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REVISED SECTION A
NON TECHNICAL SUMMARY

SECTION A: NON-TECHNICAL SUMMARY

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

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the discharge of waste water associated with the waste water works. This description should also indicate the hours during which the waste water works is supervised or manned and days per week of this supervision.

The following information must be included in the non-technical summary:

A description of:

- the waste water works and the activities carried out therein,
- the sources of emissions from the waste water works,
- the nature and quantities of foreseeable emissions from the waste water works into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment,
- the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the waste water works,
- further measures planned to comply with the general principle of the basic obligations of the operator, i.e., that no significant pollution is caused;
- measures planned to monitor emissions into the environment.

Supporting information should form **Attachment Nº A.1**

A Description of the Waste Water Works and the Activities Carried Out Therein

The wastewater in Midleton is collected in a partially combined foul and surface water drainage network. Within the sewer network there are 4 No. existing sewage pumping stations (Dungourney Road PS, Rock PS, Bailick 3 PS & Ballinacurra No. 2 Untreated Effluent PS) and two terminal pumping stations (Bailick No. 1 & No 2 PS's) and one final effluent pumping station (Ballinacurra No. 1 Treated Effluent PS). The Midleton WWTP is designed for a Population Equivalent (PE) of 10,000PE and BOD loading of 600Kg/day. Approval has been granted for an upgrade to 15,000PE.

The influent sewage arriving at the plant is a cumulated pumped flow from Bailick No.1 Pumping Station and Bailick No.2 Pumping Station. The maximum hydraulic capacity of the Midleton WWTP is 90l/s, which is 3 Dry Weather Flow (3DWF). In order that this capacity is not exceeded the maximum discharge capacity of Bailick No.1 Pump Station is 75 l/s and Bailick No.2 Pump Station is 15l/s.

In order to cope with flows above 3DWF storm storage has been provided at both Terminal Pumping Stations. The volume of storm storage at Bailick No. 1 Pumping Station is approximately 1750m^3 and at Bailick No. 2 Pumping Station is approximately 350m^3. Flows in excess of the storage volume are screened to 5mm and then discharge into the adjacent water course.

Bailick No. 1 Pumping Station also receives treated industrial effluent from Irish Distillers Group Ltd. These flows are pumped directly to Ballinacurra No. 1 Treated Effluent Pumping Station.

The influent flow to the Midleton WWTP ranges from between 2 DWF (Dry Weather Flow) and 3DWF even during dry weather periods. Typical influent flow to the plant is 60 -100% of the design flow. The reasons for this are assumed to be significant infiltration/illegal surface water connections within the Midleton catchment. Currently Cork County Council is undertaking an infiltration project to replace and repair old sections of the sewer network within the Midleton catchment and also to construct a new Pumping Station at Dwyer's Road which will divert some of the flows from Bailick No. 1 Pumping Station.

The treatment plant treats all flows that arrive at the works (3DWF) to tertiary treatment standards (UV disinfection).

The main Waste Water Treatment Plant process stages consist of: -

- Inlet works – 2 No. screens, 2 No. macerator pumps and liquid separator, aerated grit and grease removal system, flow measurement and grit classifier with 3 No. grit suction pumps, gas detection system, 2 No. air blowers and skip.

- The screened influent passes directly to the aeration tanks – there is no primary settlement stage. The aeration system comprises 2 separate lanes, with 4 aeration chambers per lane, each chamber having a volume of 406m^3 and a liquid depth 4.5m. The first chamber acts as an anoxic zone, and there is internal sludge recirculation from chamber 4 back to the anoxic zone. Each chamber is equipped with fine bubble membrane disc aeration under dissolved oxygen control. A central mixer in each cell ensures adequate mixing during those periods when the air supply to the diffusers is switched off, due to high Dissolved Oxygen. Aeration equipment comprises of 3 No. blowers, 8 No. mixers, 8 No. DO probes, 2 No. flow meters and 1 No. sampler.

- Final Settlement – There are 2 No. 18.5m diameter final settlement tanks with half bridge scrapers. Surplus Activated Sludge (SAS) is withdrawn between the aeration tank and final settlement tank for each process stream. The SAS is pumped to 1 No. 5.4m diameter picket fence thickener for thickening from 0.5% to 3% Dry Solids. Return Activated Sludge (RAS) is withdrawn from the bottom of each final settlement tank and is pumped back into the inlet of the aeration tank via the RAS Pumping Station.

- UV Disinfection – The final effluent overspills the 2 No. final settlement tanks and combines to the UV disinfection chamber, which comprises 2 No. banks of Ultra-Violet lamps acting in duty/assist mode, and includes flow measurement and final effluent sampler unit.

The sludge treatment process consists of: -

- Raw Sludge Holding Tank – 1 No. mixer and air extraction unit, and raw sludge pump sump equipment with 2 No. Pumps. The plant is currently not receiving any imported sludges from any other Waste Water Treatment Plants.

- Sludge Return Chamber – 2 No. Return Activated Sludge (RAS) pumps, 1 No. sludge drain pump, 1 No. chamber drain pump, 1 No. scum pump, and 2 No. RAS flow meters

- Surplus Activated Sludge Chamber – 2 No. Surplus Activated Sludge (SAS) pumps, 2 No. SAS flow meters.

- Sludge Holding Tank with Picket Fence Thickener – 1 No. sludge blanket detector and air extraction unit.

- Dewatering Room – 2 No. sludge transfer pumps, 1 No. flow meter, 1 No. centrifuge including 2 No. poly dosing and transfer pumps, 1 No. Seepex cake pump and skip.

Ancillary equipment at the WWTP also includes the following:

- Odour Control – 2 No. extractor fans, air flow meter and woodchip scrubber.

- Standby Generator and SCADA system covering all the plant including sludge treatment process.

- Buildings – Inlet and sludge building, electricity transformer building, laboratory and control room building with fire alarm and security alarm systems.

- Telemetry System – WWTP, Bailick No. 1 & No. 2, Ballinacurra No. 1 Treated Effluent Pumping Stations.

- Private access road to WWTP.

Treated Effluent (TE) is then discharged from the WWTP by gravity to a pumping station at Ballinacurra No. 1 Treated Effluent Pumping Station which lifts the treated effluent into the tidal holding tank at Rathcoursey.

The holding tank has a penstock that discharges the treated effluent into Cork Harbour via an outfall pipe at appropriate times during the lunar cycle of the tide. A schematic of the Midleton network catchment is included in **Section C – Infrastructure and Operation**.

The Midleton WWTP is currently operated by a private operator under a 10 year Operation and Maintenance Contract (Commenced September 2006). The plant is manned during the working week 8.00am – 5.30pm (Monday – Friday) by a plant manager and 2 No. operators. During out of hours the SCADA system will send alarms to a mobile phone of the person on standby.

There is provision made in the site general arrangement for the extension of the WWTP to accommodate a future total population of 15,000 P.E by the addition of a further aeration lane and 1 No. final settlement tank. Currently Cork County Council is advertising for Consulting Engineer's to undertake the Design and procurement of the upgrade to 15,000PE.

The Sources of Emissions from the Waste Water Works

The pollution load for the Midleton agglomeration arises from the following areas:

- The local Population
- Irish Distillers Group Ltd
- Dawn Meats Ltd

The pollution load from these sources varies greatly with daily, weekly and seasonal producers of effluent. Irish Distillers and Dawn Meats have their own treatment plants. Irish Distillers Group discharge into a sump at Bailick No. 1 Pumping Station, from here it is pumped into the gravity treated effluent sewer which goes to Ballinacurra No. 1 Treated Effluent Pumping Station. Here the treated industrial and domestic effluents are pumped to Rathcoursey tidal holding tank and discharged into the Owenacurra River/Estuary. Dawn Meats discharge their treated effluent directly into the Owenacurra River. The sewage from other industries is collected via public sewer and treated in conjunction with domestic waste at the waste water treatment plant.

The domestic population of Midleton has grown over the last three censuses owing to its development as a town within the Cork Metropolitan area. The most recent Census figures show that Midleton Town and environs now has a population in excess of 10,000. (Census, 2006). Other sources of influent that contribute to the sewage scheme would be:

- Commercial premises
- Schools
- Tourism

The treatment plant was designed to be built in two stages. Stage 1 was designed for a population equivalent of 10,000 with Stage 2 increasing the capacity of the WWTP to 15,000PE. This upgrade will accommodate the development area available within Midleton and the possible population which could occupy the designated development area.

The nature and quantities of foreseeable emissions from the waste water works into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment

Prior to the construction of the waste water treatment plant, the sewage from Midleton received only primary treatment in the form of comminution at Ballinacurra pumping station after which it was discharged to the estuary at Rathcoursey Point. As a condition on the granting of the first foreshore license in 1986, a holding tank was constructed at Rathcoursey so that discharge would not occur for one hour at low tide. The second licence was granted in 1999 a copy of which can be found in Section B, Attachment No. B.12.

Sampling was carried out due to the granting of the foreshore license to monitor the receiving waters with particular reference to faecal coliform counts. This was conducted due to the existence of extensive oyster farming in the North Channel. Analysis of this data with particular reference to the Bathing Water Directive and the Shellsan Classification System indicated the installation of a secondary treatment plant for the sewage of Midleton would greatly improve the quality of the effluent from the Rathcoursey Outfall and greatly diminish any contribution from that source to the levels of contamination in the receiving waters as a whole.

Following assessments of the environmental condition of the receiving water by analysis of samples from the North Channel, from assimilation and dispersion characteristics of the receiving water, it was reported that the proposed upgrading of the quality of effluent released was likely to have a beneficial effect on the marine life of the East Passage and the North Channel. The most likely predicted effect was a change in the character of sediments and the species composition of benthic communities close to the outfall, as well as an increase in species diversity.

The wastes treated at the Midleton plant may be broken down into two groupings:

- Sources of faecal coliforms and possible pathogens (human sources).
- Other sources.

The production process at Irish distillers does not give rise to faecal coliforms however its production facility does use water abstracted from the Dungourney River and from underground caverns for cooling purposes which may contain faecal coliforms. This water is then discharged into the council's sewer where it eventually discharged at Rathcoursey.

Environmental Impacts

The Owenacurra Estuary and the North Channel have been designated Sensitive Areas in tidal waters according to the EPA's report on Water Quality in Ireland 2001-2003. The same report highlighted the disimprovement in quality in the Owenacurra Estuary from the period 1995-1999 to the last survey period 1999 - 2003. It has been confirmed that this estuary is eutrophic due to the high levels of Nitrogen in the Owenacurra River. Agricultural practices have been identified as one of the main contributors of pollutants to both the Owenacurra and its Dungourney tributary by the Phosphorus Regulations Implementation Report produced by Cork County Council's Environmental Department in 2004

The waters of the North Channel, East Passage and Owenacurra Estuary are not recognised bathing waters.

Similarly, although the Dungourney and Owenacurra Rivers are not designated salmonid rivers in accordance with the First Schedule of SI293, 1008, Natura Environment Consultants, in their report on the existing environment, refer to runs of sea trout, grilse, and salmon and these should be protected as much as possible.

The main marine life activity in the area is the harvesting of oysters in the North Channel.

The most significant environmental impact to the receiving waters associated with the discharge of wastewater from this plant is potentially that of bacteria counts.

It is necessary to consider a number of standards both European and Irish which relate to the quality of the water into which the sewage for Midleton is discharged.
These standards are – Urban Wastewater Treatment Directive Standards

- Shellfish Standards
- Habitats Directive

The Proposed Technology and Other Techniques for Preventing or, Where This Is Not Possible, Reducing Emissions from the Waste Water Works

Technologies

The WWTP at Midleton and Bailick No. 1 & 2 and Ballinacurra No. 1 Treated Effluent Pumping stations are equipped with duty standby pumps and standby diesel generators or generator sockets in control panels to enable operation of the pumps during mains electric power failure thereby preventing untreated emissions from entering the receiving aqueous environment.

Techniques

A Performance Management System (PMS) is in place at the Midleton Wastewater Treatment Plant. This Performance Management System was developed by the Water Services National Training Group (WSNTG). The PMS provides a uniform approach to dealing with all relevant performance management issues, including Independent Compliance Audits, Management of Change, Dispute Resolution, Public Relations, Emergency Procedures and Reporting Procedures.

The current operator is contractually obliged to perform the Operation of the WWTP in accordance with the Performance Management System and to maintain the design performance capability of the existing treatment plant.

Further measures planned to comply with the general principle of the basic obligations of the operator, i.e., that no significant pollution is caused

These measures apply at the treatment plant operated by the operator (EPS) and not to the network or pump stations.

As part of the operator's contract, failure to meet specified final effluent quality standards results in financial penalties due to non-compliance. The penalties vary depending on the severity of the pollution caused.

Prevention of pollution

Any alteration / upgrading of the existing infrastructure undertaken by the operator must not increase the potential to cause pollution in the environment. In particular any alterations to the wastewater treatment plant will be designed to enable any operator of the facility to prevent pollution of the environment by the following potential contaminants:

- Surface water run-off
- Spillages
- Solid Waste

Toxic Substances

The current operator is to ensure that any modification or alterations to the plant do not increase the impact by any toxic substances. All chemicals and dangerous substances must be stored safely at all times and all appropriate safety measures must be taken to ensure against leakage and spillage in accordance with the relevant Health and Safety Legislation.

Measures planned to monitor emissions into the environment

The current operator has developed, using the PMS as a template, procedures and processes for sampling and analysis of the incoming raw sewage and outgoing effluent, so that analytical results are reliable, repeatable, consistent and accurate.

Sampling procedures are in accordance with EU and Irish Regulations, and in particular in accordance with the Environmental Protection Agency's (EPA) monitoring and operating requirements. All laboratory analyses are performed in accordance with the latest edition of the Standard Methods for the Examination of Water and Wastewater, published by the American Public Health Association, and the Water Pollution Control Federation or other methods of comparable accuracy.

Regular independent laboratory analysis is also undertaken to externally monitor the operator's performance. Flow proportional or time based 24 hour samples are collected at the same well defined point at the inlet and outlet of the treatment works in order to monitor compliance with the requirements. A refrigerated sampler minimizes degradation between collection and analysis. Certain heavy metal analyses are also required on an annual basis as identified in 'Code of Good Practice for Use of Biosolids in agriculture'.

The operator is responsible for developing and implementing procedures to remedy defects in his laboratory procedures where the independent checking shows variations of more than ±10%.

The sampling of the statutory samples is in accordance with the following procedures: -

- All samples are representative of the appropriate stream.
- Composite samples are collected weekly and these are fixed, stored and handled as per standard methods. Analysis of the samples (both operator's and Employer's) are undertaken within 24 hours and reported to the Employer's Representative within 48 hours of the results being made available. Reports on the operation and maintenance of the plant are generated on a monthly basis

The monitoring and recording of the status of all parameters appropriate to proper control and operation of the plant is carried out and documented at all stages.

ATTACHMENT No A.1
SUPPORTING INFORMATION – Not Applicable

REVISED SECTION B
GENERAL

SECTION B: GENERAL

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

B.1 Applicant's Details*

Name and Address for Correspondence

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

Provide a drawing detailing the agglomeration to which the licence application relates. It should have the boundary of the agglomeration to which the licence application relates clearly marked in red ink.

Name:**	Cork County Council
Address:	Area Operations South
	Floor 5
	County Hall
	Cork
Tel:	021-4276891
Fax:	021-4276321
e-mail:	Patricia.power@corkcoco.ie

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

**Where an application is being submitted on behalf of more than one water services authority the details provided in Section B.1 shall be that of the lead water services authority.

Name*:	J. B. Barry & Partners Consulting Engineers
Address:	3A Eastgate Road
	Eastgate
	Little Island
	Co. Cork
Tel:	021-4524418
Fax:	021-4524419
e-mail:	rkent@jbbarry.ie

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

Co-Applicant's Details

Name*:	
Address:	
Tel:	
Fax:	
e-mail:	

*This should be the name of a water services authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge (authorisation) licence application.

Design, Build & Operate Contractor Details

Name*:	EPS Limited
Address:	Quartertown Industrial Estate
	Mallow
	Co Cork
Tel:	022 31200
Fax:	022 31250
e-mail:	info@epsireland.com

*Where a design, build & operate contract is in place for the waste water works, or any part thereof, the details of the contractor should be provided.

Attachment B.1 should contain appropriately scaled drawings / maps (≤A3) of the agglomeration served by the waste water works showing the boundary clearly marked in red ink. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.2, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.2 Location of Associated Waste Water Treatment Plant(s)

Give the location of the waste water treatment plant associated with the waste water works, if such a plant or plants exists.

Name*:	Gerald Buckley, EPS Limited
Address:	Midleton WWTP
	Ballyannan, Garryduff,
	Midleton
	Co. Cork
Grid ref (6E, 6N)	E:187505 N:72801
Level of Treatment	Tertiary (U.V Disinfection)
Primary Telephone:	021 4634636
Fax:	021 4634640
e-mail:	gbuckley@epsireland.com

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

Attachment B.2 should contain appropriately scaled drawings / maps (≤A3) of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon

agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.1, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.3 Location of Primary Discharge Point

Give the location of the primary discharge point, as defined in the Waste Water Discharge (Authorisation) Regulation, associated with the waste water works.

Type of Discharge	Diffuser operated on a tidal clock
Unique Point Code	SW01 MIDL
Location	Rathcoursey, Midleton
Grid ref (6E, 6N)	E: 186177 N: 069506

Attachment B.3 should contain appropriately scaled drawings / maps (≤A3) of the discharge point, including labelled monitoring and sampling points associated with the discharge point. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing the drawings and tabular data requested in sections B.1, B.2, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.4 Location of Secondary Discharge Point(s)

Give the location of **all** secondary discharge point(s) associated with the waste water works. Please refer to Guidance Note for information on Secondary discharge points.

Type of Discharge	Emergency Overflow.
Unique Point Code	SW02 MIDL
Location	Ballinacurra No. 1 Pumping Station
Grid ref (6E, 6N)	E: 188366 N: 071791

Type of Discharge	Emergency Overflow.
Unique Point Code	SW03 MIDL
Location	Bailick No. 1 Storm Tank
Grid ref (6E, 6N)	E: 187973 N: 073127

Type of Discharge	Emergency Overflow.
Unique Point Code	SW04 MIDL
Location	Bailick No. 2 Storm Tank
Grid ref (6E, 6N)	E: 188045 N: 072514

Type of Discharge	Emergency Overflow.
Unique Point Code	SW05 MIDL
Location	Ballinacurra No. 2 Storm Tank
Grid ref (6E, 6N)	E: 188520 N: 071783

Type of Discharge	Emergency Overflow.
Unique Point Code	SW06 MIDL
Location	Bailick No. 3 Pump Station
Grid ref (6E, 6N)	E: 188268 N: 072058

Attachment B.4 should contain appropriately scaled drawings / maps (≤A3) of the discharge point(s), including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.5, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.5 Location of Storm Water Overflow Point(s)

Give the location of **all** storm water overflow point(s) associated with the waste water works.

Type of Discharge	Storm Overflow
Unique Point Code	SW03 MIDL
Location	Bailick No. 1 Storm Tank
Grid ref (6E, 6N)	E: 187973 N: 073127

Type of Discharge	Storm Overflow
Unique Point Code	SW04 MIDL
Location	Bailick No. 2 Storm Tank
Grid ref (6E, 6N)	E: 188045 N: 072514

Type of Discharge	Storm Overflow
Unique Point Code	SW05 MIDL
Location	Ballinacurra No. 2 Storm Tank
Grid ref (6E, 6N)	E: 188520 N: 071783

Attachment B.5 should contain appropriately scaled drawings / maps (≤A3) of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
	✓	

B.6 Planning Authority

Give the name of the planning authority, or authorities, in whose functional area the discharge or discharges take place or are proposed to take place.

Name:	Cork County Council
Address:	Area Operations South
	Floor 5
	County Hall
	Cork
Tel:	021-4276891
Fax:	021-4867007
e-mail:	planninginfo@corkcoco.ie

Planning Permission relating to the waste water works which is the subject of this application:- (tick as appropriate)

has been obtained	✓	***is being processed***	
is not yet applied for		***is not required***	

Local Authority Planning File Reference Nº:	N/A*

*Planning Permission was obtained under the 1994 Planning and Developments Regulations under a Part 10.

Attachment B.6 should contain ***the most recent*** planning permission, including a copy of ***all*** conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS, should also be enclosed. Where planning permission is not required for the development, provide reasons, relevant correspondence, *etc.*

Attachment included	**Yes**	**No**
	✓ **(EIS Only)**	

B.7 Other Authorities

B.7 (i) Shannon Free Airport Development Company (SFADCo.) area

The applicant should tick the appropriate box below to identify whether the discharge or discharges are located within the Shannon Free Airport Development Company (SFADCo.) area.

Attachment B.7(i) should contain details of any or all discharges located within the SFADCo. area.

Within the SFADCo Area	**Yes**	**No**
		✓

B.7 (ii) Health Services Executive Region

The applicant should indicate the **Health Services Executive Region** where the discharge or discharges are or will be located.

Name:	Health Service Executive
Address:	South Lee Local Health Office
	Abbeycourt House
	Georges Quay
Tel:	Cork
Fax:	021-4965511
e-mail:	grettam.crowley@mailp.hse.ie

B.7 (iii) Other Relevant Local Authorities

Regulation 13 of the Waste Water Discharge (Authorisation) Regulations, 2007 requires all applicants, not being the local authority in whose functional area the relevant waste water discharge or discharges, to which the relevant application relates, takes place or is to take place, to notify the relevant local authority of the said application.

Name:	NA
Address:	
Tel:	
Fax:	
e-mail:	

Relevant Authority Notified	**Yes**	**No**
	NA	**NA**

Attachment B.7(iii) should contain a copy of the notice issued to the relevant local authority.

Attachment included	**Yes**	**No**
	NA	**NA**

B.8 Notices and Advertisements

Regulations 10 and 11 of the Waste Water Discharge (Authorisation) Regulations, 2007 require all applicants to advertise the application in a newspaper and by way of a site notice. See *Guidance Note.*

Attachment B.8 should contain a copy of the site notice and an appropriately scaled drawing (≤A3) showing its location. **The original application must include the original page of the newspaper in which the advertisement was placed**. The relevant page of the newspaper containing the advertisement should be included with the original and two copies of the application.

Attachment included	Yes	No
	✓	

B.9 (i) Population Equivalent of Agglomeration

TABLE B.9.1 POPULATION EQUIVALENT OF AGGLOMERATION

The population equivalent (p.e.) of the agglomeration to be, or being, served by the waste water works should be provided and the period in which the population equivalent data was compiled should be indicated.

Population Equivalent	**17,100**
Data Compiled (Year)	**1993/2007**
Method	**Pollution Assessment Load**

B.9 (ii) FEES

State the relevant Class of waste water discharge as per Column 1 of the Second Schedule, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

Class of waste water discharge	Fee (in €)
Discharges from agglomerations with a population equivalent of more than 10,000	€30,000

Appropriate Fee Included	Yes	No
	✓	

B.10 Capital Investment Programme

State whether a programme of works has been prioritised for the development of infrastructure to appropriately collect, convey, treat and discharge waste water from the relevant agglomeration. If a programme of works has been prioritised provide details on funding, (local or national), allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

Attachment B.10 should contain the most recent development programme, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

B.11 Significant Correspondence

Provide a summary of any correspondence resulting from a Section 63 notice issued by the Agency in relation to the waste water works under the Environmental Protection Agency Acts, 1992 and 2003, as amended by Section 13 of Protection of the Environment Act, 2003.

Attachment B.11 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	**Yes**	**No**
	✓	

B.12 Foreshore Act Licences.

Provide a copy of the most recent Foreshore Act licence issued in relation to discharges from the waste water works issued under the Foreshore Act 1933.

Attachment B.12 should contain the most recent licence issued under the Foreshore Act 1933, including a copy of ***all*** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable.

Attachment included	**Yes**	**No**
	✓	

REVISED SECTION C INFRASTRUCTURE & OPERATION

SECTION C: INFRASTRUCTURE & OPERATION

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

C.1 Operational Information Requirements

Provide a description of the plant, process and design capacity for the areas of the waste water works where discharges occur, to include a copy of such plans, drawings or maps, (site plans and location maps, process flow diagrams), and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the area of the waste water works discharging to the aquatic environment. Maps and drawings must be no larger than A3 size.

Attachment C.1 should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Attachment included	Yes	No
	✓	

C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

Attachment C.2 should contain any supporting documentation on the design and construction of any and all discharge outfalls, including stormwater overflows, from the waste water works.

Attachment included	Yes	No
	✓	

C.1 Operational Information Requirements

Provide a description of the process

The existing Midleton WWTP is designed for a Population Equivalent (PE) of 10,000PE and BOD loading of 600Kg/day. An upgrade to 15,000PE has been approved and will be undertaken in the near future.

The influent sewage arriving at the plant is a cumulated pumped flow from Bailick No.1 Pumping Station and Bailick No.2 Pumping Station.

The maximum hydraulic capacity of the Midleton WWTP is 90l/s which is 3 Dry Weather Flow (3DWF). In order that this capacity is not exceeded the maximum discharge capacity of Bailick No.1 Pump Station is 75 l/s and Bailick No.2 Pump Station is 15l/s. In order to cope with flows above 3DWF storm storage has been provided at both Terminal Pumping Stations.

The volume of storm storage at Bailick No. 1 Pumping Station is approximately 1750m^3 and at Bailick No. 2 Pumping Station is approximately 350m^3. Flows in excess of the storage volume are screened to 5mm and then discharge into the adjacent water course. The main Waste Water Treatment Plant process stages consist of: -

- Inlet works – 2 No. screens, 2 No. macerator pumps and liquid separator, aerated grit and grease removal system, flow measurement and grit classifier with 3 No. grit suction pumps, gas detection system, 2 No. air blowers and skip.

- The screened influent passes directly to the aeration tanks – there is no primary settlement stage. The aeration system comprises 2 separate lanes, with 4 aeration chambers per lane, each chamber having a volume of 406m^3 and a liquid depth 4.5m. The first chamber acts as an anoxic zone, and there is internal sludge recirculation from chamber 4 back to the anoxic zone. Each chamber is equipped with fine bubble membrane disc aeration under dissolved oxygen control. A central mixer in each cell ensures adequate mixing during those periods when the air supply to the diffusers is switched off, due to high Dissolved Oxygen. Aeration equipment comprises of 3 No.

blowers, 8 No. mixers, 8 No. DO probes, 2 No. flow meters and 1 No. sampler.

- Final Settlement – There are 2 No. 18.5m diameter final settlement tanks with half bridge scrapers. Surplus Activated Sludge (SAS) is withdrawn between the aeration tank and final settlement tank for each process stream. The SAS is pumped to 1 No. 5.4m diameter picket fence thickener for thickening from 0.5% to 3% Dry Solids. Return Activated Sludge (RAS) is withdrawn from the bottom of each final settlement tank and is pumped back into the inlet of the aeration tank via the RAS Pumping Station.

- UV Disinfection – The final effluent overspills the 2 No. final settlement tanks and combines to the UV disinfection chamber, which comprises 2 No. banks of Ultra-Violet lamps acting in duty/assist mode, and includes flow measurement and final effluent sampler unit.

- The final effluent then discharges via 1 No. 400mm gravity main (that discharges into the 750mm Irish Distillers Treated Effluent gravity main adjacent to Bailick No. 2 PS which then gravitates to Ballinacurra No. 1 Treated Effluent PS which pumps the flows into Rathcoursey tidal holding tank which is capable of holding 2,120m^3 at low tide then discharges into the Ballynacorra River/Estuary.

The sludge treatment process consists of: -

- Raw Sludge Holding Tank – 1 No. mixer and air extraction unit, and raw sludge pump sump equipment with 2 No. Pumps. The plant is currently not receiving any imported sludges from any other Waste Water Treatment Plants.

- Sludge Return Chamber – 2 No. Return Activated Sludge (RAS) pumps, 1 No. sludge drain pump, 1 No. chamber drain pump, 1 No. scum pump, and 2 No. RAS flow meters

- Surplus Activated Sludge Chambers – 2 No. Surplus Activated Sludge (SAS) pumps, 2 No. SAS flow meters.

- Sludge Holding Tank with Picket Fence Thickener – 1 No. sludge blanket detector and air extraction unit.

- Dewatering Room – 2 No. sludge transfer pumps, 1 No. flow meter, 1 No. centrifuge including 2 No. poly dosing and transfer pumps, 1 No. Seepex cake pump and skip.

Ancillary equipment at the WWTP also includes the following:

- Odour Control – 2 No extractor fans, air flow meter and woodchip scrubber.

- Standby Generator and SCADA system covering all the plant including sludge treatment process.

- Buildings – Inlet and sludge building, electricity transformer building, laboratory and control room building with fire alarm and security alarm systems.

- Telemetry System – WWTP, Ballick No. 1 & No. 2, Ballinacurra No. 1 Treated Effluent Pumping Stations.

- Private access road to WWTP.

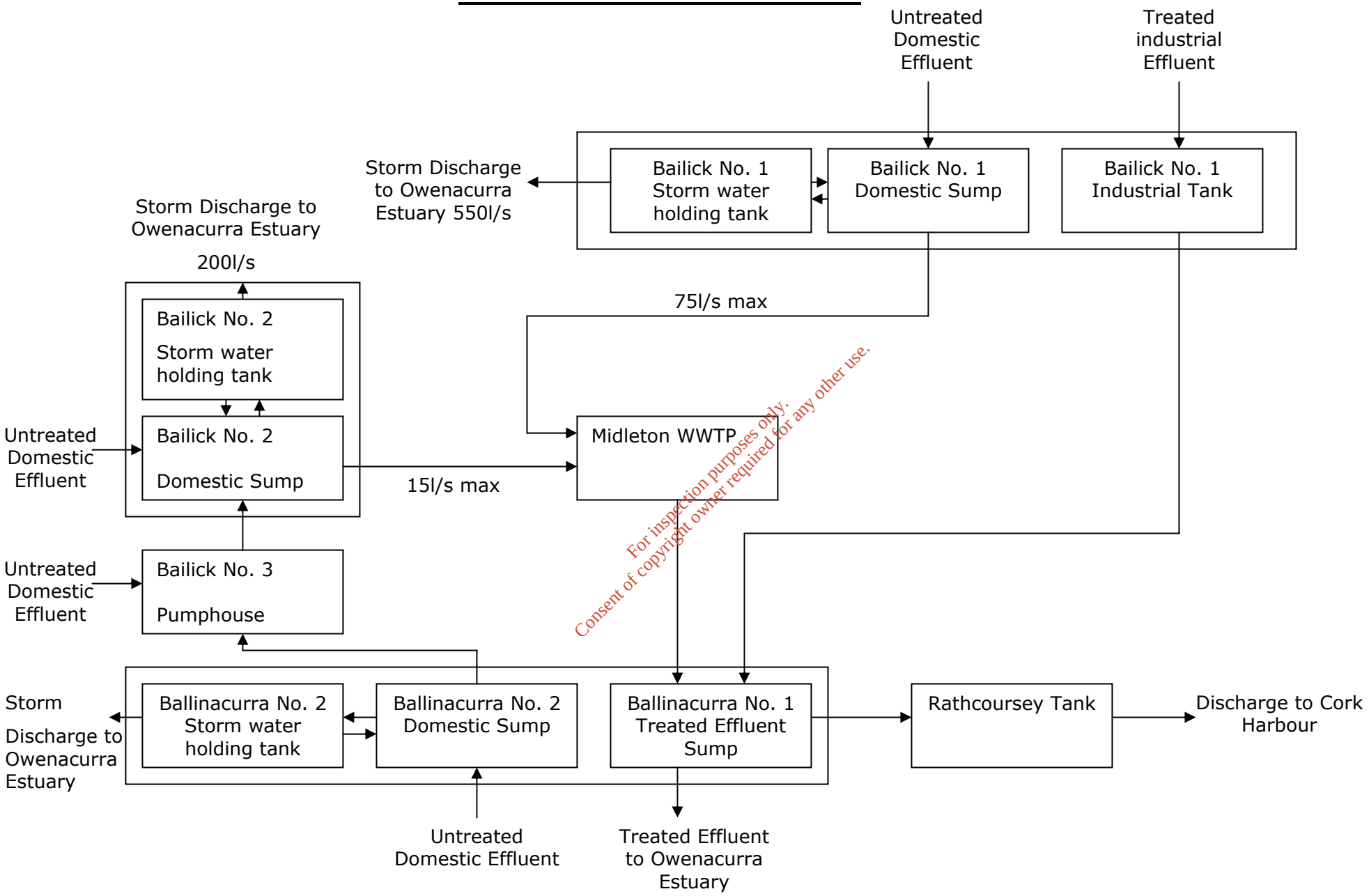
The Midleton WWTP is currently operated by a private operator under a 10 year Operation and Maintenance Contract (Commenced September 2006). The plant is manned during the working week 8.00am – 5.30pm (Monday – Friday) by a plant manager and 2 No. operators. During out of hours the SCADA system will send alarms to a mobile phone of the person on standby.

There is provision made in the site general arrangement for the extension of the WWTP to accommodate a future total population of 15,000 P.E by the addition of a further aeration lane and 1 No. final settlement tank.

As mentioned above Irish Distillers discharges its treated waste to the council sewers at Baby's Walk for eventual discharge to the Ballynacorra Estuary at Rathcoursey

Point. The waste from Irish Distillers does not go through the WWTP but makes its way to the discharge point via the Bailick 1 and Ballinacurra pumping stations. Treated effluent from Midleton is gravity fed to Ballinacurra, it combines on route with the distillery waste and both are pumped from Ballinacurra to Rathcoursey.

Midleton Schematic of Network



Provide a description of the plant

Picket Fence Thickener

Volume: 91m^3
Internal Dimensions: 5.4mϕ x 4m (d)

Raw Sludge Holding Tank

Volume: 60m^3
Internal Dimensions: 5.4mϕ x 2.625m (d)

Aeration Chambers:

No. of: 8
Volume of Each: 406m^3
Liquid Depth: 4.5m
Internal Dimensions: 9.5m (l) x 9.5mn (d)

Clarifiers

No. of: 2
Sidewall Height: 2.0m
Internal Diameter: 18.5m

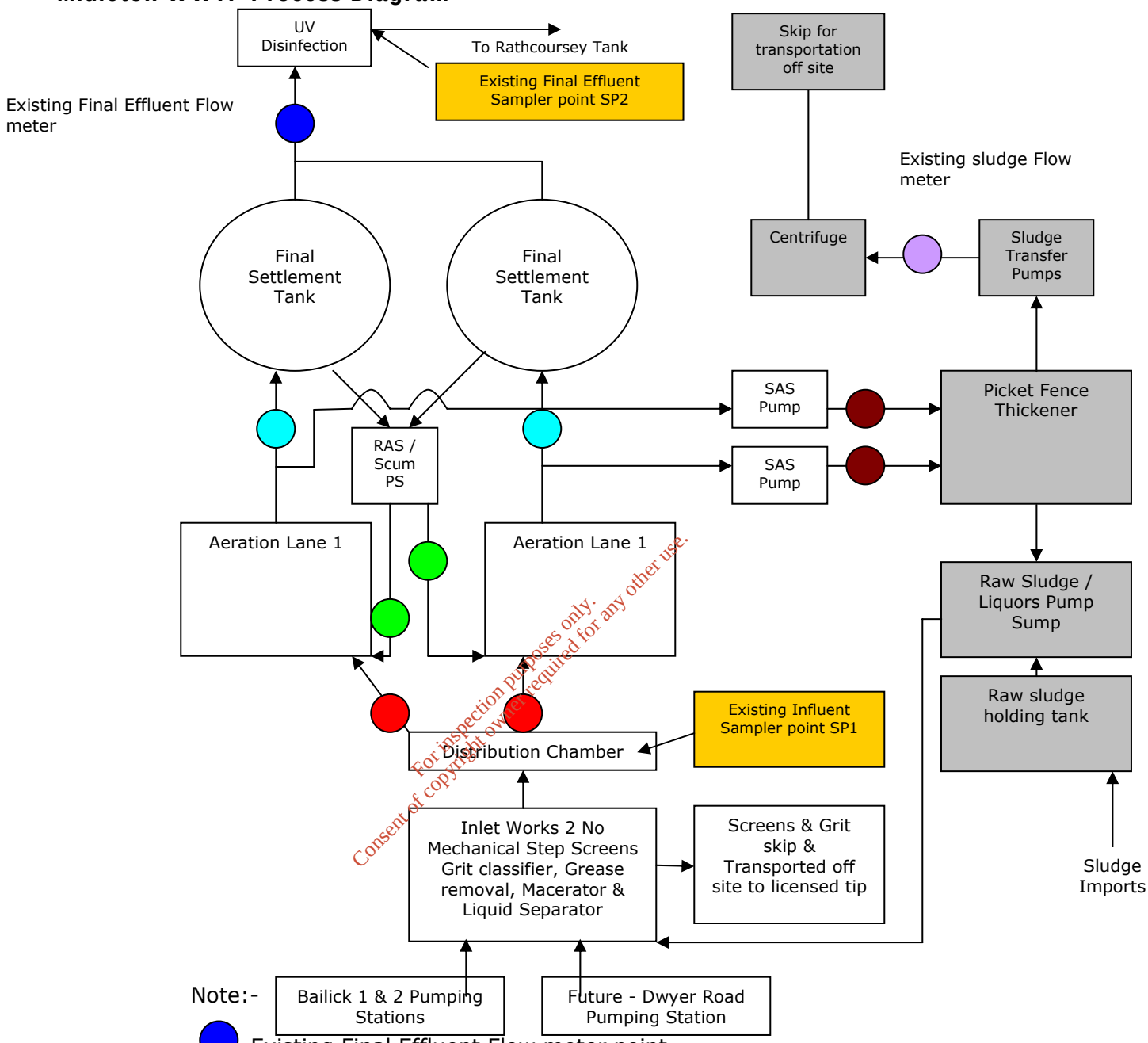
Sludge Return Pumps

Pumping Capacity: 33lt/sec

Surplus Sludge Pumps

Pumping Capacity: 1 – 4lt/sec

Midleton WWTP Process Diagram

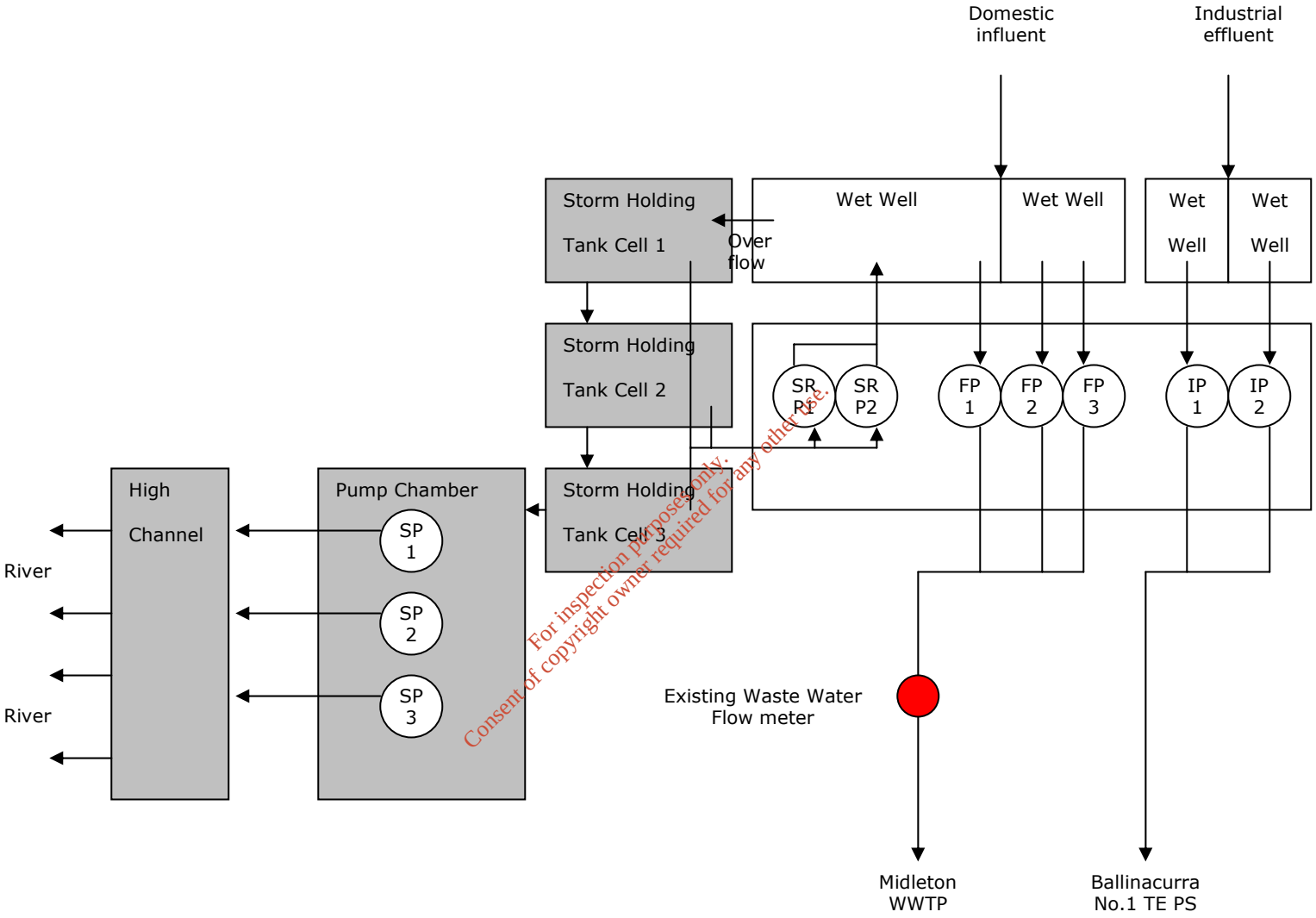


Note:-

- Existing Final Effluent Flow meter point
- Existing Flow meters measuring flow to Settlement Tanks
- Existing Flow meters measuring RAS/Scum return to Aeration Lanes
- Existing Flow meters measuring flow to Aeration Lanes
- Existing Flow meters measuring SAS to Picket Fence Thickener
- Existing Flow meter measuring flow into Centrifuge

Inlet Sample point SP1 - Outlet Sample Point SP2

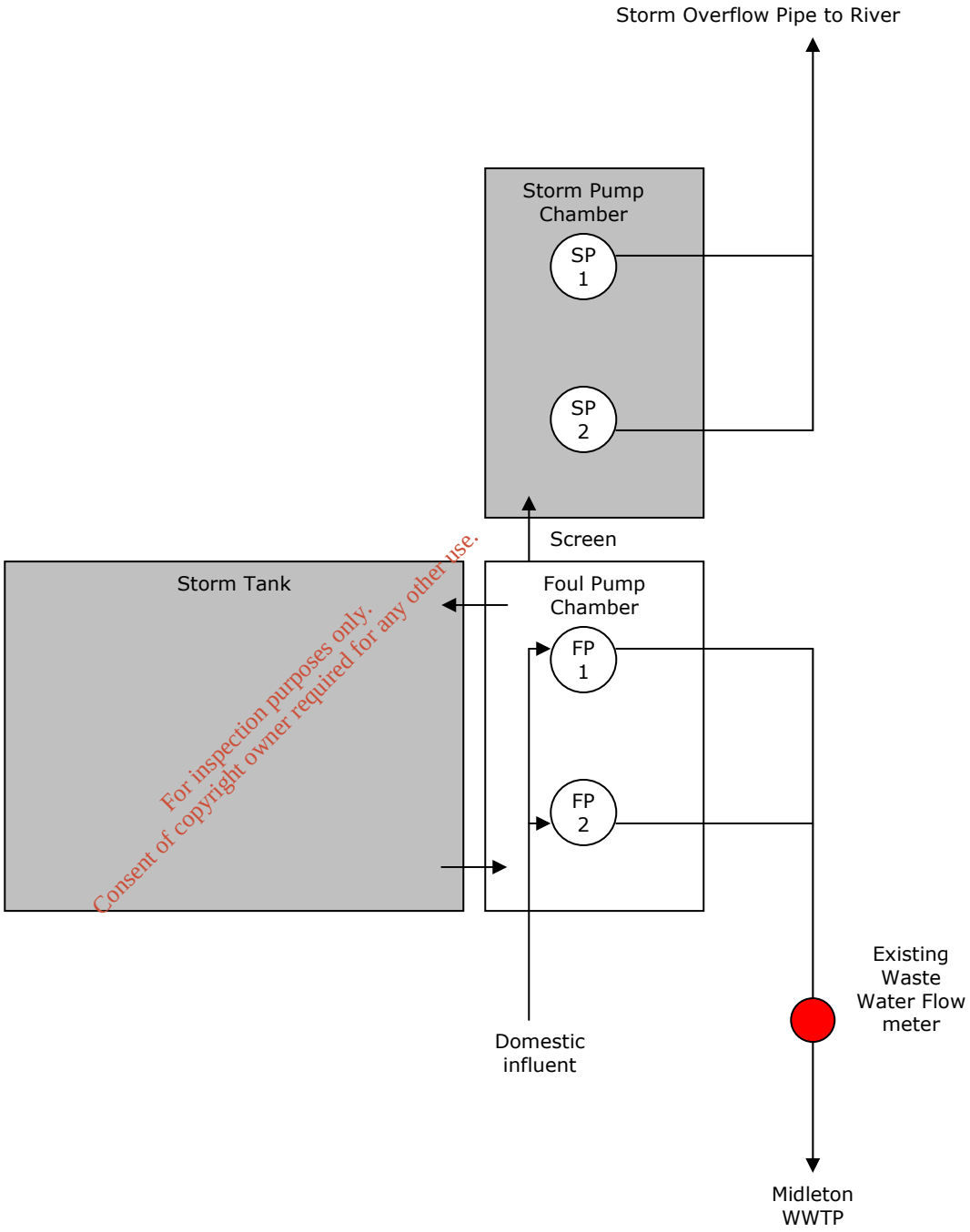
Bailick No 1 Pumping Station Process Diagram



Note:-

Existing Flow meter to measure flows pumped forward to Midleton WWTP

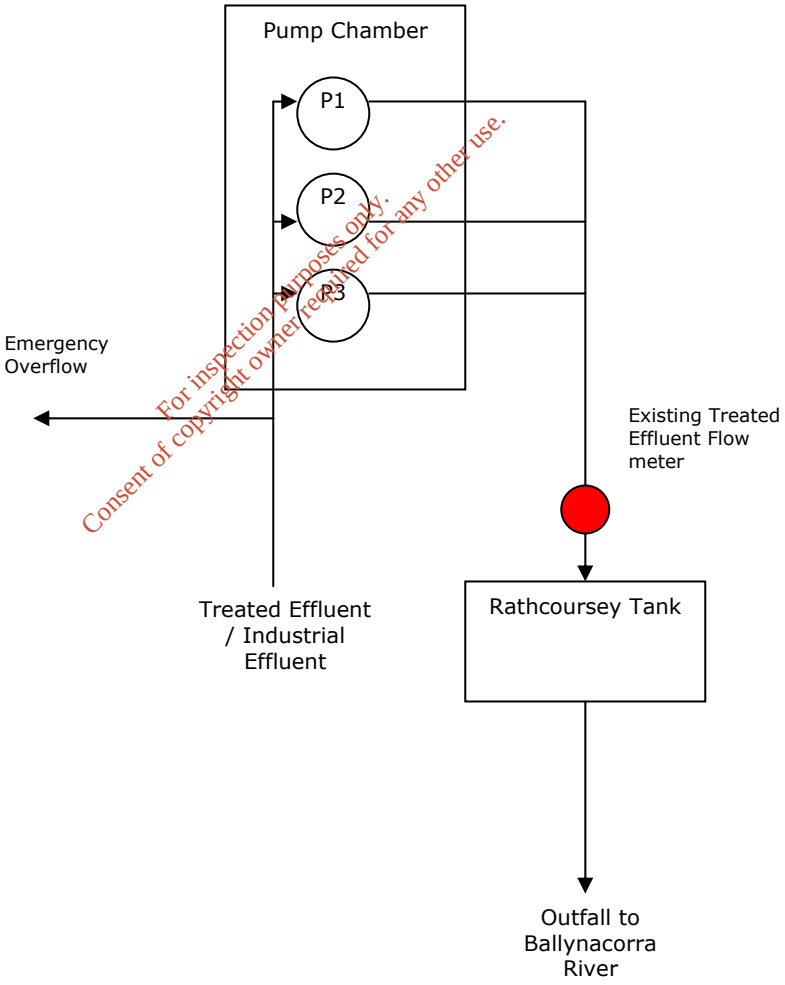
Bailick No 2 Pumping Station Process Diagram



Note:-

Existing Flow meter to measure flows pumped forward to Midleton WWTP

Ballinacurra No. 1 Treated Effluent Pumping Station Process Diagram



Note:-

Proposed Flow meter to measure flows pumped forward to Rathcoursey Tank

Design Capacity for the areas of the waste water works where discharge occurs:

Design of the plant:

The flow (hydraulic load) to the sewage treatment plant is pumped and is therefore fixed at the pumping capacity of the pumps. Up to 3 D.W.F. is pumped to the sewage treatment plant with a storm water balancing tank being provided at both pumping stations, i.e. at the existing Bailick Road Pumphouse and at the Bailick Road underpass beside the station road.

The treatment plant is designed to treat a hydraulic load of 3 D.W.F. with another 3 D.W.F. held for a minimum of 2 hours retention in both storm tanks.

By holding 3 D.W.F. for 2 hours it is ensured that any overflow gets at least primary sedimentation, thereby reducing the $B.O.D._5$ of the overflow by between 30% and 50% of the diluted overflow, thus giving an overflow $B.O.D._5$ of between 28 and 20mg/l at worst. In addition the overflow from the holding tanks at the existing pumping stations on the Bailick Road which enters the Ballinacurra River is fine screened so that the $B.O.D._5$ of the overflow liquid is well below 20mg/l.

Pumping all the effluent to the treatment plant has the effects of liquidising the faecal matter which then passes through fine screens at the treatment plant.

Balancing the flow at the pumping station supersedes the need for flow balancing the treatment plant.

The following stages occur at the treatment plant:

a) Screening
b) Grit removal
c) Aeration
d) Sedimentation
e) Sludge Settlement and Thickening
f) Sludge Dewatering

Below are the current agreed treatment capacities which have been contractually agreed with the current operator.

Midleton WWTP	**Unit**		
Design Dry Weather Flow	l/s	30	
Maximum Instantaneous Flow	l/s	90	
Maximum Duration of Instantaneous Flow	Hours	0.5	say every 3 hours
Maximum Daily Flow Volume	m^3/day	3248	18 hours HRT
Maximum BOD Load	Kg/day	1200	

Irish Distillers Limited

Irish Distillers Limited Reg ***No. P0442-01*** discharges its treated waste to the council's sewer at Baby's Walk, Grid Ref: E18879 N: 07346. From here it is taken to Rathcoursey point for eventual discharge to Cork Harbour. According to the IPPC Licence the maximum permissible volumes to be emitted by Irish Distillers are as follows:

Irish Distillers	**Unit**	
Maximum volume in one day	m^3/day	750
Maximum rate per hour	m^3/hr	45
Maximum BOD Load	kg/day	45

Recent Technical Amendments to the IPPC Licence (18th March 2008) have allowed for an increase in the process volume to be emitted from 750m^3 to 1,250m^3 per day. The total emission volume granted under the licence for Irish Distillers, including waters used for cooling during the process, has increased to a maximum of 5,000m^3 per day. This discharge volume has a population equivalent of 2,100 and a BOD load of 125kg/day.

Irish Distillers	**Unit**	
Maximum volume in one day	m^3/day	5,000
Maximum rate per hour	m^3/hr	270
Maximum BOD Load	kg/day	125

C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

Primary Discharge Point

The final effluent then discharges via 1 No. 400mm gravity main (that discharges into the 750mm main adjacent to Bailick No. 2 PS which then gravitates to Ballinacurra No. 1 Treated Effluent PS which pumps the flows into Rathcoursey tidal holding tank which is capable of holding 2,120m^3 at low tide then discharges into the Ballinacurra River/Estuary.

Secondary Discharge Point

At Ballinacurra No. 1 Treated Effluent PS which pumps forward treated effluent flows to Rathcoursey tidal holding tank there is a high level emergency overflow that operates in the event of mechanical breakdown of the pumps. The overflow to the river contains a coarse screen.

Storm Overflow Discharge Points

Bailick No. 1 Pumping Station

Bailick No. 1 Pumping Station comprises the following equipment: -

- 2 No. Industrial Pumps;
- 3 No. Foul Pumps;
- 1 No macerator screen;
- 3 No. Storm Pumps and 3 No Storm holding tanks with 6 No. tipping bucket cleaning systems;
- 2 No Storm Return Pumps;
- 1 No. 300mm Foul Rising Main to Midleton WWTP;
- 1 No. 300mm Industrial Rising Main to Ballinacurra No. 1 Treated Effluent PS;
- 4 No. 525mm Storm Overflow Pipes with penstocks to Ballynacorra River;
- Flow meter, generator, fuel store, gas detection system, odour control Telemetry System;
- Odour Control – 2 No extractor fans air flow meter and woodchip scrubber; and

- Buildings – foul/industrial/storm pumping station building, Storm Overflow pumping station building with fire alarm and security alarm systems.

The combined foul and storm water influent which arrives into Bailick No.1 Pumping Station is pumped via 3 No. dry well centrifugal foul pumps operating on a duty/assist/standby basis via a 300mm rising main to Midleton WWTP. The dry well centrifugal pumps are equipped with variable speed drives and the total output of the pumping station is 75l/s to match the hydraulic capacity of the WWTP (in conjunction with the flows received from Bailick No.2 Pumping Station).

Influent Flows in excess of 75l/s are diverted to the storm water storage facilities (3 No. storm storage tanks acting in series) and subsequently screened to 5mm and pumped to the Ballynacorra River if the volumes of storm water are greater than the storage capacity.

Storm overflow to the Ballynacorra River is by 3 No. Storm pumps (acting duty/assist/standby) pumping through 3 No. 525mm diameter outfall pipelines located below the Ballynacorra River low water mark. The discharge volume to the river outfall can thus be directly monitored by the capacity of the storm pumps and the number of hours of operation of the storm pumps.

On cessation of the storm event, 2 No. storm (1 duty/1 assist) return pumps return the accumulated storm volume in the storm tanks back to the pump station wet-well for on-ward pumping to Midleton WWTP. Under normal dry weather conditions the Storm cells remain empty and are flushed clean with a tipping bucket arrangement using water from the drinking water mains, after each storm event.

Bailick No, 2 Pumping Station

Bailick No. 2 Pumping Station comprises the following equipment: -

- 2 No. Foul Pumps;
- 1 No. Screen;
- 2 No. Storm Pumps and 1 No storm holding tanks with 2 No. tipping bucket cleaning systems;
- 1 No. 250mm Foul Rising Main to Midleton WWTP;
- 1 No. 600mm Storm Overflow to the Ballynacorra River;

- Flow meter and Telemetry System; and
- GRP Kiosk housing control panels and transformer.

The Bailick No 2 Pumping Station is a pre-fabricated Pumping Station and receives all the wastewater collected in the local sewerage network and pumps it forward via 2 No. submersible pumps (1 duty/ 1 standby) to the Midleton WWTP. All flows in excess of the designated Pumping Station capacity of 15 l/s are treated as storm water and receive preliminary treatment and 5mm screening prior to being discharged to the Ballynacorra River.

There is 1 No. storm tank and 2 No. storm pumps operating in duty/standby mode discharging to the river via a 600mm diameter outfall pipe. The discharge volume to the river outfall can thus be directly monitored by the capacity of the storm pumps and the number of running hours of each pump.

There are no storm return pumps and on cessation of a storm event, the storm water is returned by gravity to the foul wet well, for onward pumping via the 250mm diameter rising main to Midleton WWTP. Under normal dry weather conditions the Storm cell remains empty and is flushed clean with a tipping bucket arrangement using water from the drinking water mains, after each storm event.

Ballinacurra No. 2, Untreated Effluent Pumping Station

Ballinacurra No. 2 Untreated Effluent Pumping Station contains the following equipment: -

- 2 No. Storm Pumps;
- 1 No. 6mm stainless steel mesh Screen;
- 1 No. 450mm overflow pipe to manhole;
- 1 No. 450mm outfall pipe to river with flap valve;

Ballinacurra No. 2 untreated effluent outfall is designed to be used in the event of a power failure. The capacity of the storm tank is approximately 275m^3.

Bailick No. 3, Pumping Station

Bailick No. 3 pumping station is an emergency overflow which is utilised in the event of pump failure.

REVISED SECTION D
DISCHARGE TO THE AQUATIC ENVIRONMENT

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

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

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such emissions are made or are to be made.

The applicant should address in particular all discharge points where the substances outlined in Tables D.1(i), (b) & (c) and D.1(ii), (b) & (c) of Annex 1 are emitted.

Where it is considered that any of the substances listed in Annex X of the Water Framework Directive (2000/60/EC) or any of the Relevant Pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) are being discharged from the waste water works or are seen to be present in the receiving water environment downstream of a discharge from the works (as a result of any monitoring programme) the applicant shall screen the discharge for the relevant substance.

D.1 Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied. Tables D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the agglomeration and Tables D.1(ii)(a), (b) & (c) of Annex 1 should be completed for **each** secondary discharge point, where relevant. Table D.1(iii)(a) should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Supporting information should form **Attachment D.1**

Attachment included	Yes	No
	✓	

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference

An individual record (i.e. row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A Standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

REVISED ATTACHMENT No D.1

DETAILS OF ALL DISCHARGES OF WASTEWATER FROM THE AGGLOMERATION INCLUDING TABLES D.1(i)(a),(a)(i),(b) & (c)
D.1(ii)(a), (b) & (c)
D.1(iii)(a), (b) & (c)
D.1 (iv) (a)
D.1 (v) (a)

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

Discharge Point Code: SW01 MIDL

Source of Emission:	Rathcoursey Final Treated Effluent Outfall.
Location:	Rathcoursey point
Grid Ref. (12 digit, 6E, 6N):	E: 186177 N:069506
Name of receiving waters:	North Great Channel
River Basin District:	South Western
Designation of receiving waters:	RPA Species SPA, RPA Nutrient Sensitive Estuary
Flow rate in receiving waters:	n/a $m^3.sec^{-1}$ Dry Weather Flow n/a $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted 2,682,800 m^3 /year			
Normal/day	8,825m^3	Maximum/day	14,064 m^3
Maximum rate/hour	N/A m^3	Period of emission (avg)	___min/hr 24 hr/day 304 day/yr
Dry Weather Flow	m^3/sec		

*** Results based on data from 01st Jan'07 – 31st Oct'07 (304 days)**

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

Discharge Point Code: SW01 MIDL

Source of Emission:	Rathcoursey Final Treated Effluent Outfall.
Location:	Rathcoursey point
Grid Ref. (12 digit, 6E, 6N):	E: 186177 N:069506
Name of receiving waters:	North Great Channel
River Basin District:	South Western
Designation of receiving waters:	RPA Species SPA, RPA Nutrient Sensitive Estuary
Flow rate in receiving waters:	n/a $m^3.sec^{-1}$ Dry Weather Flow n/a $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted 3,882,573 m^3 /year*			
Normal/day	10,640m^3	Maximum/day	N/A m^3
Maximum rate/hour	N/A m^3	Period of emission (avg)	____min/hr _____hr/day 365 day/yr
Dry Weather Flow	m^3/sec		

*** Projected new Volumes from Irish Distillers Ltd. IPPC Technical Amendment 2008**

TABLE D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (Primary Discharge Point)

Discharge Point Code: SW01 MIDL

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.5	
2	Temperature	-	
3	Electrical Conductivity(@25°C)	418	
		Max. daily average (mg/l)	**kg/day**
4	Suspended Solids	10.3	84.57
5	Ammonia (as N)	<0.1	0.8825
6	Biochemical Oxygen Demand	2.65	22.50
7	Chemical Oxygen Demand	23	195.62
8	Total Nitrogen (as N)	5.6	35.19
9	Nitrite (as N)	n/a	n/a
10	Nitrate (as N)	0.2	1.765
11	Total Phosphorus (as P)	0.38	2.912
12	Orthophosphate (as P)[Note 1]	0.29	2.559
13	Sulphate (SO_4)	151.45	961
14	Phenols (sum) [Note 2] (µg/l)	<0.10 (µg/l)	8.83×10^{-4}

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Primary Discharge Point - Characteristics of the emission

Discharge Point Code: SW01 MIDL

Number	Substance	As discharged			
		Max. daily average		kg/day	kg/year
		µg/l	mg/l		
1	Atrazine	<0.01		$<8.83 \times 10^{-5}$	$<3.22 \times 10^{-2}$
2	Dichloromethane	<1		$<8.83 \times 10^{-3}$	<3.22
3	Simazine	<0.01		$<8.83 \times 10^{-5}$	$<3.22 \times 10^{-2}$
4	Toluene	<0.01		$<8.83 \times 10^{-5}$	$<3.22 \times 10^{-2}$
5	Tributyltin	<0.02		$<1.77 \times 10^{-4}$	$<6.44 \times 10^{-2}$
6	Xylenes	<0.01		$<8.83 \times 10^{-5}$	$<3.22 \times 10^{-2}$
7	Arsenic	7		6.18×10^{-2}	22.5
8	Chromium		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
9	Copper		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
10	Cyanide	<5		$<4.41 \times 10^{-2}$	<16.11
11	Fluoride	n/a		n/a	n/a
12	Lead		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
13	Nickel		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
14	Zinc		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
15	Boron		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
16	Cadmium		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$
17	Mercury	<0.2		$<1.77 \times 10^{-3}$	$<6.44 \times 10^{-1}$
18	Selenium	<0.02		$<1.77 \times 10^{-4}$	$<6.44 \times 10^{-2}$
19	Barium		<0.02	$<1.77 \times 10^{-1}$	$<6.44 \times 10^{1}$

TABLE D.1(ii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Secondary Discharge Point) (1 table per discharge point)

Discharge Point Code: SW02 MIDL

Source of Emission:	Treated Effluent
Location:	Ballinacurra No. 1 Treated Effluent Outfall (Emergency Overflow)
Grid Ref. (12 digit, 6E, 6N):	E: 188366 N: 071791
Name of receiving waters:	Ballynacorra Estuary
River Basin District:	South Western
Designation of receiving waters:	RPA Species SPA, RPA Nutrient Sensitive Estuary
Flow rate in receiving waters:	_____ $m^3.sec^{-1}$ Dry Weather Flow _____ $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted : 0 m^3			
Normal/day	0 m^3	Maximum/day	0 m^3
Maximum rate/hour	0 m^3	Period of emission (avg)	0 min/hr 0 hr/day 0 day/yr
Dry Weather Flow	0 m^3/sec		

TABLE D.1(ii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Secondary Discharge Point)

Discharge Point Code: **Not Applicable**

Number	Substance	As discharged	
		Max. daily average	
1	pH	X	
2	Temperature	X	
3	Electrical Conductivity (@25°C)	X	
		Max. daily average (mg/l)	**kg/day**
4	Suspended Solids	x	x
5	Ammonia (as N)	x	x
6	Biochemical Oxygen Demand	x	x
7	Chemical Oxygen Demand	x	x
8	Total Nitrogen (as N)	x	x
9	Nitrite (as N)	x	x
10	Nitrate (as N)	x	x
11	Total Phosphorus (as P) Note 1	x	x
12	Orthophosphate (as P)	x	x
13	Sulphate (SO_4)	x	x
14	Phenols (sum) Note 2 (µg/l)	x	x

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Secondary Discharge Point - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: **Not Applicable**

Number	Substance	As discharged		
		Max. daily average (µg/l)	kg/day	kg/year
1	Atrazine	X	X	X
2	Dichloromethane	X	X	X
3	Simazine	X	X	X
4	Toluene	X	X	X
5	Tributyltin	X	X	X
6	Xylenes	X	X	X
7	Arsenic	X	X	X
8	Chromium	X	X	X
9	Copper	X	X	X
10	Cyanide	X	X	X
11	Fluoride	X	X	X
12	Lead	X	X	X
13	Nickel	X	X	X
14	Zinc	X	X	X
15	Boron	X	X	X
16	Cadmium	X	X	X
17	Mercury	X	X	X
18	Selenium	X	X	X
19	Barium	X	X	X

TABLE D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)

Discharge Point Code: SW03 MIDL

Source of Emission:	Screened Storm Overflow
Location:	Bailick 1 Storm Overflow
Grid Ref. (12 digit, 6E, 6N):	E: 187973 E: 073127
Name of receiving waters:	Dungourney River / Ballinacurra River
River Basin District:	South Western
Designation of receiving waters:	RPA Drinking Water River
Flow rate in receiving waters:	0.0200 $m^3.sec^{-1}$ Dry Weather Flow 0.0300 $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted 180,457m^3			
Normal/day	594m^3	Maximum/day	9,068m^3
Maximum rate/hour	1980m^3	Period of emission (avg)	0.75 min/hr 24 hr/day 304 day/yr*

*** Results based on data from 01st Jan'07 – 31st Oct'07 (304 days)**

TABLE D.1(iii)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of the emission (1 table per discharge point)
(Storm Water Overflow)

Discharge Point Code: SW03 MIDL

Number	Substance	As discharged	
		Max. daily average	
1	pH	7.4	
2	Temperature	n/a	
3	Electrical Conductivity (@25°C)	882	
		Max. daily average (mg/l)	**kg/day**
4	Suspended Solids	41	24.552
5	Ammonia (as N)	5.1	3.0294
6	Biochemical Oxygen Demand	36	21.384
7	Chemical Oxygen Demand	105	62.37
8	Total Nitrogen (as N)	11.4	6.772
9	Nitrite (as N)	n/a	n/a
10	Nitrate (as N)	0.52	0.309
11	Total Phosphorus (as P) Note 1	1.3	0.754
12	Orthophosphate (as P)	0.11	0.065
13	Sulphate (SO_4)	450.6	267.67
14	Phenols (sum) Note 2 (µg/l)	<0.01µg/l	$<5.94 \times 10^{-5}$

Note 1: For waste water samples this monitoring should be undertaken on a sample filtered on 0.45µm filter paper.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE D.1(iii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS

Storm Water Overflow - Characteristics of the emission (1 table per discharge point)

Discharge Point Code: SW03 MIDL

Number	Substance	As discharged			
		Max. daily average		kg/day	kg/year
		µg/l	mg/l		
1	Atrazine	<0.01		5.94×10^{-09}	$<2.168 \times 10^{-06}$
2	Dichloromethane	<1.0		5.94×10^{-07}	$<2.168 \times 10^{-04}$
3	Simazine	<0.01		5.94×10^{-09}	$<2.168 \times 10^{-06}$
4	Toluene	<0.01		5.94×10^{-09}	$<2.168 \times 10^{-06}$
5	Tributyltin	NS			-
6	Xylenes	<0.01		5.94×10^{-09}	$<2.168 \times 10^{-06}$
7	Arsenic	8		4.752×10^{-06}	1.73×10^{00}
8	Chromium		0.073	4.336×10^{-05}	1.583×10^{-02}
9	Copper		<0.02	1.188×10^{-05}	$<4.336 \times 10^{-03}$
10	Cyanide	<5		2.97×10^{-06}	$<1.084 \times 10^{-03}$
11	Fluoride	n/a		n/a	n/a
12	Lead		<0.02	1.188×10^{-05}	$<4.336 \times 10^{-03}$
13	Nickel		<0.02	1.188×10^{-05}	$<4.336 \times 10^{-03}$
14	Zinc		0.582	3.4571×10^{-04}	1.26×10^{-01}
15	Boron		0.622	3.695×10^{-04}	1.349×10^{-01}
16	Cadmium		<0.02	1.188×10^{-05}	$<4.336 \times 10^{-03}$
17	Mercury	1.9		1.1286×10^{-06}	4.119×10^{-04}
18	Selenium	15		8.91×10^{-06}	3.25×10^{-03}
19	Barium		<0.02	1.188×10^{-05}	$<4.336 \times 10^{-03}$

TABLE D.1(iv)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)

Discharge Point Code: SW04 MIDL

Source of Emission:	Screened Storm Overflow
Location:	Bailick No. 2 Storm Overflow
Grid Ref. (12 digit, 6E, 6N):	E: 188045 E: 072513
Name of receiving waters:	Ballynacorra River
River Basin District:	South Western
Designation of receiving waters:	RPA Drinking Water River
Flow rate in receiving waters:	0.024$m^3.sec^{-1}$ Dry Weather Flow 0.0800 $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted	82,901m^3		
Normal/day	273m^3	Maximum/day	2,282m^3
Maximum rate/hour	720m^3	Period of emission (avg)	0.95 min/hr 24 hr/day 304 day/yr*

*** Results based on data from 01st Jan'07 – 31st Oct'07 (304 days)**

TABLE D.1(v)(a): EMISSIONS TO SURFACE/GROUND WATERS
(Storm Water Overflow) (1 table per discharge point)

Discharge Point Code: SW05 MIDL

Source of Emission:	Screened Storm Overflow
Location:	Ballinacurra No. 2 Storm Overflow
Grid Ref. (12 digit, 6E, 6N):	E: 188520 E: 071783
Name of receiving waters:	Dungourney River / Ballynacorra River
River Basin District:	South Western
Designation of receiving waters:	RPA Drinking Water River
Flow rate in receiving waters:	0.024$m^3.sec^{-1}$ Dry Weather Flow 0.0800 $m^3.sec^{-1}$ 95%ile flow

Emission Details:

(i) Volume emitted	158m^3		
Normal/day	0.5m^3	Maximum/day	126m^3
Maximum rate/hour	630m^3	Period of emission (avg)	0 min/hr 0 hr/day 0 day/yr

REVISED SECTION E MONITORING

SECTION E MONITORING

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

E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table E.1(i) of the Annex. The primary discharge shall be annotated with a **(P)**.

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table E.1(ii) of the Annex.

E.2. Monitoring and Sampling Points

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the emission and its effect on the receiving environment should be considered.

Details of any accreditation or certification of analysis should be included.

Attachment E.2 should contain any supporting information.

Attachment included	Yes	No
	✓	

E.3. Tabular data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

An individual record (i.e., row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

E.4 Sampling Data

Regulation 16(1)(h) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing waste water treatment plant to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 16(1)(l) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	**Yes**	**No**
	✓	

REVISED ATTACHMENT No E.1

WASTE WATER TYPES AND QUANTITIES – EXISTING AND PROPOSED

TABLE E.1(i): WASTE WATER FREQUENY 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)
SW01 MIDL(P)	304	2,682,883*
SW01 MIDL(P)	365	3,882,573 m^3 /year**
SW02 MIDL	Assumed 0	Assumed 0

*** Results based on data from 01st Jan 07 – 31st Oct 07 (304 days)**

**** Projected new Volumes from Irish Distillers Ltd. IPPC Technical Amendment 2008**

TABLE E.1(ii): WASTE WATER FREQUENY 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
SW03 MIDL	114	180,279	No
SW04 MIDL	214	82,900	No
SW05 MIDL	0	0	Yes

*** Results based on data from 01st Jan 07 – 31st Oct 07 (304 days)**

REVISED ATTACHMENT No E.2
PROGRAMMES FOR ENVIRONMENTAL MONITORING

Sampling

Sampling Undertaken by the Operation and Maintenance Contractor

Flow measurement, sampling, and laboratory analysis are carried out throughout the O&M Phase. Regular independent laboratory analyses are undertaken throughout the Operation & Maintenance Phase. Additional sampling and analysis may also undertake such as the Service Provider feels is appropriate. Flow proportional or time based 24 hour samples are collected at the same well defined point at the inlet and outlet of the treatment works in order to monitor compliance with the requirements. A refrigerated sampler minimizes degradation between collection and analysis. The flow monitoring, sampling, and laboratory analysis regime was agreed with the Employer prior to takeover. Certain heavy metal analyses are also required on an annual basis as identified in 'Code of Good Practice for Use of Biosolids in agriculture'.

The procedures include independent analysis, at an accredited laboratory, of the statutory samples. The Service Provider is responsible for developing and implementing procedures to remedy defects in the laboratory procedures where the independent checking shows variations of more than ±10%.

The sampling of the statutory samples is in accordance with the following procedures: -

- All samples are representative of the appropriate stream.
- Daily grab samples are taken at approximately the same times each day.
- Samples are fixed, stored and handled as per standard methods. Analysis of the samples (both Service Provider's and Employer's) are undertaken within 24 hours and reported to the Employer's Representative within 48 hours. Exceptions are BOD, metals and pathogens, which are reported within 7 days.
- Analysis of samples by the Service Provider are carried out in accordance with the methods specified in the latest editions of:-
    i. The "Standard Method of Examination of Water and Wastewater" (APHA)
    ii. Urban Wastewater Treatment Regulations, 2001 (SI No. 254 of 2001)

iii. The "Methods of the Examination of Waters and Associated Materials" published by the HMSO (UK)

- As specified, representative laboratory analysis are undertaken at an accredited laboratory approved by the Employer's Representative, who reserves the right, in the case of an independent laboratory, to visit the premises in order to ascertain that the testing is being carried out accurately, and in accordance with accepted procedures.

The monitoring and recording of the status of all parameters appropriate to proper control and operation of the plant is carried out. Specifically the following parameters are monitored and recorded:

- All parameters required by the Service Provider to operate the facility in accordance with his methods and practices;
- Totalised daily and instantaneous flows into the WWTP from the Bailick No. 1 & No. 2 Pumping Stations;
- Totalised daily flows into the WWTP from other sources including imports;
- Totalised daily and instantaneous flows gravitated from the WWTP to the Ballinancurra No. 1 Treated Effluent Pumping Station and the proposed Dwyers Road Pumping Station;
- Totalised daily and instantaneous RAS, SAS, Centrifuge and pre thickened and post thickened sludge
- Daily (5 Days per Week) COD analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;
- Weekly BOD_5 analysis of random 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Daily (5 Days per Week) SS analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Daily (5 Days per Week) pH analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Daily (5 Days per Week) NH3 analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Weekly TON TKN TN analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Weekly TP OP OFG analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Weekly Total & Faecal Coliform analysis of 24 hour flow proportional samples of the waste water received from the catchment to be taken at the distribution chamber prior to the aeration tanks;

- Daily (5 Days per Week) COD analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP;

- Weekly BOD_5 analysis of random 24 hour flow proportional samples of the treated effluent discharged from the WWTP ;

- Daily (5 Days per Week) SS analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP;

- Daily (5 Days per Week) pH analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP;

- Daily (5 Days per Week) NH3 analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP;

- Weekly TON TKN TN analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP;

- Weekly TP OP OFG analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP ;

- Weekly Total & Faecal Coliform analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP;

- Daily (5 Days per Week) U.V. Disinfection analysis of U.V Transmission of the treated effluent;

- Weekly Salinity analysis of 24 hour flow proportional samples of the treated effluent discharged from the WWTP – Sample Point 2;

- Instantaneous analysis of the turbidity of the treated effluent discharged from the WWTP – Sample Point 2;

- The Collection and issuing of samples for pH, BOD, COD, SS, TN-N, TP-P, Total Coliforms once a month to an independent laboratory for analysis

- All parameters necessary to demonstrate the proper performance of the treatment process including the other flow monitors on the WWTP and DO, SVI & MLSS monitoring.

Sampling Carried out by/ on behalf of Cork County Council

In addition to the monitoring and sampling programme carried out by the O&M contractor, Cork County Council also carry out bacteriological and chemical monitoring of final discharge from the WWTP in compliance with the Urban Wastewater Treatment Regulations.
In-house analysis includes the routine monitoring for the following parameters:

- pH;
- Temperature;
- Biochemical Oxygen Demand;
- Chemical Oxygen Demand;
- Suspended Solids;
- Total Nitrogen;
- Total Phosphorus;

Cork County Council has also undertakes the analysis of the following substances:

- Atrazine
- Dichloromethane
- Simazine
- Toluene
- Tributyltin
- Xylenes
- Arsenic
- Chromium
- Cyanide
- Copper
- Fluoride
- Lead
- Nickel
- Zinc
- Cadmium
- Mercury
- Selenium
- Barium
- Nitrate
- Nitrite
- Orthophosphate
- Phenols
- Sulphates
- Electrical Conductivity
- Boron

Total and Faecal Coliform Analysis are carried out by independent consultants on behalf of Cork County Council. This data pertains to points upstream and downstream of the Bailick 1 overflow, and upstream of Bailick 2 overflow. Details of the results relating to total and faecal coliforms for the year 2007 can be found in Attachment E.4 of the Application form.

Monitoring and sampling points for faecal and total coliforms are also located at;

- Influent,
- Pre and Post UV disinfection,
- Ballinacurra Sump
- Rathcoursey Holding tank
- Bailick 1 Storm tank
- Industrial Tank
- Baby's Walk

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

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

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

Detailed information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s).

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

F.1. Assessment of Impact on Receiving Surface or Ground Water

- Give summary details and an assessment of the impacts of any existing or proposed emissions on the environment, including environmental media other than those into which the emissions are to be made.

- Tables F.1(i)(a) & (b) should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables F.1(i)(a) & (b). Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.

- For discharges from secondary discharge points Tables F.1(ii)(a) & (b) should be completed. Furthermore, provide summary details and an assessment of the impacts of any existing or proposed emissions on the surface water or ground (aquifers, soils, sub-soils and rock environment), including any impact on environmental media other than those into which the emissions are to be made.

- Provide details of the extent and type of ground emissions at the works. For larger discharges to groundwaters, e.g., from Integrated Constructed Wetlands, large scale percolation areas, etc., a comprehensive report must be completed which should include, inter alia, topography, meteorological data, water quality, geology, hydrology, and hydrogeology. The latter must in particular present the aquifer classification and vulnerability. The Geological Survey of Ireland Groundwater Protection Scheme Dept of the Environment and Local Government, Geological Survey of Ireland, EPA (1999) methodology should be used for any such classification. This report should

also identify all surface water bodies and water wells that may be at risk as a result of the ground discharge.

- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body. Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving water.

- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.

- In circumstances where water abstraction points exist downstream of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., Cryptosporidium and Giardia, in the receiving water environment.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –

  (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —

    (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,

    (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or

    (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,

  (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC[1] in accordance with the procedures laid down in Article 21 of that Directive,

  (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or

  (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC[2];

[1]Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

[2]Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

- Describe, where appropriate, measures for minimising pollution over long distances or in the territory of other states.

- This section should also contain full details of any modelling of discharges from the agglomeration. Full details of the assessment and any other relevant information on the receiving environment should be submitted as **Attachment F.1.**

Attachment included	**Yes**	**No**
	✓	

F.2 Tabular Data on Drinking Water Abstraction Point(s)

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m^3/day	Point Code Provide Label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

Note: Attach any risk assessment that may have been carried out in relation to the abstraction point(s) listed.

An individual record (i.e. row) is required for each abstraction point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and E.3.

Attachment F.2 should contain any supporting information.

Assessment of Impact on Receiving Surface or Ground Water

Owenacurra Estuary and North Channel

According to the Environmental Protection Agency's 2005 report 'Water Quality in Ireland 2001 – 2003', the Owenacurra Estuary has been shown to have disimproved in the period since the last assessment (1995 – 1999) now being categorised as a Eutrophic water body. The disimprovement in water quality from potentially eutrophic to eutrophic is largely due to high levels of Nitrogen in the Owenacurra River.

In the same period the trophic status of the North Channel has shown some improvement going from eutrophic to intermediate. The EPA has reported that there is a paucity of information relating to comprehensive nutrient data in respect of this water body particularly in winter months.

Under the Water Framework Directive these water bodies have jointly been designated as Nutrient Sensitive Areas.

The EPA's assessment of Estuarine and Coastal Water Quality has identified the Owenacurra Estuary as eutrophic and the North Channel/ Great Island as being intermediate in status.

Under the WFD Transitional Water Status both the Owenacurra Estuary and the North Channel/ Great Island are at risk of not achieving good status.

Cork Harbour is one of six water bodies which since the last assessment has retained its status as eutrophic.

Designation under Council Directives

The EU Birds Directive (79/409/EEC) requires designation of Special Protection Areas for:

- Listed rare and vulnerable species.
- Regularly occurring migratory species, such as ducks, geese and waders.
- Wetlands, especially those of international importance, which attract large numbers of migratory birds each year. (Internationally important means that 1% of the

population of a species uses the site, or more than 20,000 birds regularly use the site.)

Cork Harbour is one such SPA. It is a large sheltered bay system with several river estuaries. The SPA site comprises most of the intertidal areas of Cork Harbour, including all of the North Channel. It is an internationally important wetland site regulary supporting wintering waterfowl and other important bird species.

Extensive areas of estuarine habitat have been reclaimed since the 1950s for a variety of projects. Cork Harbour is adjacent to a major urban and industrial centre and has variable water quality with some areas being classified as eutrophic. Pollution may not have a significant impact on bird populations.

The legal basis on which SACs are selected and designated is the EU Habitats Directive, transposed into Irish law in the European Union (Natural Habitats) Regulations,1997 as amended in 1998 and 2005. The Directive lists certain habitats and species that must be protected within SACs. The Great Island Channel in Cork Harbour has been designated an SAC. This stretches from Little Island to Midleton with its southern boundary being formed by the Great Island. The Owenacurra and Dungourney Rivers provide the main source of freshwater into this system.

The main land use within the site is oyster farming however the main threats to its conservation significance comes from road works, infilling, sewage outflows and possible marina developments.

The area has not been designated under the Shellfish Directives but it has been proposed to do so in the near future.

ATTACHMENT No F.1

MODELLING OF DISCHARGES FROM THE AGGLOMERATION & RELEVENT INFORMATION ON THE RECEIVING ENVIRONMENT

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING
(Primary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: ***SW01 MIDL***

MONITORING POINT CODE: ***MP01SW01 MIDL***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	17/01/07	04/04/07	04/07/07	24/10/07			
pH	7.4	7.5	7.4	7.6	Grab (Holding tank)	2	Electrochemical
Temperature	Not available	Not available	Not available	Not available	Grab (Holding tank)	N/A	N/A
Electrical Conductivity (@25°C)	Not available	Not available	Not available	418	Grab (Holding tank)	0.5 µmhos/cm	Electrochemical
Suspended Solids	<2.5	6	6	7	Grab (Holding tank)	0.5mg/l	Gravimetric
Ammonia (as N)	Not available	<0.1	Not available	<0.1	Grab (Holding tank)	0.02 mg/l	Colorimetric
Biochemical Oxygen Demand	<1	2.8	5.8	1.6	Grab (Holding tank)	0.06 mg/l	Electrochemical
Chemical Oxygen Demand	<21	30	43	<21	Grab (Holding tank)	8 mg/l	Digestion & Calorimetric
Dissolved Oxygen	Not available	Not available	Not available	Not available	Grab (Holding tank)	N/A	N/A
Hardness (as $CaCo_3$)	Not available	Not available	Not available	Not available	Grab (Holding tank)	N/A	N/A
Total Nitrogen (as N)	3.6	2.6	<1	13	Grab (Holding tank)	0.5 mg/l	Digestion & Calorimetric
Nitrite (as N)	Not available	Not available	Not available	Not available	Grab (Holding tank)	N/A	N/A
Nitrate (as N)	Not available	Not available	Not available	0.2	Grab (Holding tank)	0.1 mg/l	Colorimetric
Total Phosphorus (as P)	0.28	0.49	0.37	0.67	Grab (Holding tank)	0.2 mg/l	Digestion & Calorimetric
Orthophosphate (as P) – unfiltered	Not available	Not available	Not available	0.29	Grab (Holding tank)	0.02 mg/l	Colorimetric
Sulphate (SO_4)	Not available	Not available	Not available	194	Grab (Holding tank)	30 mg/l	Turbidimetric
Phenols (sum) [Note 2] (ug/l)	Not available	Not available	Not available	<0.10	Grab (Holding tank)	0.1 µg/l	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Primary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: ***SW01 MIDL***

MONITORING POINT CODE: ***MP01SW01 MIDL***

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/07	No further sample dates					
Atrazine	<0.01	x	x	x	Grab (Holding tank)	0.96 µg/L	HPLC
Dichloromethane	<1	x	x	x	Grab (Holding tank)	1 µg/L	GC-MS 1
Simazine	<0.01	x	x	x	Grab (Holding tank)	0.01 µg/L	HPLC
Toluene	<0.01	x	x	x	Grab (Holding tank)	0.02 µg/L	GC-MS 1
Tributyltin	<0.02	x	x	x	Grab (Holding tank)	1 µg/L as Sn	GC-MS 1
Xylenes	<0.01	x	x	x	Grab (Holding tank)	0.96 µg/L	GC-MS 1
Arsenic	7	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-MS
Chromium	<0.02	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES
Copper	<0.02	x	x	x	Grab (Holding tank)	5 mg/L	ICP-OES
Cyanide	<5	x	x	x	Grab (Holding tank)	0.01 µg/L	Colorimetric
Fluoride	Not available	x	x	x	Grab (Holding tank)	0.02 mg/L	ISE
Lead	<0.02	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES
Nickel	<0.02	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES
Zinc	<0.02	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES
Boron	0.262	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES
Cadmium	<0.02	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES
Mercury	<0.2	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-MS
Selenium	2	x	x	x	Grab (Holding tank)	0.74 µg/L	ICP-MS
Barium	0.02	x	x	x	Grab (Holding tank)	0.02 mg/L	ICP-OES

TABLE F.1(ii)(a): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations) (Secondary Discharge Point)

Discharge Point Code: ***SW03 MIDL***

MONITORING POINT CODE: ***MPSW03 MIDL***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	07/03/07	04/04/07	24/10/07	N/A			
pH	7.2	7.2	7.7	x	Grab	2	Electrochemical
Temperature	Not available	Not available	Not available	x	Grab	N/A	N/A
Electrical Conductivity (@25°C)	Not available	Not available	882	x	Grab	0.5 µmhos/cm	Electrochemical
Suspended Solids	28	93	3	x	Grab	0.5mg/l	Gravimetric
Ammonia (as N)	Not available	Not available	Not available	x	Grab	0.02 mg/l	Colorimetric
Biochemical Oxygen Demand	30	77	1	x	Grab	0.06 mg/l	Electrochemical
Chemical Oxygen Demand	51	238	26	x	Grab	8 mg/l	Digestion & Calorimetric
Dissolved Oxygen	Not available	Not available	Not available	x	Grab	N/A	N/A
Hardness (as $CaCo_3$)	Not available	Not available	Not available	x	Grab	N/A	N/A
Total Nitrogen (as N)	7.9	21.3	5	x	Grab	0.5 mg/l	Digestion & Calorimetric
Nitrite (as N)	Not available	Not available	Not available	x	Grab	N/A	N/A
Nitrate (as N)	Not available	Not available	0.52	x	Grab	0.1 mg/l	Colorimetric
Total Phosphorus (as P)	0.81	2.98	<0.2	x	Grab	0.2 mg/l	Digestion & Calorimetric
Orthophosphate (as P) – unfiltered	Not available	Not available	0.11	x	Grab	0.02 mg/l	Colorimetric
Sulphate (SO_4)	Not available	Not available	450.6	x	Grab	30 mg/l	Turbidimetric
Phenols (sum) [Note 2] (ug/l)	Not available	Not available	<0.10	x	Grab	0.1 µg/l	GC-MS 2

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(ii)(b): SURFACE/GROUND WATER MONITORING - (1 table per discharge point upstream and downstream locations) (Secondary Discharge Point)

Discharge Point Code: ***SW03 MIDL***

MONITORING POINT CODE: ***MPSW03 MIDL***

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	24/10/07	No further sample dates					
Atrazine	<0.01	x	x	x	Grab	0.96 µg/L	HPLC
Dichloromethane	<1.0	x	x	x	Grab	1 µg/L	GC-MS 1
Simazine	<0.01	x	x	x	Grab	0.01 µg/L	HPLC
Toluene	<0.01	x	x	x	Grab	0.02 µg/L	GC-MS 1
Tributyltin	NS	x	x	x	Grab	1 µg/L as Sn	GC-MS 1
Xylenes	<0.01	x	x	x	Grab	0.96 µg/L	GC-MS 1
Arsenic	8	x	x	x	Grab	0.02 mg/L	ICP-MS
Chromium	0.073	x	x	x	Grab	0.02 mg/L	ICP-OES
Copper	<0.02	x	x	x	Grab	5 mg/L	ICP-OES
Cyanide	<5	x	x	x	Grab	0.01 µg/L	Colorimetric
Fluoride	N/A	x	x	x	Grab	0.02 mg/L	ISE
Lead	<0.02	x	x	x	Grab	0.02 mg/L	ICP-OES
Nickel	<0.02	x	x	x	Grab	0.02 mg/L	ICP-OES
Zinc	0.582	x	x	x	Grab	0.02 mg/L	ICP-OES
Boron	0.622	x	x	x	Grab	0.02 mg/L	ICP-OES
Cadmium	<0.02	x	x	x	Grab	0.02 mg/L	ICP-OES
Mercury	1.9	x	x	x	Grab	0.02 mg/L	ICP-MS
Selenium	15	x	x	x	Grab	0.74 µg/L	ICP-MS
Barium	<0.02	x	x	x	Grab	0.02 mg/L	ICP-OES

TABLE F.1(iii)(a): SURFACE/GROUND WATER MONITORING
(Secondary Discharge Point – one table per upstream and downstream location)

Discharge Point Code: ***SW04 MIDL***

MONITORING POINT CODE: ***MPSW04 MIDL***

Parameter	Results (mg/l[Note 1])				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	NO SAMPLE DATA						
pH	x	x	x	x	x	x	x
Temperature	x	x	x	x	x	x	x
Electrical Conductivity (@25°C)	x	x	x	x	x	x	x
Suspended Solids	x	x	x	x	x	x	x
Ammonia (as N)	x	x	x	x	x	x	x
Biochemical Oxygen Demand	x	x	x	x	x	x	x
Chemical Oxygen Demand	x	x	x	x	x	x	x
Dissolved Oxygen	x	x	x	x	x	x	x
Hardness (as $CaCo_3$)	x	x	x	x	x	x	x
Total Nitrogen (as N)	x	x	x	x	x	x	x
Nitrite (as N)	x	x	x	x	x	x	x
Nitrate (as N) (mg/l)	x	x	x	x	x	x	x
Total Phosphorus (as P)	x	x	x	x	x	x	x
Orthophosphate (as P) – unfiltered	x	x	x	x	x	x	x
Sulphate (SO_4)	x	x	x	x	x	x	x
Phenols (sum) [Note 2] (ug/l)	x	x	x	x	x	x	x

Note 1: Or other unit as appropriate – please specify.
Note 2: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE F.1(iii)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)
(Secondary Discharge Point - one table per upstream and downstream location)

Discharge Point Code: ***SW04MIDL***

MONITORING POINT CODE: ***MPSW04 MIDL***

Parameter	Results (µg/l)				Sampling method (grab, drift etc.)	Limit of Quantitation	Analysis method / technique
	NO SAMPLE DATA						
Atrazine	x	x	x	x	x	x	x
Dichloromethane	x	x	x	x	x	x	x
Simazine	x	x	x	x	x	x	x
Toluene	x	x	x	x	x	x	x
Tributyltin	x	x	x	x	x	x	x
Xylenes	x	x	x	x	x	x	x
Arsenic	x	x	x	x	x	x	x
Chromium	x	x	x	x	x	x	x
Copper	x	x	x	x	x	x	x
Cyanide	x	x	x	x	x	x	x
Fluoride	x	x	x	x	x	x	x
Lead	x	x	x	x	x	x	x
Nickel	x	x	x	x	x	x	x
Zinc	x	x	x	x	x	x	x
Boron	x	x	x	x	x	x	x
Cadmium	x	x	x	x	x	x	x
Mercury	x	x	x	x	x	x	x
Selenium	x	x	x	x	x	x	x
Barium	x	x	x	x	x	x	x

REVISED SECTION G PROGRAMME OF IMPROVEMENTS

SECTION G: PROGRAMMES OF IMPROVEMENTS

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

G.1 Compliance with Council Directives

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of; the Dangerous Substances Directive 2006/11/EC, the Water Framework Directive 2000/60/EC, the Birds Directive 79/409/EEC, the Groundwater Directives 80/68/EEC & 2006/118/EC, the Drinking Water Directives 80/778/EEC, the Urban Waste Water Treatment Directive 91/271/EEC, the Habitats Directive 92/43/EEC, the Environmental Liabilities Directive 2004/35/EC and the Bathing Water Directive 76/160/EEC.

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

G.2 Compliance with Water Quality Standards for Phosphorus Regulations (S.I. No. 258 of 1998).

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the Water Quality Standards for Phosphorous Regulations (S.I. No. 258 of 1998) are being achieved. Provide details of any specific measures adopted for waste water works specified in Phosphorus Measures Implementation reports and the progress to date of those measures. Provide details highlighting any waste water works that have been identified as the principal sources of pollution under the P regulations.

Attachment G.2 should contain the most recent programme of improvements and any associated documentation requested under Section G.3 of the application.

Attachment included	Yes	No
	Not Applicable	Not Applicable

G.3 Impact Mitigation

Provide details on a programme of improvements to ensure that discharges from the agglomeration will not result in significant environmental pollution.

Attachment G.3 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

G.4 Storm Water Overflow

Provide details on a programme of improvements to ensure that discharges other than the primary and secondary discharges comply with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007.

Attachment G.4 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	✓	

REVISED ATTACHMENT No G.1
COMPLIANCE WITH COUNCIL DIRECTIVES - PROGRAMME OF IMPROVEMENTS & APPROVED PROJECT FUNDING & TIMEFRAMES – ALSO SEE ATTACHMENT No B.10

Foreshore Licence & Current Discharge Standards

The current treatment standards that the WWTP is operating to is contained within Cork County Councils application to the Department of the Marine & Natural Resources for a Foreshore licence in April 1998 which states the Midleton WWTP shall achieve a final effluent standard of:-

- BOD 20mg/l
- SS 30mg/l
- TN 15mg/l

In addition the application states that UV disinfection will also be installed on the final effluent that will have the effect of reducing the faecal coliform numbers in the discharge by a factor of 10,000 over that presently discharging (prior to the construction of the WWTP).

A Memorandum of Agreement dated 22nd September 1999 was signed between the Minister for the Marine & Natural Resources and Cork County Council to lay, use and maintain foreshore crossings, domestic rising main, outfall pipes, pumping station storm water outfall and overflow pipes in connection with the Midleton Sewerage Scheme.

THE LICENCE STATES *"THE LICENSEE SHALL PROVIDE A LEVEL OF TREATMENT, INCLUDING ULTRA-VIOLET TREATMENT, WHICH SHALL ENSURE THE FOLLOWING EFFLUENT QUALITY AT THE INSPECTION CHAMBER IN THE CHANNEL DOWNSTREAM OF THE TREATMENT PLANT: OF A GEOMETRIC MEAN OF FAECAL COLIFORMS PER 100ML OF EFFLUENT MUST BE 250 FC OR LESS. THIS LIMIT CAN BE REVIEWED IN THE EVENT OF EFFLUENT INPUTS. COMPLIANCE WITH THIS CLAUSE SHALL BE MEASURED ON THE BASIS OF A 50 SAMPLE ROLLING PROGRAMME AS APPLICABLE. 95% OF ALL SAMPLES SHALL BE LESS THAN 1000FC/100ML. IN THE EVENT OF A RESULT OF OVER 1,000FC/100ML, THE LICENSEE SHALL IMMEDIATELY CONTACT THE DEPARTMENT OF THE MARINE AND NATURAL RESOURCES TO AGREE THE NECESSARY ACTION."*

Assessment of Relevant Legislation Applicable to Midleton WWTP

The following assesses the relevant European Union Directives and Irish Statutory Legislation that is applicable to the discharge standards from the Midleton WWTP.

The Urban Waste Water Treatment Directive 91/271/EEC and Amendment Directive 98/15/EEC

The Urban Waste Water Treatment Regulations, (S.I. 254 of 2001) gives effect to provisions of the Urban Wastewater Treatment Directive (91/271/EEC). The 2001 Irish Regulations cover various requirements in relation to the collection and treatment of urban wastewater.

Article 4 (1) (c) states that '*In the case of urban waste water entering collecting systems, a sanitary authority shall provide treatment plants which provide for secondary treatment or an equivalent treatment by 31 December 2005, in respect of all discharges to freshwaters and estuaries from agglomerations with a population of between 2,000 and 10,000*.

The **Second Schedule (Part 1)** of the 2001 Regulations states that the Treated Effluent should have the characteristics shown in **Table 1.1** below.

Table 1.1 Treated Effluent Characteristics

Parameter	Concentration		Minimum % of Reduction
BOD_5	25.0	mg/l O_2	70-90
SS	35.0	mg/l	90
COD	125	mg/l 0_2	75

The **Third Schedule** of the 2001 Regulations gives a list of sensitive areas which in accordance with Article 4 (2) (a) for population equivalent above 10,000PE in sensitive areas require phosphorus and nitrogen consents in accordance the **Second Schedule (Part 2)**. The Owenacurra River/Estuary is not identified as a sensitive area and current the plant is design for a PE of 10,000 therefore this part of the regulation does not apply.

The **Fifth Schedule** of the 2001 Regulations gives a methodology for monitoring the final effluent from the WWTP. Item 3 states the minimum number of samples shall be taken according to the size of the treatment plant. For PE of between 10,000 to 49,999 12 samples shall be taken each year.

The sampling technique used should be flow proportional sampling and the Table in the Fifth Schedule of the 2001 Regulations stipulates the maximum permitted number of samples which can fail to conform in any given year; for example if 365 samples analysed over a one year period, 25 are permitted to fail, and the plant is still considered to be in compliance with the Regulations.

Urban Waste Water Treatment (Amendment) Regulations 2004 (S.I. No. 440 of 2004)

These Regulations amend the Waste Water Treatment Regulations, 2001 by-

a. Designating two additional areas (in Cork Harbour) as sensitive areas, and
b. Making some minor technical amendments

The Waste Water Treatment Regulations, 2001 impose requirements in relation to discharges from urban waste water treatment facilities and give effect to Directive No. 91/271/EEC (the Urban Waste Water Treatment Directive) and Directive No. 2000/60/EC (the Water Framework Directive)

Bathing Water Directive

Council Directive 76/160/EEC 1975 concerning bathing water quality and the associated Bathing Water Regulations (SI No 177 of 1998) lay down quality requirements for inland and coastal waters designated bathing areas. The quality standards rely predominantly on microbiological parameters. The Ballyancorra River/Estuary is not designated as a bathing water (nearest bathing water is at Fountainstown approximately 5 miles down stream of the final effluent outfall). Therefore there are no further refinements of the treated effluent characteristics listed in **Table 1.1** above arising from the Bathing Water Directive.

EU Shellfish Waters Directive (79/923/EEC); and EU Directive on Health Conditions and the Placing on the Market of Live Biovalve Molluscs (91/67/EEC) and associated amendments

There are two main EU directives relating to Shellfish Waters. These are the Shellfish Directive (79/923/EEC) as implemented by the Quality of Shellfish Waters Regulations 2006 (SI No 268 of 2006), and the Directive on Health Conditions and the placing on the market of Live Biovalve Molluscs (91/67/EEC) and its associated amendments.

The Ballyancorra River/Estuary is not designated, "Shellfish Waters", under the Quality of Shellfish Waters Regulations 2006. However the Ballyancorra River/Estuary flows to Cork Harbour, which is a licensed aquaculture area. The Department of Communications, Marine, and Natural Resources Live Bivalve Mollusce (Production Areas) Designation 2006 has confirmed that Cork Harbour, into which the Ballyancorra River/Estuary flows, is a licensed area for the cultivation of shellfish such as oysters as detailed in **Table 1.2** below.

Table 1.2 Designated Bivalve Mollusc Production Areas in Ireland - October 2006

Production Area	Boundaries	Bed Name	Species	Previous Classification	Current Classification
Cork Harbour	Between 8°16.4' W and 8° 15.6' W.	North Channel West	Oysters	B	B
	Between 8°14.6'W and 8°13.2'W.	North Channel East	Oysters	B	B
	Ahada Pier to Gold Point	Rostellan	Oysters	B	B

In accordance with the Live Bivalve Molluscs (Production Areas) Designation 2006 and Council Directive 91/492/EEC, Cork Harbour has a Category B status which means that shellfish from this area have to be treated in a purification centre or a relay bed before they can be placed on the market for human consumption. The water quality standards for Shellfish in Category B Waters is summarised in **Table 1.3** overleaf. The status of the shellfish waters is monitored on a monthly basis by the National Marine Institute.

Table 1.3 Requirements for Faecal Coliform levels for Live Bivalve Molluscs in Accordance with EEC Directive 91/492/EEC

Category of Waters	Faecal Coliforms /100g of Flesh	Compliance of Samples	Further Treatment
A- Immediate Human Consumption	<300	100% <300	Not Required
B- Human Consumption After Treatment	**300 - 6,000**	**90% < 6,000**	**Purification after Relaying**
C-Human Consumption After Treatment	6,000 - 60,000	100% < 60,000	Relaying for long period -Intensive Purification

Summary of Discharge Standards

Table 1.4 overleaf summaries the treatment standards that the Midleton WWTP is required to achieve to comply with European and Irish legislation and compares them to the standards adopted within the Foreshore Licence Application and the Memorandum of Agreement dated 22nd September 1999 which was signed between the Minister for the Marine and Natural Resources and Cork County Council.

Table 1.4 Summary of Discharge Standards

Parameter	European & Irish Legislation Standards & CEFAS Findings for Faecal Coliforms	Foreshore Licence Application & Memorandum of Agreement	Comments
BOD_5	25mg/l	20mg/l	Foreshore licence is a higher standard than EU/Irish Standards
SS	35mg/l	30mg/l	Foreshore licence is a higher standard than EU/Irish Standards
COD	125mg/l	-	Not stated on Foreshore licence but there is a relationship between BOD&COD
Total Nitrogen	-	15mg/l	>10,000PE in Sensitive areas or in areas of poor water exchange
faecal coliforms per 100ml of effluent	<300 faecal coliforms/100ml in 75% of all Samples	Geometric mean of <250 faecal coliforms/100ml and 95% of all Samples<1000 faecal coliforms/100ml	Foreshore licence is a higher standard than CEFAS findings

It can be concluded from the above that the standards set within the foreshore licence and the Memorandum of Agreement for Midleton WWTP are more stringent than the treatment standards set in European and Irish Legislation.

ATTACHMENT No G.2

COMPLIANCE WITH WATER QUALITY STANDARDS FOR PHOSPHORUS - PROGRAMME OF IMPROVEMENTS & ASSOCIATED DOCUMENTATION REQUESTED UNDER SECTION G.3 OF THE APPLICATION – Not Applicable

ATTACHMENT No G.3

IMPACT MITIGATION - PROGRAMME OF IMPROVEMENTS & APPROVED PROJECT FUNDING & TIMEFRAMES -SEE ATTACHMENT No B.10

ATTACHMENT No G.4

STORM WATER OVERFLOWS - PROGRAMME OF IMPROVEMENTS & APPROVED PROJECT FUNDING & TIMEFRAMES - SEE ATTACHMENT No B.10

SECTION H
DECLARATION

SECTION H: DECLARATION

Declaration

I hereby make application for a waste water discharge licence/revised licence, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by :_____ **Date :**_____
(on behalf of the organisation)

Print signature name: _____

Position in organisation:_____

SECTION I
JOINT DECLARATION – Not Applicable

SECTION I: Joint DECLARATION

Joint Declaration [Note1]

I hereby make application for a waste water discharge licence/revised licence, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Lead Authority

Signed by :_____ **Date :**_____
(on behalf of the organisation)

Print signature name: _____

Position in organisation:_____

Co-Applicants

Signed by :_____ **Date :**_____
(on behalf of the organisation)

Print signature name: _____

Position in organisation:_____

Signed by :_____ **Date :**_____
(on behalf of the organisation)

Print signature name: _____

Position in organisation:_____

Note 1: In the case of an application being lodged on behalf of more than a single water services authority the following declaration must be signed by all applicants.

ANNEX 2: Check List For Regulation 16 Compliance

Regulation 16 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) sets out the information which must, in all cases, accompany a discharge licence application. In order to ensure that the application fully complies with the legal requirements of Regulation 16 of the 2007 Regulations, all applicants should complete the following.

In each case, refer to the attachment number(s) of your application which contain(s) the information requested in the appropriate sub-article.

Regulation 16(1) In the case of an application for a waste water discharge licence, the application shall -		Attachment Number	Checked by Applicant ✓
(a)	give the name, address, telefax number (if any) and telephone number of the applicant (and, if different, of the operator of any treatment plant concerned) and the address to which correspondence relating to the application should be sent and, if the operator is a body corporate, the address of its registered office or principal office,	**B.1**	✓
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	**B.1**	✓
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,	**B.2**	✓
(d)	state the population equivalent of the agglomeration to which the application relates,	**B.9**	✓
(e)	specify the content and extent of the waste water discharge, the level of treatment provided, if any, and the flow and type of discharge,	**A.1 & D.1**	✓
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.	**F.1**	✓

Regulation 16(1) continued…/		**Attachment Number**	**Checked by Applicant ✓**
(g)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and, if Regulation 17 does not apply, provide details of the likely environmental consequences of any such discharges,	**E.3**	✓
(h)	in the case of an existing waste water treatment plant, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,	**E.4**	✓
(i)	describe the existing or proposed measures, including emergency procedures, to prevent unintended waste water discharges and to minimise the impact on the environment of any such discharges,	**G.1 & B.10**	✓
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,	**Not Applicable**	✓
(k)	give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit any pollution caused in such discharges,	**F.1**	✓
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,		
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.	**B.10**	✓
(n)	Any other information as may be stipulated by the Agency.		

Regulation 16(3) Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -		**Attachment Number**	**Checked by the applicant ✓**
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,	**B.8**	✓
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,	**NOT Applicable**	✓
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		
	(i) the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and	**B.2, B.3, B.4 & B.5**	✓
	(ii) the point or points at which monitoring and sampling are undertaken or are to be undertaken,	**B.3 & B.4**	✓
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		
Regulation 16(4) An original application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under Regulation 16(3) in hardcopy or in an electronic or other format as specified by the Agency.			
Regulation 16(5) For the purpose of paragraph (4), all or part of the 2 copies of the said application and associated documents and particulars may, with the agreement of the Agency, be submitted in an electronic format specified by the Agency.			
	Signed original.		✓
	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		✓
	1 CD of geo-referenced digital files provided.		✓
Regulation 17 Where a treatment plant associated with the relevant waste water works is or has been subject to the European Communities (Environmental Impact Assessment) Regulations 1989 to 2001, in addition to compliance with the requirements of Regulation 16, an application in respect of the relevant discharge shall be accompanied by a copy of an environmental impact statement and approval in accordance with the Act of 2000 in respect of the said development and may be submitted in an electronic or other format specified by the Agency			

	EIA provided if applicable		✓
	2 hardcopies of EIS provided if applicable.		✓
	2 CD versions of EIS, as PDF files, provided.		✓