	87
Average result	8.050	0.50	0.006	0.036	0.053	95.5
Overall compliance with relevant EQS	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Compliant EQS; (95%ile >80% <120%

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Table 38 - Proposed Receiving Water Monitoring

Proposed monitoring will be as per licence requirements and in line with EPA Transitional and Coastal (TraC) monitoring. Ambient monitoring for Cork Harbour and Outer Cork Harbour is provided by EPA and available on www.catchments.ie also.

Below are some of the monitoring stations on the Cork Harbour and Outer Cork Harbour that were used as part of EPA TSAS summary 2018-2020 (note; other station information is available in **attachment D.2.7**) . IW intend to utilise the EPA TraC data/monitoring regime as appropriate. The proposed monitoring regime – frequency and parameters will be as per EPA TraC sampling regime.

EDEN Code (where applicable)	Licence Code	Monitoring Location			Point Type	Name of Receiving Water
CW05003150LE8001	aSW1a	178456	E	065093	N Surveillance	Cork Harbour

EDEN Code (where applicable)	Licence Code	Monitoring Location			Point Type	Name of Receiving Water
CW05003149LE9001	aSW1b	181449	E	062044	N Operational	Outer Cork Harbour
CW05003149LE9002	aSW1c	181702	E	059752	N Operational	Outer Cork Harbour

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Table 39 - Proposed Monitoring Regime

Parameter	Units	Monitoring Frequency	Analysis method/Technique
As per EPA TraC monitoring regime			

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
Modelling Report	Attachment D.2.2 CLH Water Quality Modelling report
Natura Impact Statement	Not Applicable
AA screening report	Attachment D.2.3 AAS January 2022
Priority Substance Assessment Report	Attachment D.2.4: Priority Substance Assessment Report
Designated areas	Attachment D.2.5 Map 25 Designated areas.
European Sites	Attachment D.2.6 Map 26 European sites.
Ambient Monitoring	Attachment D.2.7 Ambient data & EPA TSAS Monitoring results 2018-2020
Outfall Long section	Attachment D.2.8 Outfall Longitudinal Section

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:

The main objective of the Cork Lower Harbour Project was to end the practice of discharging untreated wastewater discharges into Cork Harbour. Wastewater from the agglomerations of Ringaskiddy-Crosshaven-Carrigaline, Ringaskiddy village, Passage-Monkstown and Cobh town no longer discharges untreated wastewater to Cork harbour. It is now collected and fully treated at the Shanbally WwTP, which has been designed to ensure that the emissions from the agglomeration will comply with, and will not result in the contravention of, EU Directives and National Regulations. The WwTP has been designed to operate in compliance with existing legislative and regulatory standards (secondary treatment provided).

The emission limits proposed for the treated urban wastewater are in accordance with the combined approach, in that they accommodate the Urban Waste Water Regulations and the status of the receiving waterbody. The proposed standards for the primary discharge (i.e., the combined treated industrial wastewater and treated urban wastewater) will not prevent the receiving water from meeting the WFD Objectives of the receiving Waterbody

Several large industrial companies operating under individual licenses discharge directly into the IDA outfall downstream of the Shanbally WwTP discharge. Their flows are not, or will not be treated, at the Shanbally WwTP and are not considered to be part of the agglomeration load entering the Shanbally WwTP. For this reason, a set of ELVs are proposed for the discharge from the WwTP (SW100) and a different set from the IDA outfall Pipe (SW001).

The immediate WFD receiving water is Cork Harbour which is a coastal waterbody and the applicable environmental quality standard (EQS) is DIN. The EQS thresholds relating to BOD and MRP do not apply as they are only applicable to freshwater and transitional waterbodies. However, for information purposes the modelling also included an assessment of BOD and MRP impacts.

The Shanbally WwTP at the proposed ELVs will contribute approximately 1% of the BOD annually to the whole cork harbour system. During summer it contributes ca.15% of the DIN and during winter ca. 5% of the DIN to the whole Cork Harbour system.

Particle tracking demonstrated that the discharge from the IDA outfall reaches the southern boundary of Lough Mahon for very short periods of time limited to discharges at low water under certain tidal conditions. These conditions occur ca. 5% of the time.

The findings of the modelling assessment demonstrate that the proposed ELVs (45mg/l DIN) at the WwTP and the combined concentrations at the end of the IDA outfall pipe (245mg/l BOD & 95mg/l DIN) are compatible with the achievement of WFD objectives for the receiving waters would have no impact on the levels of eutrophication in Lough Mahon or North Channel Great Island.

The findings of the modelling assessment also demonstrate that more stringent removal of nutrients (nitrogen) at the Shanbally WwTP to comply with a hypothetical UWWTD Article 5 Total Nitrogen standard of 15mg/L at 80,000PE loading would have no perceptible impact on the existing level of eutrophication in Lough Mahon or North Channel Great Island.

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
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ATTACHMENTS

SECTION A: NON-TECHNICAL SUMMARY

Attachment A.1: Non-Technical Summary

A.1.1: Non-Technical Summary

A.1.2: Map 1 - Area of Interest

SECTION B: GENERAL

Attachment B.2: Agglomeration Details

Attachment B.2.1: Map 2 - Agglomeration Plan

Attachment B.2.2: Map 3 - WwTP Site Location Plan

Attachment B.2.3: Map 4 – Location of Primary Discharge Point & EPA TraC
Ambient monitoring points

Attachment B.2.4: Map 5 – Location of WwTP & Primary Discharge sampling
points

Attachment B.2.5: Map 6 - 23 – Location of SWOs/EOs

Attachment B.2.6: WwTP site layout

Attachment B.2.7: WwTP process flow

Attachment B.2.8: WwTP details

Attachment B.3: Planning Documentation

B.3.1: Planning Documentation

Attachment B.4: Notices and Advertisements

B.4.1: Newspaper Notice

B.4.2: Site Notice

B.4.3: Map 24 - Site Notice Location

B.4.4: EIA Portal Confirmation Notice

Attachment B.5: Preliminary Examination/EIA Screening

B.5: EIAR

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

B.6: Compliance with EU Directives & National Regulations

Attachment B.7: Foreshore Act Licences

B.7: Foreshore licence documentation

Attachment B.8: Improvement Programme

B.8: Improvement Programme

SECTION C: DISCHARGES & MONITORING

Attachment C.1 Discharges and Monitoring

C.1.1: Discharges and Monitoring

C.1.2: 2021 Treated effluent and primary discharge data

Attachment C.2 Measures to Prevent Unintended Discharges

C.2: WwTP Emergency Plan

SECTION D: IMPACT ASSESSMENT

Attachment D.2: Assessment of Impact on Receiving Waters

D.2.1: Impact Assessment Report

D.2.2: CLH Water Quality Modelling Report

D.2.3: AA Screening Report

D.2.4: Priority Substance Assessment Report

D.2.5: Map 25 Designated Areas

D.2.6: Map 26 European Sites

D.2.7: Ambient monitoring data and EPA TSAS report

D.2.8: Outfall Longitudinal Section

SECTION E: DECLARATION

Attachment E.1 Declaration

E.1: Signed Declaration