

This memo has been cleared for submission to the Board by Senior Inspector, Dr Karen Creed

Signed: Saig Smith Date: 10/10/11



OFFICE OF CLIMATE,
LICENSING & RESOURCE USE.

INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	DIRECTORS		
From:	Gavin Clabby	Environmental Programme	Licensing
Date:	27 th August 2011		
RE:	Application for a Waste Water Discharge Licence from Cork County Council for the Castletownsend Agglomeration, Reg. No. D0468-01		

Application Details	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 500 to 1,000
Licence application received:	22 nd June 2009
Notices under Regulation 18(3)(b) issued:	20 th April 2010
Information under Regulation 18(3)(b) received:	21 th June 2010, 26 th August 2010
Site notice check:	10 th August 2009
Site visit:	20 th December 2010
Submission(s) Received:	None

1. Background

1.1 Agglomeration

The Castletownsend Agglomeration constitutes the urban development of Castletownsend; a small village located on the sheltered narrow sea inlet of Castlehaven, which is part of the Rosscarbery Bay coastal water body. This sheltered bay is used for leisure boating and fishing. Castletownsend has a permanent population of about 188, which increases to over 400 with the summertime tourist influx.

This licence application was made by Cork County Council (Western Division) which is the Water Services Authority (WSA) for the Castletownsend agglomeration.

1.2 Waste Water Collection and Waste Water Treatment Systems

The existing collection system consists of an old stone culvert acting as a combined sewer, taking foul and surface water from the older properties fronting onto Main Street, as well as pavement run-off. The culvert discharges, without further treatment, directly into the harbour through an outfall adjacent to the boat slip.

Some older properties elsewhere in the village have individual septic tanks which discharge to soakaways or to the foreshore. A new development in the village has separate foul and surface water drainage and a dedicated treatment plant, which drains to an adjacent percolation area. However, none of these systems are considered part of the Castletownsend agglomeration waste water works. There are no EPA licensed facilities within the agglomeration. No significant fish processing occurs in the agglomeration. The Agency considers that the wastewater collected by the combined sewer referred to above, is domestic in nature and that the amount of industrial wastewater is negligible.

A new separate foul water collection system and wastewater (secondary) treatment plant (WWTP) was proposed for Castletownsend. The proposed collection system would cover a larger area of the village, while the proposed WWTP would provide secondary treatment. The scheme had received Part 8 planning; however, the scheme is not included in the Water Services Investment Programme 2010-2012. Although the scheme is included in Cork County Council's Assessments of Needs for 2013-2015, consultation with the DoEHLG Water Services Section indicates no likely commissioning date in the near future. Furthermore, the project has been unapproved as a Serviced Land Initiative scheme. This proposed plant, therefore, has not been considered for the drafting of the Recommended Licence (RL).

For reasons discussed in Section 3 below, *Condition 3.4* of the RL will require the applicant to provide primary treatment for the agglomeration.

1.3 Population Equivalent – Agglomeration

The peak population equivalent (p.e.) of the agglomeration was, at the time of application, estimated at 450. The p.e. for the purposes of this application is 643; being, at the time of application, the estimated p.e. at the latest date by which the licence must be reviewed (i.e. six years from grant of licence). As the application is for 500 to 1,000 p.e., a review of the licence will be required to accommodate a p.e. of over 1,000.

1.4 Design Population Equivalent - WWTP

There is currently no WWTP in the agglomeration under the control of the WSA.

1.5 Site Visit

A site inspection was undertaken as part of the site notice check on the 10th August 2009. A second site inspection was carried out on the 20th December 2011.

2. Discharges to waters

2.1 Existing Discharges.

The primary discharge, SW01 CEND, discharges untreated effluent into the receiving waters (Castlehaven, which forms part of Rosscarbery Bay). The application also makes a reference to a secondary discharge, SW02 CEND, to the south of the primary discharge along the quay wall. It collects foul water from eight houses and discharges 30 metres out into the bay. This is a small discharge which is conveyed a significant distance out in to the coastal waters of the harbour. Its impact is considered minimal and is not further assessed in this report. However, to further ensure the WFD objectives of 'good status' and 'no deterioration', *Schedule A.3* of the RL does require this discharge to cease by the 22nd December 2015. There are no storm water overflows within the agglomeration.

2.2 Discharges - Urban Waste Water Treatment Regulations

The existing discharges are to coastal waters from an agglomeration which is less than 10,000 p.e. Under Article 7 of the Urban Waste Water Treatment (UWWT) Regulations 2001 (SI No. 254 of 2001) the WSA is, for this agglomeration type and size, required to provide, what is defined therein as, 'Appropriate Treatment'. The WSA is not necessarily required to provide secondary treatment; the discharge limits listed in Part One of the Second Schedule in the above regulations do not automatically apply. Furthermore, Castlehaven is not designated a Sensitive Water, as listed in UWWT Regulations, as amended. Therefore, the requirements of Part Two of the Second Schedule do not apply.

'Appropriate Treatment' is defined in the UWWT Regulations as the: *"treatment of urban waste water by any process and/or disposal system which after discharge allows the receiving waters to meet the relevant quality objectives and the relevant provisions of the Directive and of other Community Directives"*. The relevant quality objectives and provisions for this receiving water are transposed into Irish law as the Surface Waters Regulations 2009 (SI No. 272 of 2009). Therefore, regardless of the level of treatment, the discharge shall be regarded as appropriately treated provided the quality of the receiving waters is in compliance with Surface Waters Regulations.

Notwithstanding the above and in line with Agency policy, *Condition 3.4* of the RL requires the applicant, as a minimum, to provide primary treatment by the 22nd December 2015.

3. Receiving waters and impact

The waters of Castlehaven (as part of Rosscarbery Bay) are designated as Coastal by the South Western River Basin District (SWRBD). The following table summarises the main considerations in relation to Castlehaven.

Table 3.0 Receiving waters

Characteristic	Classification	Comment
Receiving water name and type (for primary discharge)	(Castlehaven) Rosscarbery Bay, West Cork	Coastal Water IE_SW_110_0000 Sheltered harbour opening to exposed coastal bay.
Resource use	Fishing	-
Amenity value	Tourism	Angling, pleasure boating, whale watching excursions.
Applicable Regulations	Urban Waste Water Treatment Regulations 2001 (as amended) S.I. 254 of 2001 and S.I. 440 of 2004, SI 48 of 2010 EC Environmental Objectives (Surface Water) Regulations 2009 S.I. 272 of 2009	No Sensitive Water designation. Key Coastal Water Parameters: DO, DIN. Compliance discussed below.
Designations	None	-
WFD status	Unassigned	-
WFD Objective	None	-
WFD Risk Category	Unassigned	-

3.1 Quality of Receiving Waters

According to the Transitional and Coastal Action Plan (TraC) published by the South Western River Basin District (SWRBD) in 2010, the overall status of the Rosscarbery Bay Coastal Waters, of which Castlehaven forms a part, is 'Unassigned', with no overall objective specifically set for this waterbody. However, the Water Framework Directive (WFD) does require the prevention of further deterioration in all waterbodies, as well the achievement of good status in all water bodies by the 22nd December 2015 (derogations notwithstanding).

Monitoring data supplied by the applicant was based on one sample taken on a single date in May 2009; at a point 350 metres seaward of the discharge (see appendix). The data gives some indication of the quality of water in the region of the discharge. The applicant's limit of detection for the key coastal parameter of Dissolved Inorganic Nitrogen (DIN) is not sufficiently low to indicate compliance with the Surface Waters Regulations. (There was no result for the other key parameter, Dissolved Oxygen.)

3.2 Impact of Discharge on Receiving Waters

The value of the WSA monitoring data set is very limited, by virtue of the single sampling date and the insufficient resolution of the test methods. However, considering that the relatively small discharges from the agglomeration are the only known point discharges of any kind in Castlehaven and its environs, they are unlikely to be having any impact on the receiving water status. Basic conservative dispersion calculations show that there are approximately 1600 dilutions available within an arbitrarily set distance of 50 metres from the primary discharge point. This dilution capacity would accommodate a discharge DIN concentration of 400 mg/l N while still achieving (within 50 metres) the Surface Waters Regulation's Good Status limit of 0.25 mg/l N in the receiving water. Considering that the DIN concentration in the discharge in May 2009 was just 3.2 mg/l N, it would seem very likely that good status conditions prevail in the vicinity of the primary discharge. Good status conditions would be more likely again upon the provision of primary treatment. It is concluded, therefore, that primary treatment, in this instance, is Appropriate Treatment.

4. Monitoring

4.1 Discharge

Due to the onerous nature of sampling and analysing raw effluent, as well as considering the relatively low value of the subsequent analysis data for the existing waste water works, there is no requirement in the RL for monitoring the current primary discharge. Upon upgrading the works to primary treatment the applicant must, as per *Schedule B.1* and *Condition 4.14* of the RL, monitor the primary discharge (and influent) for cBOD and Suspended Solids, at intervals of every two months. However, providing the applicant can demonstrate, by agreement with the Agency, compliance with the standards for primary treatment as defined in Article Two of the Urban Wastewater Treatment Directive 91/271/EEC, by means other than sampling, the requirements of *Schedule B.1* and *Condition 4.14* shall not apply.

4.2 Ambient

An improved level of ambient monitoring may be beneficial for the harbour. This may not only be helpful in ensuring the universal WFD objective of 'no deterioration', but also helpful in more accurately determining a suitable location for the extended outfall. *Condition 4.15* of the Recommended Licence requires the WSA to review the requirements for ambient monitoring.

5. Assessment Summary and Conclusion

The SWRBD (TraC) reports the water quality status of Rosscarbery Bay, of which Castlehaven forms a part, as 'Unassigned'. Consequently, there is no 'restore/maintain' WFD objective or target date for the water body. Basic dispersion calculations show that good status conditions very likely prevail in the vicinity of the discharge. Therefore, the discharge is very likely to be already receiving 'Appropriate Treatment' as defined under the UWWT Regulations; despite the fact there is no treatment in place. However, the Agency takes the view that, notwithstanding the likely impact of the current discharge on the receiving waters, primary treatment, as a minimum, must be provided for coastal discharges; thereby further ensuring Appropriate Treatment is being provided.

The RL does not set Emission Limit Values (ELVs) for the discharge, as there is currently no treatment process to be controlled. Similarly, no ELVs shall be required for the primary treatment to be installed in the agglomeration. However, this primary treatment will have to meet the standards (percentage reductions of cBOD and Suspended Solids) defined for Primary Treatment in Article Two of the Urban Wastewater Treatment Directive (91/271/EEC). This requirement is given effect by *Condition 3.4* and *Schedule A.1* of the RL.

The RL also requires an improved ambient monitoring regime, which will help give a more accurate assessment of the impact of the Castletownsend discharge on Castlehaven.

6. Combined Approach

The Waste Water Discharge Authorisation Regulations, 2007 specify that a 'combined approach' in relation to licensing of waste water works must be taken, whereby the emission limits for the discharge are established on the basis of the stricter of either or both, the limits and controls required under the Urban Waste Water Treatment Regulations (S.I. No. 254 of 2001) where relevant, and the limits determined under statute or Directive for the purpose of achieving the environmental objectives established for surface waters, groundwater or protected areas for the water body into which the discharge is made.

7. Programme of Improvements

As previously stated *Condition 3.4* of the RL requires the applicant to provide primary treatment for the agglomeration, by the 22nd December 2015.

Furthermore, the old stone culvert, which acts as the main sewer is to be upgraded to prevent leaks and infiltration, as well to separate the surface water. This upgrade will also include the extension of the outfall to an appropriate location and distance into the harbour.

The above, and other improvements, must be carried out in accordance with *Schedule C.1* of the RL.

8. Compliance with EU Directives and EC Environmental Objectives Regulations

In considering the application, regard was held for the requirements of Regulation 6(2) of the Waste Water (Discharge) Authorisation, Regulations, 2007 (S.I. No. 684 of 2007) notably:

Drinking Water Abstraction Regulations

The Castletownsend agglomeration discharges to coastal waters. Therefore, there are no water abstraction points and the above regulations do not apply.

Sensitive Waters

Castlehaven is not designated as a Sensitive Water under the UWWT Regulations (Amendment) 2004. Therefore, the UWWT Regulations, 2001 limits for Total Phosphorous and Total Nitrogen limits do not apply.

Water Framework Directive [2000/60/EC]

The RL, as drafted, transposes the requirements of the Water Framework Directive. In particular, *Condition 3.3 and 3.5 Discharges* and *Condition 4.15 Ambient Monitoring*, require regulation and monitoring of the discharges to water, with the aim of preventing deterioration of the water quality.

EIA Directive [85/337/EEC]

An EIS was not submitted with the licence application and should one be required as part of any upgrade, programme of improvements or any new WWTP, it will be dealt with as per Condition 1.8 of the RL.

European Communities Environmental Objectives (Surface Water) Regulations 2009, S.I. No. 272 of 2009

The RL, as drafted, transposes the requirements of these regulations. In particular, *Condition 3.3 and 3.5 Discharges* and *Condition 4.15 Ambient Monitoring*, require regulation and monitoring of the discharges to water, with the aim of preventing deterioration of the water quality.

European Communities Environmental Objectives (Groundwater) Regulations 2010, S.I. No. 9 of 2010

The above regulations do not apply as there are no discharges to ground from the waste water works.

Urban Waste Water Treatment Directive [91/271/EEC]

The Agency is of the opinion that Castletownsend currently complies with the requirements of the Urban Waste Water Treatment Directive, in terms of the level of treatment provided. (However, primary treatment, as a minimum, will be required. The RL requires the WSA to determine what level of treatment is required, and furthermore requires the WSA to provide this treatment.) No ELV's or monitoring frequencies are specified in the Directive for an agglomeration of this type and size. Therefore, the RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

Bathing Water Directive [2006/7/EC]

Castlehaven is not designated as a Bathing Water; and there is no bathing activity in the vicinity of the existing discharges. No further measures are required to comply with the above directive.

EC Freshwater Fish Directive [2006/44/EC]

The Castletownsend agglomeration discharges to coastal waters. Therefore, the above directive does not apply.

Shellfish Waters Directive [2006/113/EC]

There are no designated Shellfish Waters in the vicinity of the Castletownsend agglomeration discharge. Therefore, the above directive does not apply.

Dangerous Substances Directive [2006/11/EC]

The applicant has provided sampling results for 19 of the 19 dangerous substances in the primary discharge for the purposes of the licence application. The measured concentrations are not considered significant. The initial screen for the application is therefore considered sufficient and the agglomeration is compliant with the Dangerous Substances Directive.

Birds Directive [79/409/EEC] & Habitats Directive [92/43/EEC]

There are no water dependent SAC's or Special protected Areas (SPA's), in the vicinity of the harbour. Therefore, the above directives do not apply.

9. Cross Office Liaison

I consulted with Shane O'Boyle of the EPA's Office of Assessment in relation to the quality of the receiving waters. Advice and guidance issued by the Technical Working Group (TWG) was followed in my assessment of this application. Advice and guidance issued by the TWG is prepared through a detailed cross-office co-operative process, with the concerns of all sides taken into account. The Board of the Agency has endorsed the advice and guidance issued by the TWG for use by licensing Inspectors in the assessment of wastewater discharge licence applications.

10. Charges

The RL sets an annual charge for the agglomeration at €2876.12 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

11. Recommendation

I recommend that a Final Licence be issued subject to the conditions and for the reasons as set out in the attached Recommended Licence.

Signed



Gavin Clabby

Office of Climate, Licensing and Resource Use

Appendix



