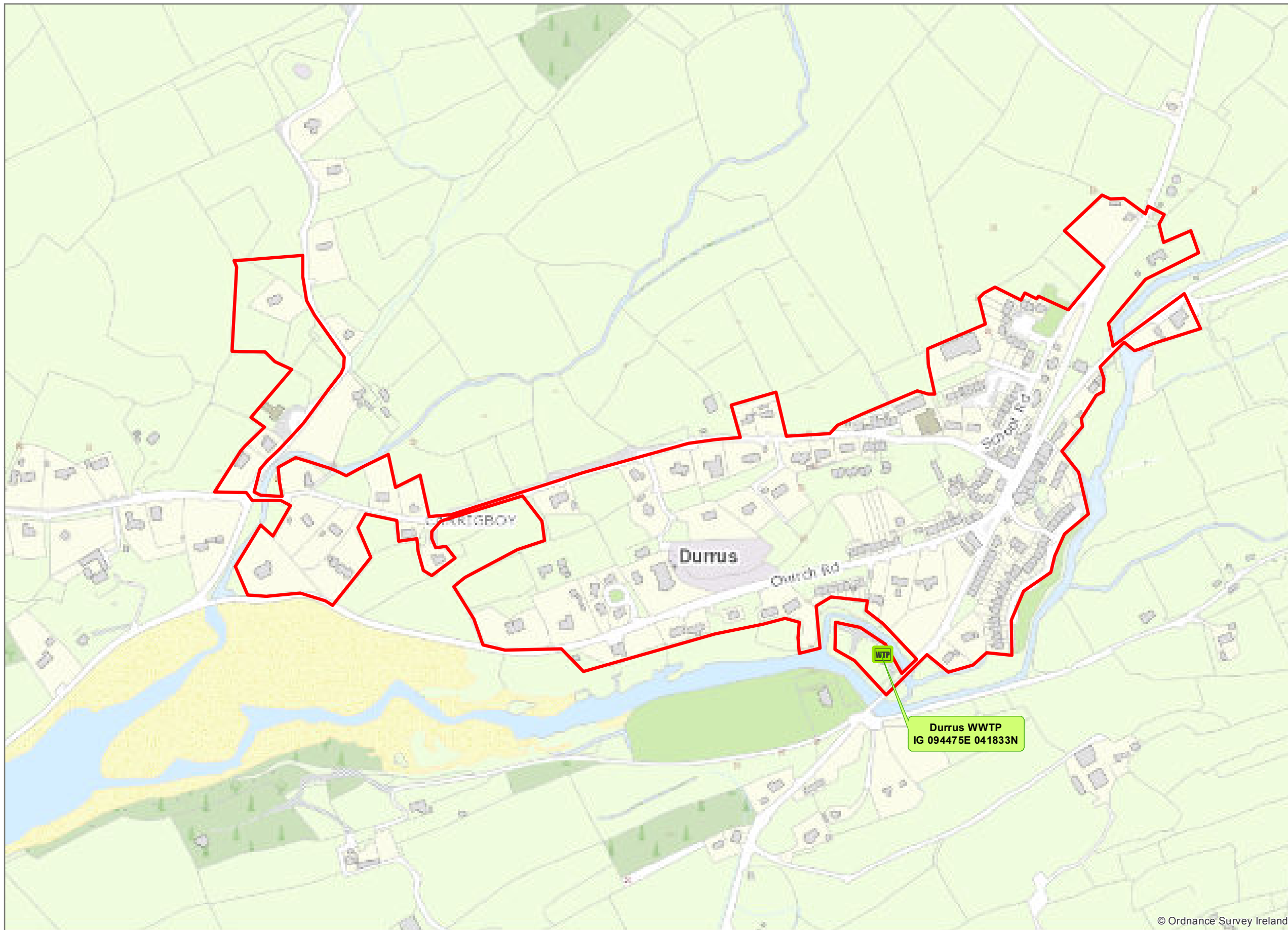




SECTION B – GENERAL

Attachment B1: Agglomeration Boundary

- **Attachment B.1: Agglomeration Boundary**



Legend

-  Waste Water Treatment Plant
-  IW Agglomeration Boundary

0 25 50 100
Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:4,500 @ A3
Revision No.:	0
Attachment No.	B.1
Drawn By:	E.Laurinaviciute
Checked By:	V.McArdle
Approved By:	V.McArdle

Drawn Date	25/05/2017
Checked Date:	25/05/2017
Approved Date:	25/05/2017



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Map Template Design: kcaardl@water.ie

Agglomeration Boundary Durrus







SECTION B – GENERAL

Attachment B3: Location of Primary Discharge Point

- **Attachment B.3: Primary Discharge Point and Sampling Locations Map**



Legend

-  **Waste Water Treatment Plant**
-  Storm Water Overflow & Primary Discharge point
-  Effluent Sampling Location
-  Influent Sampling Location
-  Downstream Ambient Sampling Location
-  Upstream Ambient Sampling Location

0 15 30 60
Meters

Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

Scale:	1:2,500 @ A3
Revision No.:	2
Attachment No.	B.3
Drawn By:	L.Redmond
Checked By:	V.McArdle
Approved By:	V.McArdle

Drawn Date	23/08/2017
Checked Date:	23/08/2017
Approved Date:	23/08/2017



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Map Template Design: kcarroll@water.ie

Durrus WWTW, Primary Discharge, Storm Water Overflow and Sampling/Monitoring Locations

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SECTION B – GENERAL

Attachment B6: Relevant Planning Authority

- **Attachment B.6: Planning Report**

Comhairle Chontae Chorcaí

CORK COUNTY COUNCIL
(WESTERN DIVISION)



Durrus Sewerage Scheme

PLANNING AND DEVELOPMENT ACT 2000

**County Manager's Report on the Durrus
Sewerage Scheme in accordance with the
provisions of Part 8 of the Planning and
Development Regulations 2001.**

**PROJECTS SECTION
WESTERN DIVISION**

April 2005

1 DESCRIPTION OF THE NATURE AND EXTENT OF THE SCHEME

It is proposed to construct a modern Wastewater Treatment Plant (WwTP) in Durrus to cater for the existing and future needs of the area. This proposal is in accordance with Objective INF 2-5 of the Cork County Development Plan 2003 and with the Preliminary Report on Durrus Sewerage Scheme prepared by Malachy Walsh & Partners for Cork County Council Water Services in 1999. The WwTP will be designed to serve a population equivalent of 500 persons, expandable to serve 700 persons. This will cater for population growth and development demand for the next twenty years. It is proposed to construct the new WwTP on a site located in lands to the north west of the R-591, adjacent to the foreshore in the townland of Carrigboy. The wastewater treatment plant will be screened to reduce its visual intrusion.

It is proposed to discharge the treated effluent to the Four Mile Water Estuary as it enters the head of Dunmanus Bay by gravity via the existing outfall.

The new wastewater treatment plant will consist of preliminary treatment, and secondary treatment, to achieve a final effluent of 25 mg/l BOD; 35 mg/l SS; 125 mg/l COD. Mitigation measures will be installed to maintain noise and odour emissions within recognised and acceptable limits at the site boundary. Thickened sludges will be transported by tanker or skip off site for further treatment or disposal in accordance with the Sludge Management Plan for County Cork. Screenings arising from the Preliminary Treatment stage will be disposed of to the nearest licenced landfill site.

The control house and any other building which may be located at the treatment works site will be constructed in blockwork with render finish, and tiled pitched roofs. The appearance of the buildings will reflect the local traditional building styles. The paved areas will consist of concrete pavement and macadam. A 2.2 m high palisade fence will enclose the treatment works with screen planting on the external boundaries.

A connection from the water supply scheme in Durrus will be taken from the adjacent public main to the treatment works. A power supply will be brought to the site from the nearest available location in accordance with the requirements of the Electricity Supply Board.

Drawings accompanying this application:

Dwg. No.04095-8 SL 01 A Wastewater Treatment Plant at Durrus Co. Cork for Cork County Council Site Layout

Dwg. No.04095-8 GA 01 A Wastewater Treatment Plant at Durrus Co. Cork for Cork County Council General Arrangement Elevations & Sections

2 PLANNING EVALUATION

(a) Development Control: -

See attached report by Senior Planner in appendix 1. The proposed development is consistent with the proper planning and sustainable development of the area.

(b) Development Plan: -

The proposed development is consistent with the overall strategy and main policy as outlined in chapter 5 (Transport & Infrastructure) of Volume 1 of the Cork County Development Plan 2003, which states that:

- *Investment in the county's infrastructure should be made in a sustainable and efficient manner in order to promote the social and economic well being of the county and its population.*

The proposed development is consistent with the objective for Sewerage Infrastructure as outlined in section 5.2 (Water Supplies, Sewerage and Drainage) which states that (INF 2-5):

- *It is an objective generally to provide support for the funding of sewerage infrastructural requirements as identified by the County Council in order to accommodate the planned levels of growth expected for the county.*
- *It is an objective generally to improve and extend the sewerage infrastructure to serve the planned levels of growth, during the lifetime of this plan, in order to facilitate development.*

The proposed development site is adjacent to and visible from Scenic Route A123 (West) between Durrus and Toormore but is consistent with key objectives as outlined in chapter 4 (Scenic Routes) which state that (ENV 3-4 & ENV 3-5):

- *It is a general objective to preserve the character of all important views and prospects, particularly sea views, river or lake views, views of unspoilt mountain, upland or coastal landscapes, views of historical or cultural significance (including buildings and townscapes) and views of natural beauty.*
- *It is a particular objective to preserve the character of those views and prospects obtainable from scenic routes identified in this plan. These routes are shown on the scenic amenity maps in volume 4 and listed in volume 2 of this plan.*

The proposed development is consistent with section 9.2 Durrus of Part 2 of the West Cork Section of the Cork County Development Plan 1996. The site is just outside the development boundary as shown on map 9.4

3 SUBMISSIONS RECEIVED

Submissions were received from the following:

	Name	Address	Date
1	Michael McPartland, Environmental Officer.	South Western Regional Fisheries Board, 1 Neville's Terrace, Masseytown, Macroom.	14 th January 2005

4 SUMMARY OF ISSUES IN SUBMISSIONS

We have considered the issues and our detailed response to the issues raised in the submissions are contained in appendix 2. A summary of the issues and responses is outlined below:

1. **That serious consideration be given to the level of disinfection to ensure no negative impact on shellfish waters** – our recommendation based on the attached report is that Ultra-violet light disinfection be provided at the Wastewater Treatment Works.
2. **That consideration be given to the manner in which all construction works, and particularly those below the waterline, are carried out with a view to minimising suspended solids pollution** – there are no proposals to carry out works below the waterline and conditions will be imposed on the contractor to prevent any activity that may lead to pollution of the adjoining river and sea.

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5 MODIFICATIONS

The following modification is recommended: -

Ultra-violet light disinfection of the effluent shall be provided at the Wastewater Treatment Works.

Some conditions in the proposed Construction Contract may be modified or strengthened to take on board some of the issues outlined above.

6 RECOMMENDATION

I recommend that the proposed Construction of a new Wastewater Treatment Works, including ultra-violet disinfection and access road on lands located off the Dunbeacon Road in the Townland of Carrigboy, Durrus be proceeded with as recommended in this report.

Signed: -

Assistant County Manager

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SECTION B – GENERAL

Attachment B8: Notices and Advertisement

- **Attachment B.8(a): Public Notice and Newspaper Advertisement**
- **Attachment B.8(b): Location for Public Notice Drawing**

PUBLIC NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE

Pursuant to Regulations 9 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007), Irish Water, Colvill House, 24-26 Talbot Street, Dublin 1, intend to apply to the Environmental Protection Agency for a Wastewater Discharge Licence for the Durrus waste water works. The waste water works was previously permitted as Certificate of Authorisation A0394-01. The waste water works consists of a wastewater treatment plant at 094475E, 041833N; a primary discharge to Dunmanus Bay; a storm water overflow to Dunmanus Bay and associated sewer network. Details of the location of these works are as follows:-

Waste Water Works Item	Location (townland)	National Grid Reference
Wastewater treatment plant	Durrus	094475E 041833N
Primary discharge (SW1)	Durrus	094437E 041831N
Storm Water Overflow (SW2)	Durrus	094437E 041831N

A copy of the following documents shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Environmental Protection Agency, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford, at Irish Water, Colvill House, 24-26 Talbot Street, Dublin 1 and at Cork County Council Office, Courthouse, Skibbereen, County Cork.

- (i) the application for a waste water discharge licence
- (ii) such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters at P.O. Box 3000, Johnstown Castle Estate, Co. Wexford.

Plannings

Cork County Council:
Patrick A. Galvin, Planning Application Services, Upper Belmont, Innishannon (Tel 021-4775079 & 086-8230343) is applying for planning permission on behalf of Denis Sheehan for alteration to dwelling house including two-storey extension and first floor extension to side and to construct pitch roof (in lieu of existing flat roof) to match existing adjoining dwelling house at Sluggera Cross, Farranastig, Whitechurch. The planning application may be inspected or purchased, at a fee not exceeding the reasonable cost of making a copy, at the offices of the Planning Authority, County Hall, Carrigrohane Road, Cork, during its public opening hours, i.e. 9.00a.m. to 4.00 p.m. Monday to Friday (excluding public holidays). A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the Authority of the application.

Cork County Council:
I, Pamela Ahern intend to apply for permission to construct a storey and a half extension, (including a first floor) and changes to elevations to existing dwelling at Lehenagh Cottage, Lehenagh More, Togher, Co Cork. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority, County Hall, Carrigrohane Road, Cork, during its public opening hours, i.e. 9.00 am to 4.00 pm Monday to Friday (excluding public holidays). A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the Authority of the application, and such submissions and observations will be considered by the planning authority in making a decision on the application. The planning authority may grant permission subject to or without conditions, or may refuse to grant permission.

Cork County Council:
Permission for retention of dwellinghouse as constructed (change of plan from that granted under 04/3198) at Killeen, Crossbarry by Tim & Celia O Driscoll. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority, County Hall, Carrigrohane Road, Cork, during its public opening hours, i.e. 9.00a.m. to 4.00 p.m. Monday to Friday (excluding public holidays). A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the Authority of the application, and such submissions and observations will be considered by the planning authority in making a decision on the application. The planning authority may grant permission subject to or without conditions, or may refuse to grant permission.

Cork County Council:
Leon Whelton - planning & design consultant, Toormore, Goleen (Tel: 086/3088715)

lary to main dwelling house, Permission to decommission 2 no existing septic tanks, permission to install a treatment plant & percolation area to serve both dwellings, & all associated site works at Lisheennacreagh, Ballydehob. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the planning Authority Norton House, Skibbereen Co Cork during its public opening hours i.e. 9.00a.m. To 4.00 p.m. Monday to Friday (excluding public holidays) and a submission or observation in relation to the application may be made to the authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the authority of the application

Cork County Council:
I, Karen O'Flynn, intend to apply for Planning Permission to construct a new single storey extension to the rear (South) and side (West) with a single storey porch extension to the front (North) of my existing dwelling with internal alterations to suit and all ancillary site development works, at 27 The Downs, Broadale, Maryborough Hill, Douglas, Co.Cork. This Planning Application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority during its public opening hours and a submission or observation in relation to the application may be made to the Authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the Authority of the application.

Cork County Council:
Daly Barry & Associates, Registered Architects and Assigned Certifiers, Glengarriff Road, Bantry, Tel. 027 51026 intend to apply for permission for the retention of; 1. Single storey extension comprising boiler room, store and living room to western side of dwelling, 2. Canopy to northern side of dwelling, 3. Detached ancillary guest accommodation constructed in lieu of storage shed as granted under 07/964. 4. Detached domestic garage and permission for completion of same. Permission also sought for the construction of an extension to the northern boundary wall at Creggane, Rosscarbery, Co. Cork on behalf of Catherine Hutton. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the offices of the Planning Authority, Norton House, Skibbereen, Co. Cork during its public opening hours and a submission or observation in relation to the application may be made to the Authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the Authority of the application.

Cork County Council:
We, Kevin & Deirdre Cowhig, intend to apply for permission for development at Sleenoge, Enniskeane, Co. Cork. The development will consist of the construction of a single dwelling house, a site entrance, a private well, the installation of a wastewater treatment unit & associated soil polishing filter, and all ancillary works. The Planning Application may be inspected or purchased

dition of 5 no. Velux windows to loft floor & 4 no. roof lights to ground floor, 6. Changes to the north, south, & west elevations of the dwelling, and 7. All associated site works at No.10 Glincool Crescent, Ballincollig, Co. Cork. The planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the Planning Authority at County Hall, Carrigrohane Road, Cork, during its public opening hours Monday-Friday 9.00-4.00p.m. A submission or observation in relation to the application may be made to the Planning Authority in writing on payment of the prescribed fee within the period of 5 weeks beginning on the date of receipt by the Authority of the application, and such submissions and observations will be considered by the planning authority in making a decision on the application. The planning authority may grant permission subject to or without conditions, or may refuse to grant permission.

Cork County Council:
Platform Architecture, Bandon (Tel: 023/88 20582) is applying for permission for the construction of a dwelling house, domestic treatment system and all associated site works at Mawmore West, Enniskeane, Co. Cork on behalf of Lorraine Holland and Kieran Doyle. The

planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy, at the offices of the Planning Authority, County Hall, Carrigrohane Road, Cork, during its public opening hours, i.e. 9.00am to 4.00pm Monday to Friday (excluding public holidays). A submission or observation in relation to the application may be made in writing to the Planning Authority on payment of the prescribed fee within the period of five weeks beginning on the date of receipt by the Authority of the application, and such submissions and observations will be considered by the Planning Authority in making a decision on the application. The Planning Authority may grant permission subject to or without conditions, or may refuse to grant permission.

Cork County Council:
We OMB Associates, 10 Market St., Skibbereen, 028 21552 (info@vom.ie) hereby apply on behalf of Ardravinna Farm Ltd for Permission for; demolition of silage pit, erection of milking parlour, dairy & milk silo, erection of 2 wall silage pit and erection of extension to grain store and associated site development works at Ardravinna, Schull, Co. Cork. The Planning application may be inspected or purchased at a fee not

exceeding the reasonable cost of making a copy at the office of the Planning Authority, Norton House, Skibbereen, Co. Cork during its public opening hours, Monday to Friday (excluding public holidays) AND a submission or observation in relation to the application may be made to the Authority in writing on a payment of €20 within the period of 5 weeks beginning on the date of receipt by the Authority of the application.

Cork County Council:
We OMB Associates, 10 Market St., Skibbereen, 028 21552 (info@vom.ie) hereby apply on behalf of Dan Hayes for Permission for erection of dairy and milking parlour, covering existing open slurry tank and associated site development works at Dunbeacon, Durrus, Co. Cork. The Planning application may be inspected or purchased at a fee not exceeding the reasonable cost of making a copy at the office of the Planning Authority, Norton House, Skibbereen, Co. Cork during its public opening hours, Monday to Friday (excluding public holidays) AND a submission or observation in relation to the application may be made to the Authority in writing on a payment of €20 within the period of 5 weeks beginning on the date of receipt by the Authority of the application.

Public Notice

PUBLIC NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE

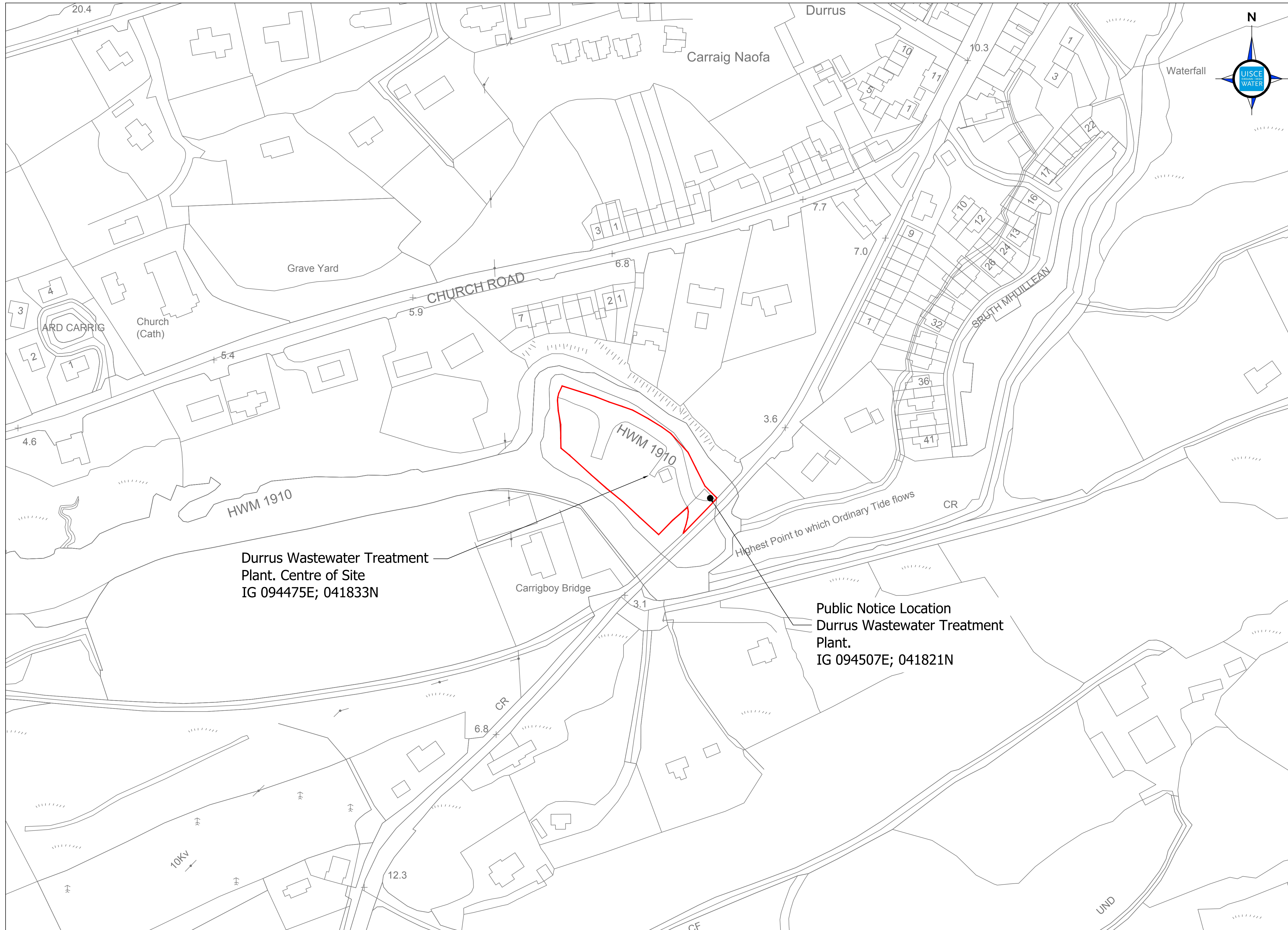
Pursuant to Regulations 9 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007), Irish Water, Colvill House, 24-26 Talbot Street, Dublin 1, intend to apply to the Environmental Protection Agency for a Wastewater Discharge Licence for the Durrus waste water works. The waste water works was previously permitted as Certificate of Authorisation A0394-01. The waste water works consists of a wastewater treatment plant at 094475E, 041833N; a primary discharge to Dunmanus Bay; a storm water overflow to Dunmanus Bay and associated sewer network. Details of the location of these works are as follows:-

Waste Water Works Item	Location (townland)	National Grid Reference
Wastewater treatment plant	Durrus	094475E 041833N
Primary discharge (SW1)	Durrus	094437E 041831N
Storm Water Overflow (SW2)	Durrus	094437E 041831N

A copy of the following documents shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Environmental Protection Agency, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford, at Irish Water, Colvill House, 24-26 Talbot Street, Dublin 1 and at Cork County Council Office, Courthouse, Skibbereen, County Cork.

- (i) the application for a waste water discharge licence
- (ii) such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application.

Submissions in relation to the application may be made to the Environmental Protection Agency at its headquarters at P.O. Box 3000, Johnstown Castle Estate, Co. Wexford.



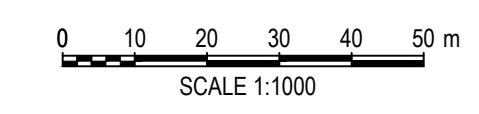
NOTES:

LEGEND:

WWTP SITE Boundary

REVISIONS:

Orig. xxx	Chk. xxx	App. xxx	Date: dd/mm/yy	Status: Status



Coordinate System: TM65 Irish Grid
Projection: Transverse Mercator

SCALE:	1:1000 @ A1
DRAWING No.	IW_DURRUS_001
REVISION:	0
Drawn By:	I Dawson
Checked By:	V McArdle
Approved By:	V McArdle
Status:	FINAL
Drawn Date:	12/06/2017
Checked Date:	12/06/2017
Approved Date:	04/08/2017

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**Durrus Discharge License Application,
Location for Public Notice**

SECTION D – DISCHARGES TO THE AQUATIC ENVIRONMENT

Attachment D1: Discharges to Surface Waters

- **Table D.1(i)(a): Emissions to Surface/Ground Waters (Primary Discharge Point)**
- **Table D.1(i)(b): Emissions to Surface/Ground Waters – Characteristics of the Emission (Primary Discharge Point)**

WWD Licence Application

Table D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS (Primary Discharge Point)

Volume emitted m³ (i)					
Normal/day	141.75	Maximum/day	442.13		
Maximum rate/hour	18.42		min/hr	hr/day	day/year
Dry Weather Flow/sec	0.0016	Period of emission (avg)	60.00	24.00	365.00

Current PE 630

Future PE 655

Table D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

1	pH	NT	
2	Temperature	NT	
3	Electrical Conductivity (@ 25 'C)	NT	
	Max. daily average per day	(mg/l)	kg/day
4	Suspended Solids	12.5	1.772
5	Ammonia as (N)	NT	
6	Biochemical Oxygen Demand	5.2	0.737
7	Chemical Oxygen Demand	37.5	5.316
8	Total Nitrogen (as N)	NT	
9	Nitrite (as N)	NT	
10	Nitrate (as N)	NT	
11	Total Phosphorus (as P)	NT	
12	Orthophosphate (as P)	NT	
13	Sulphate (SO4)	NT	
		(µg/l)	
14	Phenols	NT	

Note: The above averages were obtained from 2015-2016 sampling data, and the sampling were taken in accordance to the existing CoA conditions.

Normal Flow rate= 141.75

SECTION E – MONITORING

Attachment E1: Wastewater Discharge Frequency & Quantities – Existing

- **Table E.1(i): Waste Water Frequency and Quantity of Discharge Primary Discharge Points**
- **Table E.1(ii): Waste Water Frequency and Quantity of Discharge Stormwater Overflows**

TABLE E.1(i): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Primary and Secondary Discharge Points

Identification code for discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m ³ /annum)
SW1	365	51,739

TABLE E.1(ii): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Storm Water Overflows

Identification code for discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m ³ /annum)	Complies with Definition of Storm Water Overflow
Not Applicable	Not Applicable	Not Applicable	Not Applicable

SECTION E – MONITORING

Attachment E4: Sampling Data

- **Attachment E.4(a): Table of Effluent Sampling Data**
- **Attachment E.4(b): WAC Calculations**

E.4 Effluent Sampling Data 2015-2016

Effluent Sampling Location eSW-1

Effluent - Regular Emissions

Water Management Unit	Sample Template	Sample Date	Sample Method	mg/l	mg/l	mg/l
				BOD	Chemical Oxygen Dem:	Suspended Solids
				-	-	-
				-	-	-
Four Mile River (Dunmanus Bay)	Effluent WWDL	22/07/2015	Grab	5.8	32	18
Four Mile River (Dunmanus Bay)	Effluent WWDL	10/09/2015	Grab	4.6	43	7
Four Mile River (Dunmanus Bay)	Effluent WWDL	28/01/2016	Grab	3.4	10.5	6
Four Mile River (Dunmanus Bay)	Effluent WWDL	25/10/2016	Grab	5	29	7

Waste Assimilative Capacity (WAC) Calculation						
WWTP	Durrus					
Name of River	Dunmanus Bay		Allowable Concentration			
WFD Water Quality (Good/High)	Good	Data Source:	EPA WFD Website		Good Status	High Status
95% Flow (m3/s)	0.134	Data Source:	EPA Hydrotool		95%ile mg/l	95%ile mg/l
95% Flow (m3/day)	11578			Carbonaceous BOD		
Mean Flow (m3/s)	0.625	Data Source:	EPA Hydrotool	DIN		
Mean Flow (m3/day)	54000			Ortho Phosphate (OP)		
Effluent					Mean mg/l	Mean mg/l
PE	630			Carbonaceous BOD	4.00	4.00
Effluent flow (m3/day)	141.75			DIN	0.250	0.170
Dilution @ 95%ile flows	81.7			Ortho Phosphate (OP)	0.040	0.040
Dilution @ mean flows	381.0					

Mean River Flows

Parameter	Background Concentration mg/l (Notionally Clean)	Effluent Standards	Contribution from Primary Discharge (mg/l)	Resultant Concentration (Notionally Clean)	Allowable Concentration Mean mg/l	% of Available WAC
Carbonaceous BOD	0.260	25.00	0.065	0.325	4.00	2%
Ortho Phosphate (OP)	0.005	5.70	0.015	0.020	0.040	43%

Mean River Flows

Parameter	Background Concentration mg/l (Actual)	Effluent Standards	Contribution from Primary Discharge (mg/l)	Resultant Concentration (Actual)	Allowable Concentration Mean mg/l	% of Available WAC
Carbonaceous BOD	2.000	25.00	0.065	2.060	4.00	3%
Ortho Phosphate (OP)	0.025	5.70	0.015	0.040	0.04	99%
DIN	0.105	55.00	0.144	0.249	0.25	99%

$$T = ((F \times C) + (f \times c)) / (F + f) \quad \text{mg/l}$$

- Where T = Resulting concentration due to the discharge (mg/l)
 F = flow in receiving waters at 95%ile (m³/s) *
 C = average background concentration in receiving waters (mg/l)
 f = discharge flow (m³/s)
 c = concentration in the discharge (mg/l)

$$c = T \times [(F+f)+(F \times C)] / f$$

SECTION F – EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Attachment F1: Assessment of Impact on Receiving Surface or Ground Water

- **Attachment F.1(a): Screening for Appropriate Assessment Report**
- **Attachment F.1(i)(a): Upstream Ambient Monitoring Data – Regular Emissions**
- **Attachment F.1(i)(b): Downstream Ambient Monitoring Data – Regular Emissions**
- **Attachment F.1(ii)(a): Upstream Ambient Monitoring Data – Dangerous Substances**
- **Attachment F.1(ii)(b): Downstream Ambient Monitoring Data – Dangerous Substances**

Irish Water Report

Appropriate Assessment Screening as part of the Durrus Waste
Water Discharge Licence Application.



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Introduction

This report provides an Appropriate Assessment (AA) of the existing Waste Water Treatment Plant (WwTP) at Durrus, County Cork, for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007), as amended. It assesses whether the on-going operation of the plant, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 Site(s) in view of best scientific knowledge and the conservation objectives of the site(s). Natura 2000 Sites are those identified as sites of European Community importance designated as Special Areas of Conservation under the Habitats Directive or as Special Protection Areas under the Birds Directive.

This report follows the guidance for AA published by the Environmental Protection Agency's (EPA) 'Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007)' (EPA, 2009); and takes account of the Department of the Environment, Heritage and Local Government's guidelines 'Appropriate Assessment of Plans and Projects in Ireland. Guidance for Planning Authorities' (DoEHLG, 2009) and Circular L8/08 'Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments' (DoEHLG, 2008).

Legislative Context

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000. These are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/ECC) as codified by Directive 2009/147/EC.

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to affect Natura 2000 sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

Any plan or project not directly connected with or necessary to the management of the [Natura 2000] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) states:

If, in spite of a negative assessment of the implications for the [Natura 2000] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Methodology

Guidance Followed

Both EU and national guidance exists in relation to Member States fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this AA Screening has had regard to the following guidance:

- Note on Appropriate Assessments for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Environmental Protection Agency, (EPA, 2009).
- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government, (DoEHLG, 2010).
- Circular L8/08 – Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments. Department of Environment, Heritage and Local Government, (DoEHLG, 2008).
- Communication from the Commission on the Precautionary Principle. Office for Official Publications of the European Communities, Luxembourg, (EC, 2000a).
- Managing Natura 2000 Sites: the provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC, Office for Official Publications of the European Communities, Luxembourg, (EC, 2000b).
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001).
- Guidance document on Article 6(4) of the ‘Habitats Directive’ 92/43/EEC – Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission. Office for Official Publications of the European Communities, Luxembourg, (EC, 2007).
- Nature and biodiversity cases: Ruling of the European Court of Justice. Office for Official Publications of the European Communities, Luxembourg (EC, 2006).
- Marine Natura Impact Statements in Irish Special Areas of Conservation: A working document, National Parks and Wildlife Service, Dublin (NPWS, 2012).
- European Communities (Birds and Natural Habitats) Regulations, 2011 (S.I. No.477 of 2011).

- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013).

Stages Involved in the Appropriate Assessment Process

Stage 1: Screening / Test of Significance

This process identifies whether the WwTP discharge is directly connected to or necessary for the management of a Natura 2000 Site(s); and identifies whether the discharge is likely to have significant impacts upon a Natura 2000 Site(s) either alone or in combination with other projects or plans.

The output from this stage is a determination for each Natura 2000 Site(s) of not significant, significant, potentially significant, or uncertain effects. The latter three determinations will cause that site to be brought forward to Stage 2.

Stage 2: Appropriate Assessment

This stage considers the impact of the WwTP discharge on the integrity of a Natura 2000 Site(s), either alone or in combination with other projects or plans, with respect to (1) the site's conservation objectives; and (2) the site's structure and function and its overall integrity. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts

The output from this stage is a Natura Impact Statement (NIS). This document must include sufficient information for the EPA to carry out the appropriate assessment. If the assessment is negative, i.e. adverse effects on the integrity of a site cannot be excluded, then the process must consider alternatives (Stage 3) or proceed to Stage 4.

Stage 3: Assessment of Alternatives

This process examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 Site. This assessment may be carried out concurrently with Stage 2 in order to find the most appropriate solution. If no alternatives exist or all alternatives would result in negative impacts to the integrity of the Natura 2000 Sites then the process either moves to Stage 4 or the project is abandoned.

Stage 4: Assessment Where Adverse Impacts Remain

An assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed.

Stage 1: Screening / Test of Significance

In complying with the obligations under Article 6(3) and following the appropriate guidelines, this AA Screening has been structured as a stage by stage approach as follows:

- Description of the project;
- Identification of Natura 2000 sites potentially affected;
- Identification and description of individual and cumulative impacts likely to result;
- Assessment of the significance of the impacts identified above on site integrity;
- Exclusion of sites where it can be objectively concluded that there will be no significant effects; and
- Screening conclusion.

Consultation

The EPA, as the competent authority, will seek NPWS advice as may be required in reaching their decision on a WwTP discharge. The NPWS can only communicate with the applicant (i.e. Irish Water) on request from the competent authority, when the formal application process to the competent authority has already commenced.

Screening

Description of the Project

The Durrus Wastewater Treatment Plant (WwTP) is located in West Cork, six miles from Bantry, Country Cork.

Process Description

The wastewater treatment plant consists of primary, secondary and tertiary treatment. The main elements of the Wastewater Treatment Plant are as follows:

1. Inlet Screen

Haigh Ace 590 inlet screen can cater for 15 DWF. The screen is designed to serve a PE of 2000. The inlet screen removes all grit, rags etc. from the influent.

2. Primary Settlement Tank

Waste water enters the Primary Settlement Tank of the system, where solid matter is settled out and retained. The retained solids (primary sludge) is drawn off at regular intervals by a vacuum tanker. The settled or partially clarified liquor then passes into the Rotor Modules via a flow splitter. The primary zone is designed to have sufficient capacity to accept high flows within the unit over short intervals of time.

3. Rotor Modules

The Rotor Module (biozone) is semi-circular in cross section and rectangular in plan. Clarified liquor enters the first stage of the biozone, which contains the first stage 'roughing' media bank. The second stage of the biozone is hydraulically sealed from first stage and maintains a constant water level. This second stage is fed via a bucket lift transfer (Managed Flow) system contained in the first stage of the biozone. The RBC (Rotating Biological Contractor) consists of banks of polypropylene media attached to a central shaft and is supported by bearings, which are mounted on the main steel frames at each end of the unit. One of these frames includes the fixing assembly for the drive motor unit. The main operational features of the rotor unit are outlined below;

- The RBC is divided into two stages by means of a fixed baffle attached to the biozone. The media is split into stages by the means of rotating baffles fixed to the shaft, designed to promote effective and efficient growth of bio-culture to effect treatment.
- The RBC is rotated slowly through a reduction gearbox and is arranged so that a proportion of its surface area is submerged in the effluent at any one time. As the RBC rotates, biologically active film of microorganisms (biomass) to become established on each side of the media sheets. This biologically active film grows in size, is self regulating and oxidises the pollutants in the sewage. The micro organisms use the polluting material (measure as BOD) as a substrate (food) and as they do so, multiply in number, maintaining a specific biomass thickness to ensure optimum process efficiency. Material from the first stages of the RBC falls to the base of the first stage of the biozone, whereas material from the remaining stages of the RBC is kept in suspension and carried forward into the Final Settlement Tank.

- In order to ensure a balanced and constant flow and, therefore, a stable environment, dosing buckets fitted to the first stage of the RBC shaft lift and transfer the partially clarified liquor to the final stages of the RBC at a constant rate, irrespective of changes to incoming flow rates and water level.

4. Final Settlement Tank c/w sludge return

The Final Settlement Tanks comprises of the secondary settlement or final zone and it is in this final zone that any biological culture, which has fallen from the latter stages of the RBCs, is allowed to settle out. The treated effluent enters this zone from the biozone and then travels to the Flow Collection Chamber. The settled sludge is drawn off hydrostatically and transferred via a pump unit in the Sludge Return Chambers to the Primary Settlement Tank.

5. Channel UV System

UV System is situated inside a concrete channel and provides tertiary treatment in the form of sterilisation.

There is 1No. stormwater overflows within the agglomeration and it is located at Durrus WWTP. Flows in excess of the pumping capacity discharges from the pumping station located at the start of the treatment process into a stormwater holding tank. The tank has sufficient capacity to store >3DWF and it has an overflow which allows excess flow discharge to an outfall chamber, where it mixes with the treated effluent prior to UV radiation treatment before discharging to the primary outfall.

The current population equivalent for the agglomeration is 630p.e. increasing to 655p.e. by 2023. Based on a current loading of 630/pp/day the dry weather flow for the current discharge is calculated at 0.001641m³/sec, with the 2023 dry weather flow calculated at 0.00171m³/sec. The long-term 95-percentile flow for the Four Mile River, as obtained from the EPA Hydrotool website, is 0.134m³/sec.

Effluent data from 2015 and 2016 is presented in Table 1.0 together with Urban Wastewater Treatment Regulations (UWWT) limit values.

Table 1.0: Durrus WwTP Effluent Monitoring Data

Date	BOD mg/l O2	COD mg/l O2	SS mg/l
UWWT ELV*	25	125	35
22-Jul-2015	5.8	32	18
10-Sep-2015	4.6	43	7
28-Jan-2016	3.4	10.5	6
25-Oct-2016	5	29	7

* Limits set for plants >2000p.e. for BOD, COD and SS in Schedule 2, Part 1 of the UWWT Regulations 2001 (S.I. 254 of 2001); Limits set for plants >10,000p.e. for Total Nitrogen and Total Phosphorus in Schedule 2, Part 1 of the UWWT Regulations 2001 (S.I. 254 of 2001) for discharges to sensitive waters listed in Schedule 1 of the

UWWT (Amendment) Regulations 2010 (S.I. 48 of 2010) subject to EPA determination following amended regulation 4(3) of S.I. No 254/2001.

The effluent discharge meets the Urban Wastewater Treatment Regulations 2001(S.I. No. 254/2001 as amended) emission limits for BOD, COD and SS. It is noted that as the plant receives a load of <2000p.e. that these limits will not necessarily apply. The Four Mile River or downstream waterbodies are not sensitive waters listed on Schedule 1 of the Urban Waste Water Treatment (Amendment) Regulations 2010 (S.I. No. 48/2010).

Description of the Receiving Environment and Monitoring Results

The WwTP discharges directly in to the Four Mile River entering Dunmanus Bay. Monitoring data from locations upstream and downstream of the discharge point is given in Table 2.0. The data demonstrates that the water quality upstream of the WwTP is in compliance with Schedule 5 of the European Communities Environmental Objectives (Surface Water) Regulations 2009 (S.I. No. 272 of 2009), however downstream levels of Ammonia on this occasion did not meet the required standard.

Table 2.0: Monitoring Data Upstream and Downstream of WwTP Discharge

Parameter	pH	BOD	Ammonia	Orthophosphate
	pH Units	mg/l	mg/l N	mg/l P
SW EQS	4.5-9	≤2.6 (good) ≤2.2 (high)	≤0.14 (good) ≤0.090 (high)	≤0.075 (good) ≤0.045 (high)
Upstream				
16-Sep-2009	7.9	2	<0.1	<0.05
Downstream				
16-Sep-2009	8.1	7	0.5	<0.05

The EPA monitor the Four Mile River for biological water quality¹. Upstream of the WwTP the river was assigned a Q4 rating in 2015 indicating Good water quality status (Br u/s Durrus RS21F020500). There are no biological water quality monitoring locations downstream of the discharge point. The Four Mile River both upstream and downstream of Durrus WwTP was assigned Good WFD status (2010-2015) and is classed as 'not at risk of not achieving Good status'. While there is no WFD status assigned to the coastal waterbody in Dunmanus Bay, the EPA classify these waters as 'Unpolluted' (2010-2012).

¹ <http://gis.epa.ie/Envision>

Waste Assimilative Capacity

Table 3.0 summaries the assimilative capacity calculations which are based on the 2023 estimated loading of 655p.e., 95%ile river flow and water quality standards in the European Communities Environmental Objectives (Surface Water) Regulations, 2009 (S.I. No. 272 of 2009). Assimilative capacity calculations use both actual background concentrations and the 'notionally clean river' approach. Calculations are presented for BOD only, as there was no effluent data for Ammonia or Orthophosphate.

Table 3.0: Assimilative capacity calculations at estimated 2023 loadings of 655p.e. for actual background concentrations and for a notionally clean river.

Parameter		Background (mg/l)	Predicted downstream quality (mg/l)	EQS* (mg/l)
BOD	Actual Background	2	2.034	≤2.6
	Notionally Clean	0.260	0.316	

*European Communities Environmental Objectives (Surface Waters) Regulations 2009, S.I. No. 272 of 2009 (95%ile standards presented).

Using both the actual background concentrations and the notional clean river concentrations demonstrates that the Four Mile River has available assimilative capacity for BOD.

Brief Description of the Natura 2000 Sites

This section of the screening process describes the Natura 2000 sites within a 15km radius of the WwTP discharge location. A 15km buffer zone has been chosen as a precautionary measure, to ensure that all potentially affected Natura 2000 sites are included in the screening process, which is in line with Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities produced by the Department of the Environment, Heritage and Local Government.

Table 4.0 list the SACs that are within 15km of the WwTP discharge location, and Figure 1.0 shows their location in relation to the Durrus WwTP discharge. The qualifying interests of each of the identified Natura 2000 Sites is also provided. There is one SPA within 15km of the discharge shown in Table 5.0.

Table 4.0: SACs located within 15km of Durrus WwTP discharge

Site Code	Site Name	Qualifying Habitats	Qualify Species
000102	Sheep's Head SAC	Northern Atlantic wet heaths with <i>Erica tetralix</i> [4010] European dry heaths [4030]	<i>Geomalacus maculosus</i> (Kerry Slug) [1024]
002189	Farranamanagh Lough SAC	Coastal lagoons [1150] Perennial vegetation of stony banks [1220]	
002280	Dunbeacon Shingle SAC	Perennial vegetation of stony banks [1220]	
000101	Roaringwater Bay and Islands SAC	Large shallow inlets and bays [1160] Reefs [1170] Vegetated sea cliffs of the Atlantic and Baltic coasts [1230] European dry heaths [4030] Submerged or partially submerged sea caves [8330]	<i>Phocoena phocoena</i> (Harbour Porpoise) [1351] <i>Lutra lutra</i> (Otter) [1355] <i>Halichoerus grypus</i> (Grey Seal) [1364]
002281	Reen Point Shingle SAC	Perennial vegetation of stony banks [1220]	

Table 5.0: SPA's located within 15Km of Durrus WwTP discharge

Site Code	Site Name	Special Conservation Interests
004156	Sheep's Head to Toe Head SPA	Peregrine (<i>Falco peregrinus</i>) [A103] Chough (<i>Pyrrhocorax pyrrhocorax</i>) [A346]

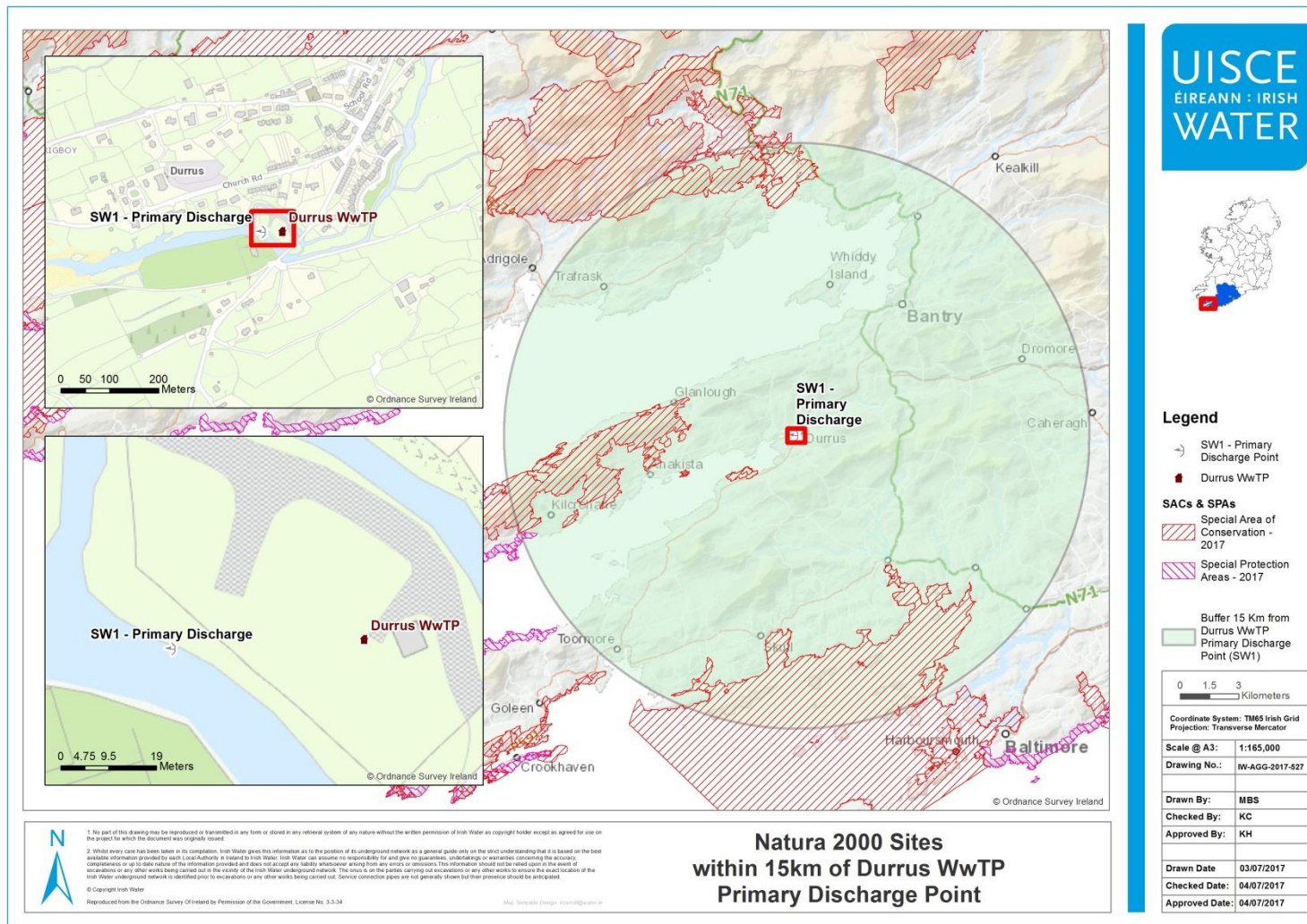


Figure 1.0 Natura 2000 sites

Possible Effects of the Waste Water Discharge in the Natura 2000 Sites

The purpose of this section of the screening is to examine the possibility that the existing waste water discharge, either individually or in combination with other plans and projects, may result in significant negative effects on the Conservation Objectives and the integrity of the Natura 2000 Sites identified.

The most apparent potential risk to a Natura 2000 Site(s) from a WwTP discharge is to the water quality of the receiving environment, and if the receiving environments water quality has the potential to interact with the qualifying interests of the Natura 2000 Sites identified.

Using the source-pathway-receptor model, only the qualifying interests of Dunbeacon Shingle SAC, Reen Point Shingle SAC and Farranamanagh Lough SAC were considered to have potential connectivity to the discharge. Sheeps Head SAC is designated for terrestrial habitats, and therefore there is no potential for any impacts to arise. Roaringwater Bay and Islands SAC is located on the opposite side of Mizen Head and therefore, due to distance and the intervening coastal waters, has no potential to be affected by the discharge. The Sheep's Head to Toe Head SPA is designated for Peregrine and Chough birds which do not forage directly within coastal waters, consequently there is no potential for the discharge to affect this Natura 2000 site.

The Conservation Objectives of these relevant sites were reviewed as part of this Screening Assessment:

- NPWS (2016) Conservation objectives for Dunbeacon Shingle SAC [002280]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
- NPWS (2016) Conservation objectives for Reen Point Shingle SAC [002281]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.
- NPWS (2016) Conservation objectives for Farranamanagh Lough SAC [002189]. Generic Version 5.0. Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs.

The existing discharge is not directly connected with or necessary to the management of any site for nature conservation.

Direct, Indirect or Secondary Impacts

The WwTP discharges to the Four Mile River which flows westwards into Dunmanus Bay. Therefore the potential for water quality impacts on coastal and marine sites with hydrological connectivity to the discharge needs to be considered.

Water quality monitoring data, both for the effluent and receiving watercourse, is limited. While assimilative capacity calculations indicate that there is capacity in the Four Mile River for BOD, ambient data suggests Ammonia levels may increase downstream of the plant. Despite this, water quality in Dunmanus Bay is classed as Unpolluted.

Dunbeacon Shingle SAC, Reen Point Shingle SAC and Farranamanagh Lough SAC are located along the coastline of Dunmanus Bay, ca. 3km, 6km and 12km from Durrus WwTP discharge point respectively. While these are coastal SAC's, with the exception of the lagoon habitat at

Farranamanagh, their qualifying habitats are supratidal and not dependant or influenced by coastal water quality.

The lagoon habitats at Farranamanagh would be periodically inundated with seawater, but given the distance to this site (12km), the dilution available in the intervening coastal waters, and the fact these intervening waters are classified as 'Unpolluted', there is no likelihood of significant impacts to this habitat.

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) the waste water discharged from Durrus WwTP does will not impact on the conservation objectives of any Natura 2000 site. No significant adverse impacts on the Annex I habitats or Annex II species of any of these Natura 2000 sites are anticipated as a result of the waste water discharge from Durrus WwTP.

Possible Cumulative Impacts with other Plans and Projects in the Area

As part of Stage 1 Screening, in addition to the existing waste water discharge, other relevant projects and plans in the relevant region must also be considered. This step aims to identify at this early stage any possible significant effects on the Natura 2000 Sites from the waste water discharge in-combination or cumulative with other plans and projects. Existing plans and projects which have been examined include:

- Cork County Development Plan 2014-2020;
- Cork County Biodiversity Action Plan 2009-2014;
- Draft National Biodiversity Action Plan 2017-2021;
- BantryBaySouth-DunmanusBay Water Management Unit Action Plan 2010.

The above plans have been assessed in accordance with Article 6(3) of the Habitats Directive and Part XAB of the Planning and Development Act, 2000, and are not envisaged to result in significant effects on the integrity of the Natura 2000 network.

Cork County Planning Maps were reviewed in order to identify any developments of significance in the area. Applications are all for small scale developments, typically residential and agricultural, which do not have the potential to significantly impact water quality in Dunmanus Bay in-combination with Durrus WwTP.

There is no potential for the WwTP discharge to contribute to any cumulative impacts on any Natura 2000 site.

Screening Assessment

Table 6.0 provides a summary of the likely significant impact of the current waste water discharge on the conservation objectives of the Natura 2000 sites potentially linked to the Durrus WwTP as identified in Table 4.0 and Table 5.0.

Table 6.0: Potential Significant Impacts on Natura 2000 sites from the Durrus Waste Water Discharge

Site Name	Direct Impacts	Indirect/ Secondary	Resource Requirements (Drinking Water Abstraction Etc.)	Emissions (Disposal to Land, Water or Air)	Excavation Requirements	Transportation Requirements	Duration of Construction, Operation, Decommissioning
Dunbeacon Shingle SAC,	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest
Roaringwater Bay and Islands SAC	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest
Sheep'S Head SAC	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest
Sheep's Head to Toe Head SPA	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest
Farranamanagh Lough SAC	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest
Reen Point Shingle SAC	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest	No impact on qualifying interest

Likely Changes to the Natura 2000 Site(s)

The likely changes that will arise from the Durrus waste water discharge have been examined in the context of a number of factors that could potentially affect the integrity of the identified Natura 2000 Sites. Overall, it has been found that the current waste water discharge will not affect the integrity of the identified Natura 2000 Sites.

Table 7.0: Likely Affect on Natura 2000 Sites

Site Name	Reduction of Habitat Area	Disturbance to Key Species	Habitat or Species Fragmentation	Reduction in Species Density	Changes in Key Indicators of Conservation Value (Water Quality Etc.)	Climate Change
Dunbeacon Shingle SAC	None	None	None	None	None	None
Roaringwater Bay and Islands SAC	None	None	None	None	None	None
Sheep'S Head SAC	None	None	None	None	None	None
Sheep's Head to Toe Head SPA	None	None	None	None	None	None
Farranamanagh Lough SAC	None	None	None	None	None	None
Reen Point Shingle SAC	None	None	None	None	None	None

Elements of the Project where the Impacts are Likely to be Significant

No elements of the current waste water discharge are likely to cause significant impacts on NATURA 2000 Sites.

Screening Conclusions and Statement

The likely impacts that will arise from the current waste water discharge have been examined in the context of a number of factors that could potentially affect the integrity of the Natura 2000 network. None of the sites within 15km of the discharge location will be adversely affected. A finding of No Significant Effects Matrix has been completed and is presented in next section of this Screening Statement.

On the basis of the findings of this Screening for Appropriate Assessment of Natura 2000 Sites, it is concluded that the current waste water discharge from the Durrus WwTP will not have a significant effect on the Natura 2000 network and a Stage 2 Appropriate Assessment is not required.

Finding of No Significant Effects Report Matrix

Name of project or plan	Durrus Waste Water Discharge License
Name and location of Natura 2000 site	Dunbeacon Shingle SAC Roaringwater Bay and Islands SAC Sheep'S Head SAC Farranamanagh Lough SAC Reen Point Shingle SAC Sheep's Head to Toe Head SPA
Description of the project or plan	The Durrus Wastewater Treatment Plant (WwTP) is located in West Cork, six miles from Bantry, Country Cork. The wastewater treatment plant consists of primary, secondary and tertiary treatment. The WwTP discharges directly in to the Four Mile River entering Dunmanus Bay.
Is the project or plan directly connected with or necessary to the management of the site?	No.
Are there other projects or plans that together with the project or plan being assessed could affect the site?	No.
The Assessment of Significance of Effects	
Describe how the project or plan (alone or in combination) is likely to affect the European Site(s).	<p>The WwTP discharges to the Four Mile River which flows westwards into Dunmanus Bay. Therefore the potential for water quality impacts on coastal and marine sites with hydrological connectivity to the discharge needs to be considered.</p> <p>Water quality monitoring data, both for the effluent and receiving watercourse, is limited. While assimilative capacity calculations indicate that there is capacity in the Four Mile River for BOD, ambient data suggests Ammonia levels may increase downstream of the plant. Despite this, water quality in Dunmanus Bay is classed as Unpolluted.</p>
Explain why these effects are not considered significant.	Of the sites identified, Sheeps Head SAC is designated for terrestrial habitats, and therefore there is no potential for any impacts to arise. Roaringwater Bay and Islands SAC is located on the opposite side of Mizen Head and therefore, due to distance and the intervening coastal waters, has no potential to be affected by the discharge. The Sheep's Head to Toe Head SPA is designated for Peregrine and Chough birds which do not forage directly

	<p>within coastal waters, consequently there is no potential for the discharge to affect this Natura 2000 site.</p> <p>Dunbeacon Shingle SAC, Reen Point Shingle SAC and Farranamanagh Lough SAC are located along the coastline of Dunmanus Bay, ca. 3km, 6km and 12km from Durrus WwTP discharge point respectively. While these are coastal SAC's, with the exception of the lagoon habitat at Farranamanagh, their qualifying habitats are supratidal and not dependant or influenced by coastal water quality.</p> <p>The lagoon habitats at Farranamanagh would be periodically inundated with seawater, but given the distance to this site (12km), the dilution available in the intervening coastal waters, and the fact these intervening waters are classified as 'Unpolluted', there is no likelihood of significant impacts to this habitat.</p> <p>In accordance with the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) the waste water discharged from Durrus WwTP does will not impact on the conservation objectives of any Natura 2000 site. No significant adverse impacts on the Annex I habitats or Annex II species of any of these Natura 2000 sites are anticipated as a result of the waste water discharge from Durrus WwTP.</p>
List of agencies consulted: provide contact name and telephone or e-mail address.	N/A
Response to consultation.	N/A
Data Collected to Carry Out the Assessment	
Who carried out the assessment?	Qualified Ecologist, Irish Water
Sources of data	NPWS database; EPA database; WFD Ireland database; and Information from Irish Water.
Level of assessment completed	Desktop study
Where can the full results of the assessment be accessed and viewed?	EPA
Overall Conclusion	Stage 1 Screening indicates that the Durrus WwTP discharge will not have a significant negative impact on the Natura 2000 network. Therefore, a Stage 2 'Appropriate Assessment' under Article 6(3) of the Habitats Directive 92/43/EEC is not required.

F.1(i)(a)

Upstream Ambient Monitoring Data – Regular Emissions

Parameter	Results(mg/l)			Sampling Method(grab, drift etc)	Limit of Quantitation	Analysis Method/Technique
	16/09/2009	Date	Date			
pH	7.9			Grab	2	Electrochemical
Temperature	NT			Grab	0.5	Electrochemical
Electrical Conductivity (@25oC)	9400			Grab	0.5	Electrochemical
Suspended Solids	<2.5			Grab	0.5	Gravimetric
Ammonia (as N)	<0.1			Grab	0.02	Colorimetric
Biochemical Oxygen Demand	2			Grab	0.06	Electrochemical
Chemical Oxygen Demand	65			Grab	8	Digestion & Colorimetric
Dissolved Oxygen	NT			Grab	0.2	Electrochemical
Hardness (as CaCo3)	NT			Grab	1	Titimetric
Total Nitrogen (as N)	0.777			Grab	0.5	Digestion & Colorimetric
Nitrite (as N)	<0.1			Grab	0.1	Colorimetric
Nitrate (as N)	<0.5			Grab	0.5	Colorimetric
Total Phosphorus (as P)	<0.05			Grab	0.2	Digestion & Colorimetric
Orthophosphate (as P) - unfiltered	<0.05			Grab	0.02	Colorimetric
Sulphate (SO4)	455			Grab	30	Turbidimetric
Phenols (sum) Note : (ug/l)	NT			Grab	0.1	GC-MS2

Note: The ambient sampling was undertaken in 2009. There has not been a significant change in the agglomeration since then so the water quality is not expected to have deteriorated

F.1(i)(b)

Downstream Ambient Monitoring Data – Regular Emissions

Parameter	Results(mg/l)				Sampling Method(grab, drift etc)	Limit of Quantitation	Analysis Method/Technique
	16/09/2009	Date	Date	Date			
pH	8.1				Grab	2	Electrochemical
Temperature	NT				Grab	0.5	Electrochemical
Electrical Conductivity (@25oC)	45500				Grab	0.5	Electrochemical
Suspended Solids	4				Grab	0.5	Gravimetric
Ammonia (as N)	0.5				Grab	0.02	Colorimetric
Biochemical Oxygen Demand	7				Grab	0.06	Electrochemical
Chemical Oxygen Demand	63				Grab	8	Digestion & Colorimetric
Dissolved Oxygen	NT				Grab	0.2	Electrochemical
Hardness (as CaCo3)	NT				Grab	1	Titimetric
Total Nitrogen (as N)	0.752				Grab	0.5	Digestion & Colorimetric
Nitrite (as N)	<0.1				Grab	0.1	Colorimetric
Nitrate (as N)	<0.5				Grab	0.5	Colorimetric
Total Phosphorus (as P)	<0.05				Grab	0.2	Digestion & Colorimetric
Orthophosphate (as P) - unfiltered	<0.05				Grab	0.02	Colorimetric
Sulphate (SO4)	0				Grab	30	Turbidimetric
Phenols (sum) Note : (ug/l)	<0.1				Grab	0.1	GC-MS2

Note: The ambient sampling was undertaken in 2009. However it should be noted that there has not been a significant change in the agglomeration since then so the water quality is not expected to have deteriorated.

F.1(ii)(a)

Upstream Ambient Monitoring Data – Dangerous Substances

Parameter	Results(µg/l)				Sampling Method(grab, drift etc)	Limit of Quantitation	Analysis Method/Technique
	16/09/2009	Date	Date	Date			
Atrazine	NT				Grab	0.96	HPLC
Dichloromethane	NT				Grab	1	GC-MS1
Simazine	NT				Grab	0.01	HPLC
Toluene	NT				Grab	0.02	GC-MS1
Tributyltin	NT				Grab	0.02	GC-MS1
Xylenes	NT				Grab	1	GC-MS1
Arsenic	NT				Grab	0.96	ICP-MS
Chromium	60.7				Grab	20	ICP-OES
Copper	<20				Grab	20	ICP-OES
Cyanide	NT				Grab	5	Colorimetric
Fluoride	177				Grab	100	ISE
Lead	<20				Grab	20	ICP-OES
Nickel	<20				Grab	20	ICP-OES
Zinc	<20				Grab	20	ICP-OES
Boron	617.2				Grab	20	ICP-OES
Cadmium	<20				Grab	20	ICP-OES
Mercury	NT				Grab	0.2	ICP-MS
Selenium	NT				Grab	0.74	ICP-MS
Barium	<20				Grab	20	ICP-OES

Note: The ambient sampling was undertaken in 2009. However it should be noted that there has not been a significant change in the agglomeration since then so the water quality is not expected to have deteriorated. The agglomeration consist largely of domestic properties, so the influent discharged to the WWTP is not expected to have a significant industrial influence.

F.1(ii)(b)

Downstream Ambient Monitoring Data – Dangerous Substances

Parameter	Results(µg/l)			Sampling Method(grab, drift etc)	Limit of Quantitation	Analysis Method/Technique
	16/09/2009	Date	Date			
Atrazine	<0.01			Grab	0.96	HPLC
Dichloromethane	<1			Grab	1	GC-MS1
Simazine	<0.01			Grab	0.01	HPLC
Toluene	<0.28			Grab	0.02	GC-MS1
Tributyltin				Grab	0.02	GC-MS1
Xylenes	<1			Grab	1	GC-MS1
Arsenic	3.2			Grab	0.96	ICP-MS
Chromium	127.6			Grab	20	ICP-OES
Copper	<20			Grab	20	ICP-OES
Cyanide	<5			Grab	5	Colorimetric
Fluoride	728			Grab	100	ISE
Lead	<20			Grab	20	ICP-OES
Nickel	<20			Grab	20	ICP-OES
Zinc	<20			Grab	20	ICP-OES
Boron	3201			Grab	20	ICP-OES
Cadmium	<20			Grab	20	ICP-OES
Mercury	0.2			Grab	0.2	ICP-MS
Selenium	<0.74			Grab	0.74	ICP-MS
Barium	<20			Grab	20	ICP-OES

Note: The ambient sampling was undertaken in 2009. However it should be noted that there has not been a significant change in the agglomeration since then so the water quality is not expected to have deteriorated. The agglomeration consist largely of domestic properties, so the influent discharged to the WWTP is not expected to have a significant industrial influence.

SECTION G – PROGRAMME OF IMPROVEMENTS

- **This section not applicable**