



4654/101/YMcM

7th February 2011

Environmental Protection Agency – Headquarters,
Administration, Environmental Licensing Programme,
Office of Climate, Licensing & Resource Use,
P.O. Box 3000,
Johnstown Castle Estate,
Co Wexford

Re: Notice in accordance with Regulation 25(c)(ii) of the Waste Water Discharge (Authorisation) Regulations 2007
Castletown Agglomeration A0044-01

Dear Sir/ Madam,

Please find below the clarification as requested under your previous correspondence of 28th October 2010.

REGULATION 24 COMPLIANCE REQUIREMENTS

Query No.1. Confirm the design capacity of the waste water treatment plant and the current population equivalent (p.e.) being treated at the plant. Please confirm that the current p.e. included the maximum average weekly loading for the agglomeration having taken account of local festivals, peak holidays seasons, etc.

Clarification No.2 Castletown A0044-01

	Design Population Equivalent	Current Population Equivalent
Castletown Agglomeration	200	152

The Castletown waste water treatment plant caters for domestic and non-domestic waste water. The main non-domestic user is the local national school. The calculation of the population equivalent has taken into account the possible population fluctuations. It is not envisaged the Castletown would be subject to an increase in populations for events such local events or holiday seasons.

Query No.2. Provide the name of the receiving water body to which the effluent from the primary discharge point drains. Provide the National Grid References for the location where the drain/unnamed stream enters a significant water body and provide a suitable scaled map to show the primary discharge point, receiving water and associated drainage channels.

Clarification No.2 Castletown A0044-01

The effluent from the Castletown Primary Discharge point drains into the Killary River at National Grid Reference Point 287.866, 281.019. See attached drawing 4654/OL/07/07 and revised drawing contents page.

Please find attached the revised non-technical summary for the above agglomeration.

If you have any queries or comments, please do not hesitate to contact this office.

Yours sincerely,

A handwritten signature in dark ink, appearing to read 'Yvonne McMonagle', is written over a horizontal line.

Yvonne McMonagle

For: Jennings O'Donovan & Partners

Encl. /

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, where applicable, 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 N^o A.1**

Background

Castletown is located in County Meath, approximately 20km north of Navan. The village is accessed via the R162 from Navan to Carrickmacross or via the N52 from Kells to Ardee.

Castletown has approximately 75 houses of which 47 are served by a foul sewer network that discharges into a wastewater treatment system.

Sewer Network

The sewer system is separated in Castletown. The main foul sewer line is a 225mm diameter Concrete pipe which is considered sufficient to convey foul flows to the treatment system.

There is no storm overflow within the sewerage infrastructures in Castletown.

Existing Waste Water Treatment Works

The existing treatment system (activated sludge – 1974) is located adjacent to the housing estate at the end of Hillside Drive. It is closed off by a 2.0m high masonry wall.

It is estimated that the treatment system is designed on the basis of a population equivalent of approximately 200 p.e with the design parameters detailed as follow :

	Design	Current
Population Equivalent (p.e.)	200	152
Total BOD5	12 kg/d	9.1kg/d
Total Suspended Solids	14 kg/d	10.6kg/d

Total Dry Weather Flow	45 m ³ /day	34.2 m ³ /day
Total peak design flow to be treated (3DWF)	4m ³ /h	3.5m ³ /h

A search of planning applications for 2008 and 2009 revealed that there is no approved planning application proposing to connect to this sewerage scheme. Therefore no figure is allocated for pending development.

For the purpose of this application Meath County Council allocate some 21 p.e projected p.e.

The findings of the house count and short survey carried out as part of this application results in domestic population equivalent of 128 and a non-domestic population equivalent of 29 with the total population equivalent of 157.

Meath County Council carried out a flow and load survey for a 14 day period. The results of this survey indicate an average flow of 29.5m³/day. This equates to a population equivalent of 131 (225 l/h/day).

As mentioned above the design capacity of the Castletown waste water treatment plant is 200. The findings of the house count and non-domestic users estimates results in a population equivalent of 157. The treatment plant was designed to cater for 200 p.e. which equated to a spare capacity of 43 p.e.

The treated effluent standards have to comply with the current Urban Wastewater Treatment Regulations, 2001 (S.I. No. 254 of 2001) which gives further effect to EU Council Directives 91/271/EEC, 200/60/EC and 98/15/EC.

The Regulations require agglomerations with a P.E. of less than 2,000, which discharge to freshwater or estuaries to have "appropriate treatment". Appropriate treatment is defined in the Regulations as "treatment of urban wastewater by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and relevant provisions of the Directive and of other Community Directives".

The final effluent is sampled by Meath County Council every four months. The results for 2009 are summarised below:

- BOD range between 5.2 – 12.3mg/l
- COD range between 45.3 – 70mg/l
- TSS range between 10.4 – 29.2mg/l
- TP range between 0.62 – 2.09mg/l
- TN range between 6.26 – 13.9mg/l

The Local Government (Water Pollution) Act, 1977 (Water Quality Phosphorus) regulations, 1998 (S.I 258/1998) implements in part **EU Directive 76/464/EEC on pollution caused by substances discharged into the aquatic environment**. The regulations require that water quality has to be maintained or improved by reference to the Biological Quality (Q) Rating assigned by the EPA in 1997.

The Castletown Waste Water Treatment plant discharges into a small stream the feed into the Killary Water which is a tributary of the River Dee.

River Water quality results analysed by Meath County Council for 2007-2009 indicate that the quality of water within River Dee is presently meeting the standards for Q4 value for the upstream and downstream of the discharge point of the Castletown Waste Water Treatment Plant for BOD, Dissolved Oxygen and Annual Orthophosphate concentrations.

Based on the River Dee water quality and the treated effluent quality it can be seen that the Castletown wastewater treatment plant is operating efficiently.

A detailed description of the treatment plant is summarised below:

Aeration unit

Flows from the estate are discharged into a single tank with partition walls. Within the first part of the tank, biological assimilation of the waste water is achieved. Oxygen is provided by means of a surface aerator located next to the inlet.

The aeration unit of the tank is approximately 28m². The depth is 2.5 to 3m.

Settlement unit

Water from the aeration unit flows over a partition wall and reaches the settlement unit where sludge and treated water are being separated.

The settlement unit of the tank is approximately 10m². The depth is 2.0 to 2.5m.

Sludge pumping

Sludge from the settling process is being pumped and returns to the aeration unit in order to maintain the microbial population.

In the settlement unit, excess sludge is removed on a monthly basis by tanker for further treatment.

Treated Effluent

The treated effluent overflows from the settlement unit to the outlet manhole. Treated water is then discharged into a small stream.

Control system

The plant is equipped with a control kiosk for the aeration and pumping systems. In case of system failure, a radio signal is sent directly to the caretaker.



Comhairle Chontae Na Mí

Meath County Council

CASTLETOWN SEWERAGE SCHEME OUTFALL LICENCE APPLICATION

OUTFALL LICENCE APPLICATION

4654/OL/07/00

4654/OL/07/01

4654/OL/07/02

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Schedule of Drawings

Attachment A.1 - Site Location Map

Attachment B.1 - Agglomeration Outline Plan

Attachment B.2 - Existing Waste Water Treatment Facilities - Overall Site Plan

Attachment B.3 - Existing Primary Discharge Point

Attachment C.1 - Existing Waste Water Treatment Facilities - Layout Plan

Attachment F.1 - Designation Map

Attachment B.3-1 - Existing Primary Discharge Point / Receiving Water - Overall Plan

Notes

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING.
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE.
3. ENGINEER TO BE INFORMED OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES.

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client			
MEATH COUNTRY COUNCIL			
project			
CASTLETOWN SEWERAGE SCHEME			
stage			
WASTE WATER DISCHARGE LICENCE APPLICATION			
title			
SCHEDULE OF DRAWINGS			
scales			
N/A			
drawn	checked	approved	date
TC	YMcG	TMcG	Nov. 2009

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SLIGO.**

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