

This memo has been cleared for submission to the Board by the Snr Inspector, Dr Karen Creed
 Signed: Sanya Smith Date: 16/11/10

		OFFICE OF CLIMATE, LICENSING & RESOURCE USE.	
INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION			
To:	DIRECTORS		
From:	Gavin Clabby	Environmental Programme	Licensing
Date:	09 th November 2010		
RE:	Application For A Waste Water Discharge Licence From Cork County Council For The Glengarriff Agglomeration, Reg. No. D0471-01		

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:	23 rd April 2010
Information under Regulation 18(3)(b) received:	21 th June 2010
Site notice check:	13 th July 2009
Site visit:	12 th October 2010
Submission(s) Received:	None

1. Agglomeration

The Glengarriff Agglomeration constitutes the urban development of Glengarriff village. Glengarriff is a coastal tourist centre, located on the N71 National Route between Kenmare and Bantry, overlooking the cove of Glengarriff Harbour. The harbour is comprised of approximately 4 km² of sheltered waters (see appendix); set back from the more exposed coastal waters of Bantry Bay. The harbour is a candidate Special Area of Conservation (cSAC) and a designated area under the Quality of Shellfish Waters Regulations, 2006 as amended.

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

1.2 Waste Water Collection System

According to the applicant, the agglomeration has an extensive collection system, and has both pumped and gravity systems within the network. There are two pumping stations in the agglomeration under the control of the WSA. The first pumping station (P1) is adjacent to Glengarriff Bridge beside the Castletownbere Road. It collects effluent from the western portion of the village, including effluent pumped from a privately owned pumping station

servicing a small housing development. The second station (P2) is located at the tidal pond close to the Eccles Hotel and collects effluent from the eastern portion of the village. The extent of combined sewer in the network is not known, however, the application states there are no storm water overflows (SWOs) associated with this sewerage scheme. Condition 4.10 of the RL specifies the WSA to assess the requirement for SWOs in the agglomeration.

According to the applicant, the preliminary report, prepared on behalf of the WSA, and which is currently with the Department of the Environment, Heritage and Local Government (DoEHLG) for approval, includes details for upgrading and extending the sewer network, upgrading the existing pumping stations and constructing a new outfall.

1.3 Waste Water Treatment

The existing waste water treatment plant (WWTP) is located 250 metres west of the pier, between the main road and the shoreline. The treatment process is a primary sedimentation system (septic tank). The capacity of this tank is 209 m³. According to the applicant, the preliminary report includes details for a proposed new WWTP which will be adjacent to the septic tank. The Appropriate Assessment submitted with the application includes an indicative drawing for the proposed WWTP, which details secondary treatment (Sequence Batch Reactors) and a disinfection system.

1.4 Population Equivalent (p.e.) – Agglomeration

The current p.e. for the agglomeration is approximately 750. The predicted p.e. for 2015, based, at the time of application, on population projections for the lifetime of the Recommended Licence (RL), would be approximately 990. Subsequently, the p.e. for the purposes of this application is less than 1,000. A review of the licence will be required to accommodate a loading of over 1,000 p.e.

1.5 Design Population Equivalent - WWTP

The current treatment works (septic tank) has a capacity of 209 m³, which equates to a design p.e. of 1,000. According to the applicant, the preliminary report includes details of a proposed new WWTP, which will cater for a population equivalence of 2,500.

1.6 Site Visit

A site inspection was undertaken on the 12th October 2010, followed by a meeting with Niall O'Mahony, Orla O'Brien and Ger Murphy of Cork County Council at their offices in Skibbereen, Co. Cork, to discuss and clarify issues arising from this licence application assessment, with particular regards to monitoring requirements.

2. Discharges to waters

2.1 Existing Discharges.

The primary discharge, SW01 GLEN is the outfall from the septic tank and discharges into the harbour below the low tide level 190 metres to the west of the pier.

There are no secondary discharge points in the agglomeration.

The agglomeration has no designated storm water overflow discharge points (SWO's). The two pumping stations, P1 and P2, have associated emergency overflows. The overflow at P1 (Glengarriff Bridge) is piped to the Glengarriff River before discharging to the Harbour 300 metres away. The overflow at P2 (Eccles Hotel) discharges to the adjacent tidal pond. There are no balancing or retention tanks mentioned in the application. However, there is currently 25% spare capacity within the tank to accommodate some additional hydraulic flow. Condition 4.10 requires the licensee to submit to the Agency an assessment of the requirement for storm water overflows in the agglomeration. The design of any required SWO's should be in accordance with in the DoEHLG 'Procedures and Criteria in Relation to Storm Water Overflows', 1995 and any other guidance as may be specified by the Agency.

2.2 Proposed Discharges.

The Appropriate Assessment, submitted with the application, includes details on the upgrading of the existing pumping stations and the construction of a new outfall pipe from the proposed WWTP, which is to be constructed adjacent to the existing septic tank. The assessment also includes indicative drawings and details of a proposed WWTP; these details indicate that the effluent would be of sufficient standard to meet the limits for secondary treatment laid down in part one of the Second Schedule in the Urban Waste Water Treatment (UWWT) Regulations, 2001. The details also suggest that disinfection would be provided and that discharge standards for phosphorous and nitrogen would be considered following the outcome of the preliminary report's dispersion modelling.

2.3 Discharges - Urban Waste Water Treatment Regulations

The existing (and proposed) discharges are to Transitional Waters from an agglomeration of less than 2,000 p.e. (750). Under Article 7 of the UWWT Regulations, as amended, the WSA, for this agglomeration type and size, is required to provide 'Appropriate Treatment', as defined therein. The WSA is not necessarily required to provide secondary treatment, and therefore, the discharge limits listed in part one of the second schedule of the regulations do not automatically apply. Glengarriff Harbour 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 directives, as transposed into Irish law, for this receiving water, are the Surface Waters Regulations 2009 and the Shellfish Waters Regulations 2006, as amended. Therefore, the discharge would be regarded as *appropriately treated* provided the quality of the receiving waters is in compliance with Surface Waters Regulations and the Shellfish Regulations. Appropriate Treatment, therefore, may include secondary or tertiary treatment, including disinfection. Conditions 3.1, 3.3 and 5.2 of the RL requires the licensee to identify appropriate improvements to the sewerage system, including the waste water treatment plant, that are necessary to ensure all discharge(s) from the agglomeration contribute towards achieving at least good status in accordance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009, as well as any other relevant water quality objectives.

3. Receiving waters and impact

The waters of Glengarriff Harbour are designated as Transitional by the South Western River Basin District (SWRBD). The following table summarises the main considerations in relation to Glengarriff Harbour of the primary discharge.

Table 1.0 Receiving waters

Characteristic	Classification	Comment
Receiving water name and type	Glengarriff Harbour, Bantry Bay, West Cork	Transitional Water (salinity ~23 psu). IE_SW_170_0400 Sheltered harbour opening to exposed coastal bay.
Resource use	Shellfish Harvesting	Mussels
Amenity value	Tourism	Pleasure Boating, Ferry Point.
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 EC (Quality of Shellfish Waters) Regulations 2006 (as amended) S.I. 268 of 2006, S.I.s 55 and 464 of 2009 EC Regulation 854/2004 and SI 335 of 2006	No Sensitive Water designation. Key Transitional Water Parameters: BOD, DO, MRP Shellfish Waters approx 60 m from existing primary discharge (using GIS) Classified as direct discharge in Glengarriff Characterisation Report. Classified B for Mussels (June 2010).
Designations	Shellfish Waters SAC/NHA 00090	Glengarriff Shellfish Area Glengarriff Harbour and Woodland Direct discharge
WFD status	Moderate	
WFD Objective	Restore 2021	Status Year: 2008
WFD Risk Category	Not at risk	
WFD protected areas	Glengarriff harbour Shellfish Waters	See above See above

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 Glengarriff Harbour Transitional Waters is moderate, with the overall objective set to restore to good status (by the year 2021). This overall status is not based on general conditions or chemical status, but

rather is an extrapolated status. However, the overall risk is set at 'not at risk'. The TraC identifies no key pressures for the water body (i.e. the Glengarriff WWTP is not considered as impacting on the status of the receiving water body)

According to the Glengarriff Pollution Reduction Programme (PRP) which was also issued in 2010, and in accordance with Quality of Shellfish Waters Regulations, the results of monitoring undertaken for the purposes of these regulations do not indicate any water quality issues within the vicinity of this shellfish area. The PRP also states that results of WFD monitoring do not indicate any water quality issues within/in the vicinity of this shellfish area. Monitoring of shellfish flesh for the purposes of food hygiene indicates low levels of faecal contamination in this shellfish area; the bivalve mollusc production areas in Glengarriff are classified as 'Class B' for the purposes of EC Regulation 854/2004, thereby indicating a limited amount of faecal contamination. Available shellfish samples at this shellfish area are all in compliance with the Shellfish Waters Regulations guideline value for faecal coliforms.

Monitoring data supplied by the applicant was based on a single sample taken in May 2009, at a point 450 metres further east along the shore (see appendix). The value of this data set is somewhat limited considering the single sampling date. Nevertheless, the results indicate compliance with the Surface Waters Regulations for the relevant general condition parameters for Transitional Waters, Biological Oxygen Demand and Orthophosphate. (There were no sample results for the remaining general condition parameter, Dissolved Oxygen.) The WSA must assess the location, frequency and other requirements for ambient monitoring, as provided for in *Schedule B: Monitoring and Condition 4.14* of the Recommended Licence.

3.2 Impact of Discharge on Receiving Waters

As mentioned above the Characterisation Report and PRP for Glengarriff states that there are no key pressures affecting the Shellfish Waters. This suggests that the current WWTP is not having an impact on the harbour for the key parameter of faecal coliforms. However, as discussed in Section 3.1 above, the Glengarriff Characterisation Report and PRP state that there is some microbiological shellfish flesh contamination in the general bay area but the source was not identified.

As no key pressures were identified, no measures were identified in the Glengarriff PRP for the WWTP. Correspondence from the SWRBD, included in the application, suggests a range of measures (such as lunar discharging and UV disinfection), which may be necessary, but would otherwise depend on the outcome of further assessment.

The preliminary report includes dispersion modelling for faecal coliforms. This modelling indicates that tidal movements within the harbour are slack, and particularly so near the current outfall. This results in a high bacteriological impact in the vicinity of the current discharge, but very low at the current licensed shellfish bed areas (see appendix).

Conditions 5.6 and 5.7 of the RL require the WSA, in consultation with designated public authorities, to assess the discharge's impacts on the Shellfish Waters, as well as assess the requirements for disinfection, where appropriate. *Condition 3.3* of the RL specifies that the WSA must take measures, as are necessary to ensure that no deterioration in the quality of the receiving waters should occur as a result of the discharge. These conditions are considered appropriate to ensure, that prior to the completion of the proposed WWTP (and discharge point), the current septic tank is properly maintained and providing basic primary treatment, thereby minimising the load in the confined, slack tidal waters of the inner harbour.

With the increased level of wastewater treatment required in the RL and a more open discharge location, the proposed discharge is very likely to improve the quality of Glengarriff harbour water and further reduce the risk to the Shellfish Waters and the WFD objectives. *Schedule A.1* sets Emission Limit Values (ELV's) for the primary discharge which will apply upon completion of the proposed WWTP or from the 22nd December 2020 (whichever is the sooner). In addition to the ELV's specified in part one of the second schedule of the UWWT

Regulations, Schedule A.1 also specifies ELV's for Orthophosphate and DIN/TON/Ammonia, in line with other coastal/transitional discharges licensed by the Agency.

4. Monitoring

4.1 Discharge

Due to the onerous nature of sampling and analysing, what is essentially, raw effluent, as well as considering the relatively trivial nature of the subsequent analysis data, there will be no requirement in the RL for monitoring the current discharge. (As indicated in section 3.2 above, proper maintenance of the septic tank should be sufficient to ensure optimum primary treatment.) Upon completion of the proposed WWTP, monitoring should be in accordance with *Schedule B.1* of the RL.

4.2 Ambient

An improved level of ambient monitoring may be beneficial for the harbour for the remainder of the current WWTP's lifetime, as well as for the proposed WWTP and discharge. This may not only be helpful in ensuring the WFD objective of 'no deterioration', but also helpful in protecting and improving the current quality of the Shellfish Waters. Monitoring data from the WFD or Shellfish Directive Programmes may be sufficient for this purpose. The WSA must assess the requirements for monitoring and should implement any changes in agreement with the Agency, as provided for in *Schedule B.4* and *Condition 4.14* of the Recommended Licence.

5. Combined Approach

The Waste Water Discharge Authorisation Regulations, 2007 (S.I. No. 684 of 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) 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. The RL as drafted gives effect to the principle of the Combined Approach as defined in S.I. No. 684 of 2007.

6. Programme of Improvements

A proposed wastewater treatment plant (WWTP) is to be constructed. The new WWTP will provide preliminary and secondary treatment or their equivalent; to achieve the discharge standards set in part one of the second schedule of the UWWT Regulations. The WWTP should also provide disinfection, if required (as per Conditions 5.6 and 5.7 of the RL). The RL specifies that the WWTP and ancillary works (including the upgrading of current SWO's) must be complete by 22nd December 2020, to help Glengarriff Harbour achieve 'good status' by the TraC Action Plan deadline of 2021.

7. Compliance with EU Directives

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

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

Sensitive Waters

Glengarriff Harbour 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. Discharges*, provides conditions regulating discharges to water, while *Schedule A: Discharges*, specifies limit values for those substances contained within the wastewater discharge. Those limits specified in the RL are determined with the aim of restoring to good water quality status.

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

Condition 5 and the ELV's set in *Schedule B* of the RD satisfy the requirements of the above regulations, in particular, Article 7 and the relevant parameters listed in Schedule 5 of said regulations.

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

Glengarriff complies with the requirements of the Urban Waste Water Treatment Directive in terms of the level of treatment provided. The RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

The current and proposed WWTP, as required by Annex 1.D of the Urban Waste Water Treatment Directive, are required to provide appropriate treatment for the agglomeration. Glengarriff currently complies with the requirements of the Urban Waste Water Treatment Directive, in terms of the level of treatment provided (i.e. Appropriate Treatment as defined therein). No ELV's or monitoring frequencies are specified in the Directive for an agglomeration of this type and size. The RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

Bathing Water Directive [2006/7/EC]

Glengarriff Harbour is not designated as a Bathing Water, although there is some bathing activity in the vicinity of the existing and proposed discharges. However, no further measures are required to comply with the above directive.

EC Freshwater Fish Directive [2006/44/EC]

The Glengarriff agglomeration discharges to transitional waters. Therefore, the above directive does not apply.

Shellfish Waters Directive [2006/113/EC]

The Glengarriff agglomeration discharges 60 metres from the boundary of the Glengarriff designated Shellfish Waters. The Characterisation Report for Glengarriff does not include the Glengarriff WWTP (septic tank) as a key pressure affecting the Shellfish Waters. This is reflected in the Glengarriff PRP, which has no requirement for upgrading the current WWTP as a basic measure. However, Conditions 4.16, 5.6 and 5.7 of the RL require the WSA, in

consultation with designated public authorities, to further assess the discharge's impacts on the Shellfish Waters and to install UV disinfection where appropriate.

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]

An Appropriate Assessment was undertaken for this site and was submitted with this licence application. There are discharges from the Glengarriff agglomeration directly into Glengarriff Harbour and Woodland cSAC, as designated under the E.U. Habitats or Birds Directives. The assessment concludes that the current discharge is leading to localized water quality issues in the harbour, but positive impacts are likely for water quality, following the upgrade of the WWTP.

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.

8. Submissions

No submissions were received in relation to this application.

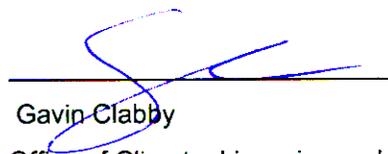
9. Charges

The RL sets an annual charge for the agglomeration at €1,430 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

10. 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



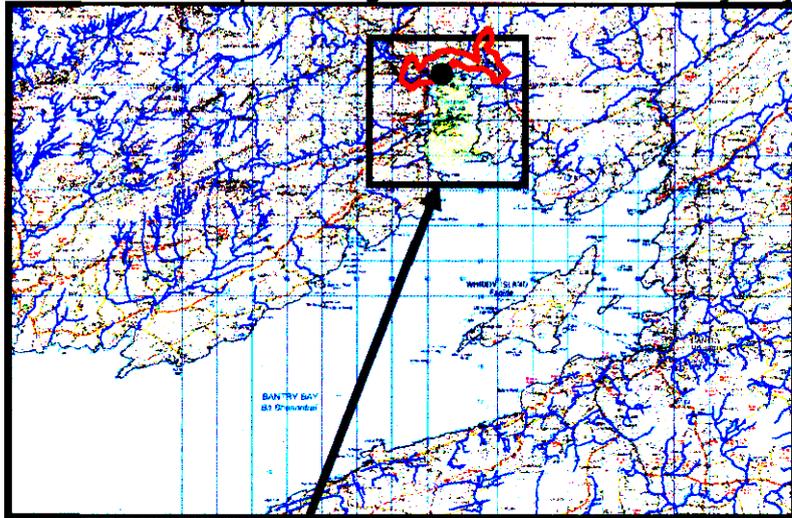
Gavin Clabby

Office of Climate, Licensing and Resource Use

Appendix

Map 1: Glengarriff Harbour and Bantry Bay

Glengarriff primary discharge (SW01 Glen) ●
Current WSA Monitoring Point (SW01d) ◆
Shellfish Regulations Monitoring Point ◆
Agglomeration Boundary ~~~~~
Site of Existing and Proposed Waste Water Treatment Plant ○
Shellfish Water [Blue shaded area]
Licensed Shellfish Beds (DAFF) ▭
Strong Tidal Flow ↑
Weak Tidal Flow ↑



Map 2: Glengarriff Harbour

