Eve O'Sullivan

Subject:WWDA - EIAR scoping request -Midleton & Carrigtwohill agglomerationsAttachments:Midleton_Carrigtwohill EIA Request.pdf

From: Peter Keegan pkeegan@water.ie>
Sent: Tuesday 27 September 2022 10:25
To: EIAPlanning <<u>eiaplanning@epa.ie</u>>
Cc: Licensing Staff <<u>licensing@epa.ie</u>>
Subject: RE: WWDA - EIAR scoping request -Midleton & Carrigtwohill agglomerations

Good Morning,

In accordance with Regulation 17C of the European Union (Waste Water Discharge) Regulations 2007 to 2020, please find attached request for the Agency to provide its' opinion in writing on the scope and level of detail of the information required to be included in the EIAR for the Midleton & Carrigtwohill amalgamated agglomerations

Kind regards

Peter Keegan Environmental Licensing Specialist

T + 01 89 25080

<u>pkeegan@Water.ie</u> www.water.ie Facebook | Twitter | LinkedIn Environmental Licensing Programme Office of Environmental Sustainability Environmental Protection Agency PO Box 3000 Johnstown Castle Estate Wexford

27/09/2022

IW-ER-LT0612

Dear Inspector,

RE: Midleton Wastewater Discharge Licence Review Application D0056



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

Irish Water Colvill House 24-26 Talbot Street Dublin 1 D01 NP86 Ireland

T: +353 1 89 25000 F: +353 1 89 25001 www.water.ie

In accordance with Regulation 17C of the European Union (Waste Water Discharge) Regulations 2007 to 2020, Irish Water is requesting the Agency to provide its opinion in writing on the scope and level of detail of the information required to be included in the EIAR.

In accordance with Regulation 17D (1), Please note the following.

- (a) the name and address, and telephone number and e-mail address if any, of the water services authority:

 Irish Water Colvill House
 24 26 Talbot Street
 Dublin 1
 01 8925000
 WasteWaterLicensingSouthern@water.ie
- (b) the location, townland or postal address of the land or structure to which the request relates (as may be appropriate), and shall include a location map marked so as to clearly identify—
 Midleton WwTP and agglomeration (D0056-01) & the Carrigtwohill WwTP & agglomeration (D0044-01) Please see attached EIA Scoping Report (Section 3)



- the land or structure to which the request relates and the boundaries thereof in red:
 Please refer to the Section 3 of the attached EIA Scoping Report.
- II. any land which adjoins, abuts or is adjacent to the land to be developed and which is under the control of the water services authority in blue: Not applicable
- III. any wayleaves in yellow Not applicable

(C) a description of -

I. the nature of the proposed development

In accordance with Regulation 17 of the European Union (Waste Water Discharge) Regulations 2007 to 2020 IW is required to prepare an Environmental Impact Assessment (EIAR) Report to support the licence review application for Midleton D0056-01.

The Licence review application for Midleton will consider operational discharges to the aquatic environment from the proposed amalgamated Midleton (D0056-01) and Carrigtwohill (D0044-01) agglomerations.

There is significant demand for housing development in Midleton with a number of development sites seeking planning permission including the Water Rock Urban Expansion Area (UEA) and therefore, wastewater upgrades are required. The existing Midleton Waste Water Treatment Plant is currently organically overloaded and in order to provide immediate relief at the Midleton WwTP, the Midleton Local Infrastructure Housing Activation Fund (LIHAF) Wastewater Project will divert waste water loads from the Midleton agglomeration to the existing Carrigtohill and Environs WwTP.

To cater for this two new Pumping Stations, one at Water Rock and the other at Midleton North, are required to be constructed along with approximately 7 km of rising main.

Further details are contained in the attached EIA Scoping report.



II. the development's specific characteristics, including its location and technical capacity

The Midleton North Pumping Station which will be sized for future growth will draw an existing wastewater load (ca. 4,177PE) off the existing sewerage network system in Midleton and will divert this load to the Water Rock Pumping Station and onto Carrigtohill WwTP for treatment. This will provide immediate relief at the Midleton WwTP. In the event that flows in the existing sewer exceed the pumping capacity of the Midleton North Pumping Station, surplus flows will return back into the Midleton network, via a bifurcation chamber, and ultimately back to the Midleton WwTP for treatment, as per the current treatment situation. This return of surplus flows to the Midleton WwTP will may occur following a storm event in this area of the catchment. It is this return of flows back to the Midleton WwTP which is the key driver for the amalgamation of the two agglomerations.

From the new Water Rock Pumping Station, a new network will be constructed to Carrigtohill to divert future loads from the Urban Expansion Area (UEA) Housing site (ca. 7,000 p.e) in North Midleton by ca. December 2023 (dates subject to change).

Further details are contained in the attached EIA Scoping report.

(iii) the development's likely impact on the environment.

Given the nature of the operation activities i.e., discharges to the aquatic environment, operational discharges in general have the potential to impact on the existing hydrological conditions.

The EIAR will include an assessment of the impact of the operational discharges, in combination with other plans and projects, against the pertinent objectives of relevant Directives and Regulations, including but not limited to the Water Framework Directive [2000/60/EC].

Further details are contained in the attached EIA Scoping report.

In addition to the above information, the Agency should consider the following, in their determining the scope and level of detail of the information required to be included in the EIAR



- EIAR Scoping Report Reproduced in Appendix A
- Part 8 planning approval for the Water Rock Pumping Station was obtained from Cork County Council in 2019.
- Irish Water submitted a Section 5 application to Cork County Council in 2021 for the pipeline from the Water Rock Pumping Station to Carrigtwohill and this was confirmed as Exempted Development.
- A planning application was made under Section 34 of the Planning and Development Action, 2000, as amended for the Midleton North Pumping Station and Network Project in May 2022. This is currently under determination by Cork County Council

I trust the above is satisfactory but please contact me if you require any further information or have any further queries in relation to this.

Yours sincerely,

<u>Peter Keegan</u>

Peter Keegan Asset Strategy



MIDLETON WASTE WATER DISCHARGE LICENCE REVIEW – D0056-01

ENVIRONMENTAL IMPACT ASSESSMENT REPORT - SCOPING REPORT





September 2022

IRISH WATER

MIDLETON WASTE WATER DISCHARGE LICENCE REVIEW

EIAR SCOPING REPORT

Nicholas O'Dwyer Ltd Consulting Engineers Nutgrove Office Park Nutgrove Avenue Dublin 14

September 2022

PROJECT NO. 20893-12						
Revision	Reason for Revision	Prepared by	Reviewed by	Approved by	Issue Date	
-	Initial Issue	NOD	CAS	CAS	08/04/2022	
Rev A	Version for IW Review	NOD	CAS/UD	CAS	07/09/2022	
Final	Final	NOD	CAS/RC	CAS	23/09/2022	

CONTENTS

1. 1	NTRODUCTION2			
1.1.	Background to WWDL Review and Amalgamation of Agglomerations2			
1.2.	Industrial Emissions3			
1.3.	Planning Permission3			
1.4.	Construction Programme			
1.5.	Waste Water Discharge Licences			
1.5.	1. Midleton WWDL D0056-01			
1.5.	2. Carrigtwohill & Environs WWDL D0044-016			
2. L	EGISLATION			
3. D	ESCRIPTION OF THE PROJECT – SUBJECT MATTER OF EIAR			
3.1.	Operational Discharges			
4 0	ONSIDERATION OF ALTERNATIVES 13			
5. K	ECEIVING ENVIRONMENT			
6. E	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17			
6. Е 6.1.	NVIRONMENTAL IMPACT ASSESSMENT (EIA)			
6. E 6.1. 6.2.	NVIRONMENTAL IMPACT ASSESSMENT (EIA) 17General17EIA Screening Process17			
 6.1. 6.2. 6.3. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18			
 6. E 6.1. 6.2. 6.3. 7. E 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23			
 6. 6.1. 6.2. 6.3. 7. 7.1. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23			
 6. 6.1. 6.2. 6.3. 7. 7.1. 7.2. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23Methodology24			
 6. 6.1. 6.2. 6.3. 7. 7.1. 7.2. 7.3. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23Methodology24Proposed Approach to Detailed Assessments25			
 6.1. 6.2. 6.3. 7. E 7.1. 7.2. 7.3. 7.3. 7.3. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23Methodology24Proposed Approach to Detailed Assessments251.Water25			
 6. 6.1. 6.2. 6.3. 7. 7.1. 7.2. 7.3. 7.3. 7.3. 7.3. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23Methodology24Proposed Approach to Detailed Assessments251.Water252.Biodiversity26			
 6. 6.1. 6.2. 6.3. 7.1. 7.2. 7.3. 7.3. 7.3. 7.3. 7.3. 7.3. 7.3. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23Methodology24Proposed Approach to Detailed Assessments251.Water252.Biodiversity263.Population and Human Health26			
 6. 6.1. 6.2. 6.3. 7. 7.1. 7.2. 7.3. 7.3. 7.3. 7.3. 7.3. 7.3. 7.3. 7.3. 7.3. 	NVIRONMENTAL IMPACT ASSESSMENT (EIA)17General17EIA Screening Process17EIA Scoping Process18IAR STRUCTURE & METHODOLOGY23Structure of EIAR23Methodology24Proposed Approach to Detailed Assessments251.Water252.Biodiversity263.Population and Human Health264.Material Assets27			

i

1. INTRODUCTION

This document is the Scoping Report for the preparation of the Environmental Impact Assessment Report (EIAR) for the proposed Midleton and Carrigtwohill amalgamated agglomeration operational discharges.

It is submitted for opinion as to the scope and content of an EIAR to be prepared and submitted to the EPA in support of the Midleton Waste Water Discharge Licence (D0056-01) review. This WWDA review application will also include for the amalgamation of the Carrigtwohill and Environs agglomeration into the Midleton licence D0056-01, thereby leading to the surrender of Carrigtwohill licence D0044-01. The combined design population equivalent (p.e.) of the proposed amalgamated Midleton and Carrigtwohill agglomeration will be 45,000 p.e.

1.1. Background to WWDL Review and Amalgamation of Agglomerations

Midleton has been identified as a regional growth centre by the Cork County Development Plan 2014 and the East Cork Municipal District Local Area Plan 2017, and a Metropolitan Town in the County Metropolitan Strategic Planning Area in the draft Cork County Development Plan 2022-2028. The Draft County Development Plan 2022-2028 includes as an objective the need to secure investment in essential infrastructure including water services. It states that the delivery of required residential development is, in many cases, dependent on the delivery of new water services infrastructure.

There is significant demand for housing development in Midleton with a number of development sites seeking planning permission including the Water Rock Urban Expansion Area (UEA). The existing Midleton Waste Water Treatment Plant (WwTP) (design capacity of 15,000 p.e) is currently organically overloaded at 16,376 p.e (Source: 2021 AER) and does not have capacity to cater for additional loads from proposed development sites in Midleton. Therefore, wastewater upgrades are required to facilitate future population and economic growth of the area and enable Irish Water to grant connection agreements to future developments.

In order to increase the capacity of the Midleton WwTP, the Midleton Local Infrastructure Housing Activation Fund (LIHAF) Wastewater Project, which commenced construction in June 2022 (on the Water Rock pipleline to Carrigtwohill), will divert waste water loads from the Midleton agglomeration to the existing Carrigtohill and Environs WwTP (Design p.e. 30,000). The current organic capacity of the Carrigtohill and Environs WwTP is 10,010 (Source: 2021 AER) meaning there is significant spare capacity to cater for these diverted loads.

To cater for the above, two new Pumping Stations, one at Water Rock and the other at Midleton North, are required to be constructed along with approximately 7 km of rising main.

The Midleton North Pumping Station which will be sized for future growth will draw an existing wastewater load (*ca.* 4,177PE) off the existing sewerage network system in Midleton and will divert this load to the Water Rock Pumping Station and onto Carrigtohill WwTP for treatment. This will provide immediate relief at the Midleton WwTP. In the event that flows in the existing sewer exceed the pumping capacity of the Midleton North Pumping Station, surplus flows will return back into the Midleton network, *via* a bifurcation chamber, and ultimately back to the Midleton WwTP for treatment, as per the current treatment situation. This return of surplus flows to the Midleton WwTP will only occur

following a storm event in this area of the catchment. There will be no storage, or Storm Water Overflow (SWO) or Emergency Overflow (EO) at this new Midleton North Pumping Station. It is this return of flows back to the Midleton WwTP which is the key driver for the amalgamation of the two agglomerations.

From the new Water Rock Pumping Station, a new network will be constructed to Carrigtohill to divert future loads from the Urban Expansion Area (UEA) Housing site (*ca.* 7,000 p.e) in North Midleton by *ca*. December 2023 (dates subject to change). At this Pumping Station 24-hour emergency storage and a high-level connection to the Northern Relief sewer will be provided. There will be no SWO or EO at this new Pumping Station.

1.2. Industrial Emissions

The treated wastewater arising from the Midleton agglomeration (discharged at the outfall) is a mix of domestic, commercial, and industrial (Irish Distillers Limited - IE licence Reg. No. P0442-01 and Dairygold Co-operative Society Ltd. and TINE - IE licence Reg. No. P1103-01) and varies daily, weekly, and seasonally. Both Irish Distillers Ltd. and Dairygold Co-operative Society Ltd. and TINE treated effluent bypasses the Midleton WwTP and combine with treated effluent from the Midleton WwTP before discharging to the North Channel at NGR 186177, 069506. These discharges are limited under WWDL D0056-01. Irish Water, under Section 99E of the EPA Act, as amended, have given consent for these discharges, specifying the ELVs and certain other conditions and restricted periods of emission. The WWDL has regard to the water quality standards and objectives for the receiving water and protected areas (including shellfish).

An assessment/modelling simulation of both the existing and permitted discharges from the Midleton WwTP and Irish Distillers Ltd. facility in combination with the treated effluent from the Dairygold/TINE installation was carried out by Irish Hydrodata to inform the Dairygold/TINE IPC application. This modelling informed the EIA and AA processes undertaken by the EPA during 2019 and 2020. Irish Water are also currently undertaking a modelling exercise to assess and confirm the findings of these exercises.

1.3. Planning Permission

Part 8 planning approval for the Water Rock Pumping Station was obtained by Cork County Council in 2019.

Irish Water submitted a Section 5 application to Cork County Council in 2021 for the pipeline from the Water Rock Pumping Station to Carrigtwohill and this was confirmed as Exempted Development.

A planning application was made under Section 34 of the Planning and Development Action, 2000, as amended for the Midleton North Pumping Station and Network Project in May 2022. This is currently under determination by Cork County Council.

1.4. Construction Programme

At this stage it is anticipated that the Water Rock Pumping Station will be commissioned by *ca*. December 2023.

Construction commenced on the Water Rock pipeline to Carrigtohill on 27th June 2022. Works are estimated to be completed by December 2023.

It is estimated that the Midleton North Pumping Station and Network will commence construction in early 2023, subject to grant of planning permission.

1.5. Waste Water Discharge Licences

1.5.1. Midleton WWDL D0056-01

The Midleton WWDL was granted on the 6th January 2011 and was subsequently amended on the 19th December 2016 (Technical Amendment A), 20nd October 2020 (Technical Amendment B) and on the 2nd December 2021 (Technical Amendment C).

The primary discharge (SWO1MIDL) is to the North Channel Great Island at Rathcoursey point *via* a diffuser (NGR 186177E, 069506N). Midleton WwTP provides secondary treatment by extended aeration and advanced treatment by UV disinfection of the final effluent. The plant at the time of the grant of the licence in 2011 had a capacity of 10,000 p.e. This was subsequently increased to 15,000 p.e.

The current Emission Limit Value (ELV's) for Midleton WwTP are shown in **Table 1.1** below:

Parameter	Emission Limit Value
Biological Oxygen Demand	25 mg/l
Chemical Oxygen Demand	125 mg/l
Suspended Solids	35 mg/l
Total Nitrogen (as N)	15 mg/l
Ortho-P (as P)	2 mg/l
Faecal Coliforms	Geometric mean of < 250
	fc/100mls of sample and
	95%ile ≤1000fc/100mls.
рН	6.5 - 9

Table 1.1 Current Emission Limit Value (ELV's) for Midleton WwTP as per D0056-01

There are currently 4 no. SWOs licenced under D0056-01 (see **Table 1.2**).

Fable 1.2. Operationa	I Discharges as cited	under D0056-01	(Midleton)
------------------------------	-----------------------	----------------	------------

Current Licence Name	Type of Discharge	Discharge Location Coords (NGR) as per D0056-01	Receiving Waterbody
	Primary		North Channel
SW01MIDL	Discharge from	186177, 69506	Great Island at
	Midleton WwTP		Rathcoursey point
SW03MIDI	SWO	187073 73127	Owenacurra
SWOSHIDE	500	10/9/3, /312/	Estuary
SWOAMIDI	SWO	100045 72514	Owenacurra
3W04MIDL	300	100045, 72514	Estuary
SWOEMIDI	SWO	199520 71792	Owenacurra
SWOSHIDL	300	100520, 71705	Estuary
	SWO	199520 71792	Owenacurra
3WU/MIDL	300	100320, /1/03	Estuary

The current licenced Midleton agglomeration boundary and discharges are shown in **Figure 1.1** below.



Figure 1.1. D0056-01 Midleton - Licenced Agglomeration Boundary and Discharges

1.5.2. Carrigtwohill & Environs WWDL D0044-01

The Carrigtwohill & Environs WWDL was granted on the 1st December 2014 and was subsequently amended on the 29th June 2017 (Technical Amendment A) and on the 2nd December 2021 (Technical Amendment B).

The plant at the time of the grant of the licence, provided secondary treatment and was designed for 5,000 p.e. In 2015 the WwTP was upgraded to 30,000 p.e. with the provision of secondary treatment, nutrient removal, and tertiary treatment (Nereda process).

At the time of the WWDL grant, the final treated effluent discharged through the primary discharge point (SW002) at NGR 180594E, 072283N to the Lough Mahon (Harper's Island) waterbody (Slatty Waters), in the Northern Channel of Upper Cork Harbour.

As part of the upgrade works, SW002 was decommissioned, and the final treated effluent is now discharged through the primary discharge point (SW001) at NGR 179911E, 072583N.

The current Emission Limit Value (ELV's) for the Carrigtwohill WwTP are shown in **Table 1.3** below:

Table 1.3 Current Emission Limit Value (ELV's) for Carrigtwohill WwTP as per D0044-01 (Technical
Amendment A)

Parameter	Emission Limit Value
Biological Oxygen Demand	25 mg/l
Chemical Oxygen Demand	125 mg/l
Suspended Solids	35 mg/l
Total Phosphorus (as P)	1 mg/l
Ortho-P (as P)	0.5 mg/l
Total Oxidised Nitrogen	20 mg/l
Ammonia Total (as N)	5 mg/l
рН	6.5 - 9

There are currently 2 no. SWOs licenced under D0044-01 (see **Table 1.4**).

Table 1.4. Operational Discharges as cited under D0044-01 (Carrigtwohill)

Current Licence Name	Type of Discharge	Discharge Location Coords (NGR) as per WWDL	Receiving Waterbody
SW001	Primary Discharge from WwTP	179911, 72583	Lough Mahon (Harper's Island)
SW002	Primary Discharge (Decomissioned)	180594, 72283	Lough Mahon (Harper's Island)
SW003	SWO	181268, 72266	Anngrove River
SW004	SWO	181182, 72317	Tibbotstown_010

The current licenced Carrigtwohill agglomeration boundary and discharges are shown in **Figure 1.2** below.



Figure 1.2 D0044-01 Carrigtwohill - Licenced Agglomeration Boundary and Discharges

2. LEGISLATION

Irish Water intend to submit a licence review of the existing Waste Water Discharge Licence (WWDL) (Reg No. D0056-01) for the Midleton Agglomeration in accordance with Regulation 14(1)(b) of the Waste Water Discharge (Authorisation) Regulations, 2007-2020 (as amended) to the Environmental Protection Agency (EPA). As mentioned above, this review will include for the amalgamation of the Carrigtwohill agglomeration into the above licence, thereby giving an agglomeration with a total design p.e. of 45,000.

The subject matter of the review involves a wastewater discharge licence application from a wastewater treatment plant with a capacity of greater than 10,000 population equivalents.

Therefore, a mandatory Environmental Impact Assessment Report (EIAR) is required for this particular project, as per Regulation 17 of the relevant Waste Water Discharge Regulations, 2007-2020.

Regulation 17C (1) of the Waste Water Discharge Regulations, 2007- 2020 outlines the scope and level of detail required during EIAR Scoping process and states the following:

17C. (1) EIAR Scoping Request

'(a) Subparagraph (b) applies where, before a water services authority submits an EIAR to the Agency, the authority requests the Agency to give the authority an opinion in writing on the scope and level of detail of the information required to be included in the report.

(b) Subject to subparagraph (c), the Agency shall, taking into account the information provided by the water services authority, in particular on the specific characteristics of the proposed waste water discharge, including its location and likely impact on the environment and the technical capacity of its associated waste water works, give an opinion in writing on the scope and level of detail of the information to be included in an EIAR, subject to consultations prescribed in Regulation 17D to be carried out by the Agency in relation to such opinion.

(c) The Agency shall give the opinion before the submission by the water services authority of the EIAR. (2) Where an opinion referred to in paragraph (1) has been provided, the EIAR shall be based on that opinion, and include the information that may reasonably be required for reaching a reasoned conclusion on the significant effects on the environment of the proposed development, taking into account current knowledge and methods of assessment.'

This EIAR Scoping Report will be issued to the EPA, as the Competent Authority, to obtain their Scoping opinion.

3. DESCRIPTION OF THE PROJECT – SUBJECT MATTER OF EIAR

The subject matter of this EIAR scoping document are the current operational discharges from the Midleton and Carrigtwohill and Environs amalgamated agglomeration (see **Section 1.1.1**. above for an overview). The combined design p.e. of the amalgamated agglomeration will be 45,000 p.e. (see **Figure 3.1**).



Figure 3.1. Midleton and Carrigtwohill Amalgamated Agglomeration

3.1. Operational Discharges

The operational discharges relating to the proposed amalgamated agglomeration are shown on **Table 3.1** below and **Figure 3.2**.

These include for the previously licenced overflows and also the unlicenced overflows in each functional area which have been identified and confirmed from Irish Water's SWO Assessment Programme.

The primary discharge from the amalgamated agglomeration will be the primary discharge from the Carrigtwohill WwTP. The current primary discharge from the Midleton WwTP will become a secondary discharge in the amalgamated agglomeration.

Table 3.1 Operational Discharges from the Midleton and Carrigtwohill Amalgamated Agglomeration

Current Licence Name	Proposed Name in WWDL Review	Asset	Discharge Type	Discharge Location Coords (NGR)	Receiving Waterbody
		Carrigtwo	hill Functional	Area	
SW001	SW001	Carrigtwohill WwTP	Primary Discharge from amalgamated Agglomeration	179911 72583	Lough Mahon (Harper's Island)
	SW005	Located at Carrigtwohill WwTP	SWO	179911, 72605	Lough Mahon (Harper's Island)
SW003	SW003	Barryscourt Pumping Station	SWO and EO	181276, 72256	Tibbotstown_0 10
	SW006	Church Lane (Network)	SWO	181544, 73040	Tibbotstown_0 10
	SW007	Elm Road (Network)	SWO	181544, 73040	Tibbotstown_0 10
SW004	SW004	IDA Pumping Station No.1	SWO and EO	181133, 72310	Tibbotstown_0 10
	SW008	Old Cobh Road PS	SWO and EO	181142, 72674	Tibbotstown_0 10
		Midle	eton Functional	Area	
SW01MIDL	SW009	Midleton WwTP	Secondary discharge from amalgamated Agglomeration	186177, 69506	North Channel Great Island at Rathcoursey point
SW03MIDL	SW010	Ballick No. 1 Pumping Station	SWO/EO	187975, 73109	Owenacurra Estuary
SW04MIDL	SW011	Ballick No. 2 Pumping Station	SWO/EO	188047, 72518	Owenacurra Estuary
SW05MIDL	SW012	Ballinacurra No. 2 Pumping Station	SWO/EO	188518, 71783	Owenacurra Estuary
	SW013	Ballick No. 3 Pumping Station	EO	188272, 72060	Owenacurra Estuary
SW07MIDL	SW014	Dwyers Road Pumping Station	SWO/EO	187475, 72902	OWENNACURR A_040
	SW015	Oakwood Pump Station	EO	188573, 73373	Owenacurra Estuary
	SW016	Roxboro Mews Pump Station	SWO/EO	188346, 73332	DUNGOURNEY_ 020
	SW017	The Rock Pump Station	SWO/EO	188265, 73232	DUNGOURNEY_ 020
	SW018	Roxboro Housing Estate Pump Station	SWO/EO	188332, 73316	DUNGOURNEY_ 020

Midleton WWDL Review

EIAR Scoping Report

Current Licence Name	Proposed Name in WWDL Review	Asset	Discharge Type	Discharge Location Coords (NGR)	Receiving Waterbody
	SW019	Old Youghal Road Pump Station	SWO/EO	188740, 73011	DUNGOURNEY_ 020
	SW020	Riversfield Estate SWO (Network)	SWO	187687, 73025	Owenacurra Estuary
	SW021	Drury's Avenue SWO (Network)	SWO	188346, 73332	DUNGOURNEY_ 020



Figure 3.2 Midleton and Carrigtohill Agglomeration & Associated Operational Discharges as per Subject Matter of WWDL Review

4. CONSIDERATION OF ALTERNATIVES

There is significant demand for housing development in Midleton with a number of development sites seeking planning permission including the Water Rock Urban Expansion Area (UEA). The existing Midleton Wastewater Treatment Plant (WwTP) does not have sufficient capacity to cater for additional flows from proposed development sites in Midleton. Therefore, wastewater upgrades are required to facilitate future population and economic growth of the area and to enable Irish Water to grant connection agreements to future developments. Options considered included pumping loads to Carrigtwohill or upgrading the Midleton WwTP. There are a number of programmes planned to accommodate the increased demand, and the Midleton LIHAF project which will be covered within the scope of the EIAR is the project most advanced and for which planning permission has been submitted, where required.

5. RECEIVING ENVIRONMENT

The subject matter of this EIAR scoping document are the operational discharge activities from the proposed amalgamated Midleton and Carrigtwohill agglomeration. Therefore, this EIAR will only be concerned with the likely significant effects on the receiving environment associated with the operational discharges from the agglomeration. Demolition and construction related impacts are not relevant to this EIAR scoping process.

There are a number of environmental receptors and constraints associated with the proposed Project that will be taken into account as part of the EIAR process. These include, but are not limited to, the following:

- There are 2 no. European Sites within the immediate zone of influence of the project *i.e.,* Great Island Channel SAC (Site code: 001058) and Cork Harbour SPA (Site code: 004030)
- There are a number of pNHAs within Lough Mahon and Cork Harbour including the Great Island Channel pNHA.
- The Owennacurra Estuary / North Channel and Lee Estuary / Lough Mahon are designated as 'sensitive' under the Urban Treatment Regulations 2001 (as amended). For the Owennacurra Estuary / North Channel, both N or P can be limiting in these water bodies and for the Lee Estuary / Lough Mahon, P is the limiting nutrient.
- There are a number of aquaculture and fishing practices within the receiving waters. Carrigtwohill WwTP primary discharge discharges *ca*. 2 km from the boundary of the Great Island North Channel designated shellfish waters, and *ca*. 10 km from the boundary of the Rostellan designated shellfish waters. The Midleton WwTP primary discharge discharges *ca*. 1.5 km from the boundary of the Great Island North Channel designated shellfish waters, and *ca*. 3 km from the boundary of the Rostellan designated shellfish waters.
- The main river waterbody within the Carrigtwohill functional area is the Tibbotstown_010. The WFD status (2013-2018) of this waterbody is Moderate. The Lough Mahon (Harper's Island) is the receiving water for the primary discharge and is of Moderate status. The main river waterbodies within the Midleton functional area are the Owennacurra_040, the Dungourney_020 and Knocknamadderee_010. The WFD status (2013-2018) of these waterbodies is Moderate, Poor and Poor, respectively. The Owenacurra Estuary (transitional waterbodies) and the North Channel Great Island, receiving waterbody for the Midleton WwTP primary discharge is Moderate status. The WFD objective of the above waterbodies is to achieve Good WFD status by 2027.
- Irish Distillers Ltd. (PO442-01) and Dairygold Co-operative Society Ltd. and TINE (P1103-01) treated effluent bypasses the Midleton WwTP and combine with treated effluent from the Midleton WwTP before discharging to the North Channel at NGR 186177, 69506. These discharges are limited under WWDL D0056-01. To inform the EPA's determination of P1103-01 an assessment/modelling simulation of both the existing and permitted discharges from the Midleton WwTP and Irish Distillers Ltd. facility in combination with the Dairygold/TINE discharges was carried out by the applicant, Dairygold Co-operative Society Ltd. and TINE. This modelling informed the EIA and AA processes undertaken by the EPA.

Refer to **Figure 5.1** for map showing key receptors and sensitives.

The EIAR, which will be prepared in accordance with Directive 2011/92/EU as amended by Directive 2014/52/EU (the EIA Directive) and S.I. No. 214/2020 - European Union (Waste Water Discharge) Regulations 2020, will thoroughly assess the likely significant effects on the environment from the operational discharges on the above receptors, alone and in combination with other plans and projects.



Figure 5.1. Key Receptors and Sensitivities in relation to the amalgamated Midleton and Carrigtohill Agglomeration & Associated Operational Discharges.

6. Environmental Impact Assessment (EIA)

6.1. General

The process by which the likely significant effects of a project on the environment are assessed is set out in the EU EIA Directive 2011/92/EU on the assessment of the effect of certain public and private projects on the environment (codification) (transposed to Irish law through the Planning and Development Regulations 2001, as amended), as amended by EIA Directive 2014/52/EU (transposed to Irish law through the European Union (Planning and Development) (Environmental Impact Assessment) Regulations S.I. 296 of 2018 and in terms of Waste Water Discharges in S.I. No. 214/2020 - European Union (Waste Water Discharge) Regulations 2020.

The EIA process has a number of key characteristics:

- It is systematic, comprising a sequence of tasks defined both by regulation and by practice;
- It is analytical, requiring the application of specialist skills from the environmental sciences;
- It is impartial, its aim being to inform the decision-makers;
- It is consultative, with provision being made for obtaining feedback from interested parties, including local authorities and statutory agencies; and
- It is interactive, allowing opportunities for environmental concerns to be addressed during the planning, design, and implementation of a project.

The process may be summarised succinctly as follows:

- 1. Screening Is EIA Required?
- 2. Scoping If EIA is Required, what aspects of the Environment should be considered?
- 3. Preparation of EIAR
- 4. EIAR informs the EIA process being conducted by the Competent Authority which in this case is the EPA as part the WWDA process.

6.2. EIA Screening Process

The project has been screened against Regulation 17 of the Waste Water Discharge Regulations (S.I. No. 214/2020) which states the following: -

'17. The principal Regulations are amended by substituting the following Regulation for Regulation 17 –

"Certain applications to be accompanied by an EIAR

17. An application in respect of the waste water discharge from—

(*i*) a waste water treatment plant with a capacity of greater than 10,000 population equivalent as defined in Article 2, point (6), of the Urban Waste Water Treatment Directive, and

(ii) a waste water treatment plant specified in accordance with paragraph (6)(c) or (8)(b)(ii) of Regulation 18 or paragraph (3)(c) or (5)(b)(ii) of Regulation 25,

shall, subject to and in addition to compliance with the requirements of Regulation 16, be accompanied by a copy of an EIAR, which shall be submitted in electronic form (which shall be searchable by electronic *means as far as practicable) and such other form as may be specified by the Agency".*

The project involves a WWDA application for wastewater treatment plants with 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.*, Midleton 15,000 p.e. and Carrigtwohill 30,000 p.e.). Therefore, a mandatory EIA, and the preparation of an EIAR is required for this particular project to inform the WWDA process.

6.3. EIA Scoping Process

The scoping stage, albeit not a statutory stage of the EIA process, is considered a key element of the EIA process and signifies commencement of the development of an EIAR.

'*Scoping*' is a process of deciding what information and the level of same that should be contained in an EIAR, and what methods should be used to gather and assess that information. It is defined in the European Commission Guidance as: -

`determining the content and extent of the matters which should be covered in the environmental information to be submitted in the EIAR'.

The EPA (2022) document 'Guidelines on the Information to be contained in Environmental Impact Assessment Reports' states that 'All parties should be aware of the need to keep the EIAR as tightly focussed as possible. This focusses the effort and resources of all parties on the key significant issues. Scoping is usually guided by the following criteria: -

- Use 'Likely' and 'Significant' as the principal criteria for determining what should be addressed. Any issues that do not pass this test should be omitted (scoped out) from further assessment. A section of the EIAR should describe the scoping process explaining why such issues have been scoped out and they are not being considered further. All the prescribed environmental factors need to be listed in the scoping section of the EIAR. It is important to note that the environmental factors themselves cannot be scoped out and must feature in the EIAR. Only topics and headings related to each factor can be scoped in or out. Each environmental factor should be clearly covered by one or more specific section headings in the EIAR. If scoping determines that no likely significant issues arise under any heading, then an explanatory text should be included;
- Precedence where EIARs for similar projects on similar sites or for other project proposals for the same site are available, these can be useful references; and,
- Interactions assessors need to be vigilant for pathways direct and indirect

 that can magnify effects through the interaction or accumulation of effects
 for instance the potential for cumulative significant effects to arise from
 multiple non-significant impacts.

It is important to reiterate that subject matter of this EIA relates only to the operational discharges from the proposed Midleton and Carrigtwohill amalgamated agglomeration, as detailed in **Section 3** above.

The EIAR will identify, describe, and assess in an appropriate manner the direct and indirect significant effects of the operational discharges from the Midleton and Carrigtwohill agglomeration on each of the factors listed in Article 3 of Directive 2011/92/EU as amended by Directive 2014/52/EU as below:

`Article 3

1. The environmental impact assessment shall identify, describe, and assess in an appropriate manner, in the

light of each individual case, the direct and indirect significant effects of a project on the following factors:

(a) population and human health;

(b) biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive

2009/147/EC;

(c) land, soil, water, air and climate;

(d) material assets, cultural heritage and the landscape;

(e) the interaction between the factors referred to in points (a) to (d).

2. The effects referred to in paragraph 1 on the factors set out therein shall include the expected effects deriving from the vulnerability of the project to risks of major accidents and/or disasters that are relevant to the project concerned".

The EIAR will include an assessment of all discharges from the wastewater works (*i.e.*, primary, storm water overflows and emergency overflows) including a cumulative assessment that aims to achieve the Water Framework Directive environmental objectives for the receiving waters *e.g.*, North Channel Great Island and Lough Mahon, and the wider Cork Harbour.

The approach that we will adopt in the detailed impact assessments and the overall preparation of the EIAR will be based on the recommendations in the Guidelines on information to be contained in Environmental Impact Assessment Reports (EPA, 2022) and will be in line with the EIA Directive 2014/52/EU, and indeed will take account of all current guidance documents published at the time of preparing the EIAR.

The EIAR will consider the operational phase of the proposed project and will take into consideration the potential for cumulative impacts with other plans and projects, where relevant, within the surrounding area of the Midleton and Carrigtwohill agglomeration.

We acknowledge that the environmental factors themselves cannot be scoped out and must feature in the EIAR and that only subtopics and headings related to each factor can and will be scoped in or out. Each environmental factor will be clearly covered by one or more specific section headings in the EIAR. However, if scoping determines that no likely significant issues will arise under any heading (*e.g.*, Land, Soils and Geology), then an explanatory text will be provided in the EIAR to clearly explain the rationale of why a detailed assessment is not required for that particular environmental topic.

To inform this scoping report we have completed an initial scoping exercise to identify the environmental topics requiring detailed assessment. Refer to **Table 6.1**.

From this preliminary scoping exercise, it is our professional opinion that the following environmental aspects will require a detailed assessment of the possible direct and indirect significant effects resulting from the operational discharges:

- Population and human health
- Biodiversity, with particular attention to species and habitats protected under Directive 92/43/EEC and Directive 2009/147/EC
- Water
- Material Assets

Table 6.1 Initial Scoping Exercise

Environmental Aspect	Scoped In/Scope Out	Rationale
Population & Human Health	In	The operational discharges have the potential to impact on population and human health within the vicinity of the proposed project. The potential that water quality might impact upon aquaculture / fishing will also be assessed as part of the EIAR.
		At this stage it is not considered that the operational discharges will have a significant effect on demography, traditional lifestyles, or employment. See Section 7.3 for further details.
Biodiversity with particular attention to species and habitats protected under the Habitats Directive and the Birds Directive	In	The primary discharge from the Midleton agglomeration discharges to North Point just south of the boundary of the Great Island Channel SAC and Cork Harbour SPA. The Carrigtwohill primary discharge (now the secondary discharge of the new Midleton & Carrigtwohill agglomeration) discharges directly into the Great Island Channel SAC and Cork Harbour SPA. There are a number of pNHAs within Lough Mahon and Cork Harbour including the Great Island Channel pNHA which will also need to be assessed as part of the EIAR. The Biodiversity EIAR chapter will describe the likely significant direct and indirect effects of the operational discharges on biodiversity including flora
		(plants), fauna (animals), and habitats in the aquatic receiving environment. See Section 7.3 for further details.
Land, Soils and Geology	Out	The subject matter of this scoping report relates only to the matters that come within the functions of the EPA. In essence, this EIA scoping report focuses only on the likelihood of significant effects on the environment from the operational discharges from the amalgamated agglomeration. It is considered that there is no potential for impacts from the operational discharges in relation to land, soils and geology associated with the Midleton and Carrigtwohill agglomeration, and therefore potential Land, Soils and Geology impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Land, Soils and Geology subject matter.

Environmental Aspect	Scoped In/Scope Out	Rationale
Water	In	Given the nature of the operational activities <i>i.e.</i> , discharges to the aquatic environment, the proposed project may impact on the existing hydrological conditions. The EIAR will include an assessment of the impact of the operational discharges, in combination with other plans and projects, against the pertinent objectives of relevant Directives and Regulations, including but not limited to the Water Framework Directive [2000/60/EC]. See Section 7.3 for further details.
Air Quality & Climate	Out	It is considered that there is no potential for impacts in relation to Air Quality & Climate associated with the operational discharges. Therefore, potential Air Quality & Climate impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Air Quality & Climate subject matter.
Odour	Out	It is considered that there is no potential for impacts in relation to Odour associated with the operational discharges. Therefore, at this stage it is considered that potential Odour impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Odour subject matter.
Noise & Vibration	Out	It is considered that there is no potential for impacts in relation to Noise and Vibration associated with the operational discharges. Therefore, potential Noise and Vibration impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Noise and Vibration subject matter.
Traffic & Transport	Out	It is considered that there is no potential for impacts in relation to Traffic & Transport associated with the operational discharges. Therefore, potential Traffic & Transport impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Air Traffic and Transport subject matter.

Environmental Aspect	Scoped In/Scope Out	Rationale
Archaeology, Architectural and Cultural Heritage	Out	It is considered that there is no potential for impacts in relation to Archaeology, Architectural and Cultural Heritage associated with the operational discharges. Therefore, potential Archaeology, Architectural and Cultural Heritage impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Archaeology, Architectural and Cultural Heritage subject matter.
Landscape and Visual Amenity	Out	It is considered that there is no potential for impacts in relation to Landscape and Visual Amenity associated with the operational discharges. Therefore, potential Landscape and Visual Amenity impacts do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Landscape and Visual Amenity subject matter.
Material Assets	In	The proposed operational discharges may have an impact on existing material assets which will be assessed as part of the EIAR process. The likely significant effect on enterprises and amenities of the area, including fishing activities, aquaculture and recreational activities within the surrounding waters will be assessed as part of the EIAR process. See Section 7.3 for further details.
Transboundary Effects	Out	The nature and scale of the operational discharges would not result in any significant transboundary effects.
Risk of Major Accidents and/or Disasters	Out	It is not considered that there is any risk of major accidents and/or disasters from the operational discharges. Therefore, the potential risk of major accidents and/or disasters do not warrant detailed consideration within the EIAR. However, further rationale will be provided in the EIAR on the extent of the assessment required under the Risk of Major Accidents and/or Disasters subject matter.

7. EIAR STRUCTURE & METHODOLOGY

7.1. Structure of EIAR

It is proposed that the EIAR will be prepared using the "*grouped format structure*" where each environmental topic is examined in a separate chapter in the EIAR document.

The EIAR will include all necessary technical studies to address the likely significant environmental effects of the operational discharges from the Midleton and Carrigtwohill agglomeration on the receiving environment.

The EIAR will be presented in three volumes as follows: -

- Volume 1 Non-Technical Summary;
- Volume 2 EIAR;
- Volume 3 EIAR Appendices.

Volume 1 Non-Technical Summary will provide an outline of the proposed development (*i.e.*, operational discharges from the amalgamated agglomeration) and will highlight the key impacts and mitigation measures in non-technical language. This will be a standalone document to the EIAR.

Volume 2 of the EIAR will consist of general information and background chapters (Chapters 1 to 5) and then the environmental assessment chapters for each environmental aspect/topic (Chapters 6 to 16). Chapters 17 and 18 will provide an examination of environmental impact interactions and a Schedule of Mitigation Measures, representing the environmental commitments associated with the operational discharges from the agglomeration. Finally, Chapters 19 and 20 will provide the Bibliography and the Abbreviations and Glossary of Terms.

- Chapter 1 Introduction
- Chapter 2 Need for the Development
- Chapter 3 Alternatives Considered
- Chapter 4 Description of the Operational Discharges
- Chapter 5 EIA Scoping, Consultation and Key Issues/Receptors
- Chapter 6 Biodiversity
- Chapter 7 Water
- Chapter 8 Population & Human Health
- Chapter 9 Material Assets
- Chapter 10 Traffic and Transportation
- Chapter 11 Air Quality and Climate Change
- Chapter 12 Noise and Vibration
- Chapter 13 Odour
- Chapter 14 Archaeology, Architectural and Cultural Heritage
- Chapter 15 Landscape & Visual
- Chapter 16 Risk of Major Accidents and/or Disasters
- Chapter 17 Interactions of the Foregoing
- Chapter 18 Schedule of Mitigation Measures
- Chapter 19 Bibliography
- Chapter 20 Abbreviations & Glossary of Terms

Volume 3 - Appendices will provide any additional technical data and survey and modelling reports to support the EIAR.

It is proposed that each specialist chapter requiring a detailed assessment will be structured as follows:

- **Introduction** This section will introduce the environmental topic to be assessed and the areas to be examined in the assessment.
- **Methodology** This section will contain the specific topic related methodologies. This will include the methodology used in describing the existing environment and undertaking the impact assessment. It is important that the methodology is documented so the Competent Authority and relevant stakeholder can clearly understand how each assessment was undertaken.
- **Receiving Environment** An accurate description of the existing baseline environment is necessary to predict the likely significant impacts of a proposed development. To describe the existing environment, desktop reviews of existing data sources will be undertaken for each specialist area. This literature review will rely on published reference reports and datasets to ensure the objectivity of the assessment. Desktop studies as required will be supplemented by specialised field walkovers or studies in order to confirm the accuracy of the desktop study or to gather more baseline environmental information for incorporation into the EIAR document. The sensitivity of the environment to the operational discharges will also be described in this section.
- Description of Likely Significant Effects This section will predict how the receiving environment will interact with the operational discharges. The full extent of the proposed developments potential effects before the consideration of any mitigation measures will be detailed in this section. In this section, potential impacts arising from the operational discharges will be assessed and detailed. An evaluation of the significance of the impacts will also be undertaken. This section will also address interactions and cumulative impacts with other environmental topics.
- **Mitigation Measures** This section will provide the recommendations for mitigation measures to reduce or eliminate any significant negative impacts identified.
- **Residual Impacts** This final section of each Chapter will identify the likely impact that will occur after the proposed mitigation measures have been put in place. These impacts will be described in detail, and an assessment of their significance undertaken as required.

7.2. Methodology

The EIAR will be prepared in accordance with Waste Water Discharge Regulations 2007-2020 and with due regard to the following EIAR guidance and indeed any other guidance available at the time of preparing the EIAR;

- Environmental Protection Agency (EPA) (2022) '*Guidelines on the Information to be contained in Environmental Impact Assessment Reports* May 2022.
- Environmental Protection Agency (EPA) (2015) 'Advice Notes for Preparing Environmental Impact Statements Draft'.

- Department of Housing, Planning and Local Government (DoHPLG) (2018) *`Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment'*.
- European Commission (2020) *'Environmental Assessments of Plans, Programmes* and Project – Rulings of the court of Justice of the European union'.
- European Commission (2017) *`Environmental Impact Assessment of Projects Guidance on the preparation of the Environmental Impact Assessment Report'*

The EIAR will be prepared in line with Annex IV of the EIA Directive which clearly identifies the information that must be provided for in any EIAR.

Discipline specific best practice guidance will be consulted by each specialist for each environmental topic (*e.g.*, Population & Human Health, Water, Biodiversity and Material Assets) during the preparation of the EIAR. The receiving environment, surveys/site walkovers, methodology, potential impacts, and mitigation measures will be incorporated and included within each disciplines chapter within the EIAR. The outline methodology for each discipline is outlined below and will be included in detail within the EIAR.

The scope and level of detail to be contained within each specialist chapter will be finalised after completion of this scoping process by qualified environmental specialists in each environmental field. This will ensure that all studies and assessments of impacts are scientifically robust in terms of design, execution, and analysis which will guarantee that all data obtained, and assessments preformed are of a sound basis and authoritative in nature.

7.3. Proposed Approach to Detailed Assessments

7.3.1. Water

This chapter will describe the likely significant effects associated with the Project on surface, transitional and coastal waters which are located in proximity to the operational discharges. An overarching component of this chapter will be assessing the impact of the discharges against the pertinent objectives of relevant Directives and Regulations, including but not limited to the Water Framework Directive [2000/60/EC], Urban Waste Water Treatment Directive [91/271/EEC], Shellfish Waters Directive (2006/113/EC), Habitats Directive [92/43/EC], Birds Directive [79/409/EEC] and European Union Environmental Objectives (Surface Waters) (Amendment) Regulations 2019 [S.I No. 77/2019]. Colleague

Irish Water has established a strategic numerical water quality model of the entirety of Cork Harbour (herein referred to as "*the Model*"), which is used as a singular point of reference to undertake the assessments as required for planning and WWDA licensing purposes. The Model has been delivered in line with the Irish Water Technical Standard for Marine Modelling (IW-TEC-100-015) and has been calibrated and validated against a wide range of hydrodynamic (temperature, salinity, current speed, current direction, tide level) and water quality (BOD, Ammonia, TON, DIN, MRP, E. Coli, Enterococcus) datasets. As the Model simulates the impact of a wide range of discharges (licenced, riverine, diffuse *etc.*) on receiving water quality, it facilitates the assessment of individual and in combination effects of a given discharge/agglomeration.

This Model will be used to assess the impact of the operational discharges from the Midleton and Carrigtwohill agglomeration. Broadly, the Model will first assess the impact

of the existing primary, secondary and storm water overflow discharges on the receiving waters. Such an assessment will allow for the individual and in combination impacts to be assessed. This model will include for the discharges from Irish Distillers Ltd. facility and the Dairygold/TINE installation.

The impact of primary and secondary discharges will be assessed by a number of deterministic model runs. Flow rates and effluent concentrations representative of each primary and secondary discharge under existing conditions will be first applied to the model, with subsequent runs executed with values representative of proposed future scenarios inputted.

The impact of storm water overflow discharges will be determined based on the application of the Unit Impact Database as per Urban Pollution Manual v3.1 methodology (FWR, 2012. Urban Pollution Management Manual, 3rd edition. Foundation for Water Research, Marlow, UK). Such an approach will facilitate statistical assessment of the impact of individual storm water overflow discharges on the concentrations in receiving waters over a long (10 year) time period. In doing so, the impact of intermittent discharges can be appropriately assessed (*i.e.*, impact on the 97%ile receiving water concentrations). This task will be executed for the existing conditions, and for future conditions (*i.e.*, subject matter of the WWD review).

The modelling works will facilitate identification of the in-combination impact of discharges to receiving water quality, while also providing source apportionment plots to determine the drivers of simulated concentrations of water quality parameters. In doing so, the impact of the operational discharges from the proposed combined Midleton and Carrigtohill agglomeration can be clearly assessed.

7.3.2. Biodiversity

This chapter will describe the likely significant direct and indirect effects of the operational discharges on biodiversity, including flora (plants), fauna (animals), and habitats in the aquatic receiving environment. It will provide a detailed Ecological Impact Assessment (EcIA) which will be carried out in accordance with CIEEM guidelines.

Separate to this chapter, an Appropriate Assessment (AA) Screening Report and Natura Impact Statement (NIS) will be prepared, as standalone documents.

7.3.3. Population and Human Health

This chapter will describe the likely significant effects of the operational discharges on population and human health (*i.e.*, socio-economic, and public health aspects respectively). The assessment of population and human health will require a comprehensive understanding of the baseline environment and local community which will be obtained *via* desktop studies, and discussions with local stakeholders.

In terms of the population assessment, this assessment will identify and assesses the likely significant effects on the local community and users of the receiving waters, along with the likely economic significant effects of the operational discharges at the local and regional level.

The assessment on human health will draw on the findings of other sections of the EIAR as necessary to ensure that the likely significant effects that have the potential for significant effects on human health are considered herein. In this case the key focus will

be the environmentally related health issues relating to the operational discharges in relation the surrounding population and users of the receiving waters.

7.3.4. Material Assets

The methodology used to prepare this section of the EIAR will be in accordance with the EPA '*Guidelines on the information to be contained in Environmental Impact Assessment Reports* (EIAR)' (2022). The likely significant effect of the operational discharges on the main enterprises of the area will be considered, including aquaculture / fishing activities, within surrounding waters.

8. SCOPING REQUEST

In accordance with Regulation 17(D)(4), Irish Water would appreciate a scoping response not later than 4 weeks after the expiry of the notice period referred to in paragraph (2)(a) of the Regulations.