This Report has been cleared for submission to the Board by the Programme Manager F Clinton
Signed: N Kearey **Date:** 16/7/09

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

OFFICE OF CLIMATE, LICENSING & RESOURCE USE.

INSPECTORS REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	DIRECTORS	
From:	Aoife Loughnane	**Environmental Licensing Programme**
Date:	13th July 2009	
RE:	Application for a Waste Water Discharge Licence from Donegal County Council for the **Donegal Town & Environs** Agglomeration, Reg. No. D0135-01	

Application Details	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of 2,001 to 10,000.
Licence application received:	22/09/2008
Notices under Regulation 18(3)(b) issued:	06/02/2009
Information under Regulation 18(3)(b) received:	17/04/2009
Supplementary information received:	10/07/2009
Site notice check:	09/10/2008 - Martin Kerr, OEA
Site visit:	22/01/2009
Submissions Received:	One - Northern Regional Fisheries Board

1. Agglomeration

Donegal Town is located at the mouth of the River Eske in south-west County Donegal. The town has developed as a strong market town with substantial industrial employment provided by Abbott Ireland, manufacturers of medical supplies, and Magee clothing manufacturers. Tourism has become increasingly important to the town in recent years. The core of the agglomeration is predominantly served by a combined sewerage system, while the extremities are generally served by separate foul and surface water systems.

The population equivalent (p.e.) of Donegal Town and Environs agglomeration is reported to be 6,566 p.e., based on flow records for June 2008. A new secondary waste water treatment plant (WWTP) was commissioned in June 2008, in conjunction with new sewers which have intercepted and eliminated the discharge of untreated and partially treated waste water into the Eske Estuary. The design capacity of the WWTP is 12,000 p.e., for the year 2028. The sources and quantities of waste water arising within the agglomeration are shown in Table 1 below. The make-up of the existing waste water load is approximately 51% domestic, 20% industrial, 16% commercial and 13% institutional. A landfill leachate load of 100 p.e. is identified in the make-up of the 12,000 p.e. WWTP design capacity. This equates to less than 1% of the design p.e. To date, there have only been a few occasions when leachate has been brought to Donegal Town WWTP for treatment.

Table 1: Population Equivalent constituents, 1998 and design year 2028

Sector	1998 p.e. Note 1		2028 Design p.e.	
Domestic	2,944	51%	4,481	38%
Industrial	1,171	20%	3,421	29%
Commercial	900	16%	1240	11%
Institutional	760	13%	970	8%
Tourism Development	--		1,500	13%
Landfill Leachate	--		100	<1%
Total	**5,775**	**100%**	**11,712**	**100%**
Rounded up			**12,000**	

Note 1: Data taken from EIS for Donegal Main Drainage, Waste Water Treatment Works, January 1999

There are four pumping stations on the sewer network. The main pumping station is located at the New Pier. All flows arriving at the main pumping station receive coarse screening. Flows of up to 6 times the dry weather flow (6xDWF) are pumped 3.6 km via rising mains to the WWTP. During heavy rainfall, when flows entering the main pumping station exceed 6xDWF, the excess flow receives fine screening prior to overflow to the main channel of the estuary.

The WWTP is located in the townland of Drumkeeghan, 3.5km west of Donegal town. Of the 6xDWF conveyed to the WWTP from New Pier pumping station, a maximum of 3xDWF (0.105 m^3/s) receives full treatment and an additional 3xDWF can be directed to storm water holding tanks (capacity 756m^3) and returned for treatment when the storm has passed. Treatment consists of screening, grit removal, primary settlement, biological aeration and secondary settlement. The WWTP is required to achieve the Urban Waste Water Treatment Regulations, 2001, standards:- 25mg/l BOD, 125mg/l COD and 35 mg/l Suspended Solids. The installation of UV disinfection facilities at a future date has been accommodated in the plant design, if deemed necessary following detailed sampling and analysis to establish background bacteriological concentrations, treatment plant performance and water quality in the Eske Estuary. The regional Sludge Treatment Centre for south west Donegal is located at the WWTP.

An Environmental Impact Statement for Donegal Town WWTP and Sludge Hub Centre was certified by order from an Bord Pleanála on 26th October 1999.

Effluent monitoring at the WWTP inlet and outlet is carried out on a monthly basis. The average measured effluent concentrations from December 2008 to May 2009 are shown in Table 2. The results indicate that the WWTP complies with the Urban Waste Water Treatment Regulations 2001, as amended.

Table 2: Average Effluent Concentrations at WWTP intake & outlet, December 2008–May 2009

Parameter	BOD mg/l	COD mg/l	Suspended Solids mg/l	Total P mg/l	Ortho P mg/l	Ammonia mg/l as N
Intake	63.75	340	157	1.18	0.317	7.68
Outlet	4.9	49	7.95	0.57	0.046	2.38
% Reduction	92%	86%	95%	52%	85%	69%

Donegal Town WWTP was constructed as part of the *Donegal Bay Waste Water Management Scheme Group A – Donegal Town, Ballyshannon & Rossnowlagh.* This project was included in the Water Services Investment Programme 2007–2009 at an estimated cost of €30.2 million. The implementation of the new sewerage scheme will ensure a significant reduction in organic and bacteriological loading to the Eske Estuary and Donegal Bay.

The legislation under which the discharges form the waste water works are to be licensed does not provide any regulatory powers with regard to odour, noise or management of the waste water works infrastructure. Therefore, the Recommended Licence (RL) does not specifically refer to, or set operating conditions in relation to these areas.

2. Discharges to Waters

Primary Discharge

The primary discharge is the discharge of treated effluent from the WWTP to the Eske Estuary at a location 3km south-east of the WWTP and 70m off Revlin Shore in Inner Donegal Bay. The outfall operates on a continuous basis, with the treated effluent discharged via a six-port diffuser. The diffuser runs along the main river channel in a direction perpendicular to the direction of river flow, and is under water even at low tide. The primary discharge has a reported maximum daily flow of 1,765 m^3/day. *Schedule A.1* of the RL sets the following effluent emission limit values on the primary discharge. Monitoring results for the primary discharge submitted by Donegal County Council demonstrate that these limits are easily achievable (see Table 2).

Table 3: Primary Discharge - Emission Limit Values

Parameter	Proposed Emission Limit Value	Waste Water Treatment Regulations Standards
cBOD	25 mg/l	25 mg/l
COD	125 mg/l	125 mg/l
Suspended Solids	35 mg/l	35 mg/l
Ammonia	5 mg/l	---

Secondary Discharge

Donegal County Council did not identify any secondary discharges in the agglomeration. However, following a submission received from the Northern Regional Fisheries Board (see section 10 of this report), it has become apparent that there is a discharge from a Donegal County Council package waste water treatment plant serving a number of houses in the townland of Drumrooske Middle to an open field drain which feeds into the River Eske. According to the NRFB, the unit has a long history of unsatisfactory performance and regularly produces an effluent which is unacceptable and indicates that the system is not operating to its design specification.

Donegal County Council has responded to the NRFB's submission in their Regulation 18(3)(b) response dated 17th April 2009. They state that the discharge from this package treatment plant is due to be connected to the main sewer network. The new section of sewer is currently under construction and is 75% complete. Donegal County Council identify that there are difficulties with the purchase of land required for the final section of sewer. This is to progress by compulsory purchase order which may delay the connection by some months, therefore no definite date for connection is proposed by the applicant. I have included this discharge in the RL as a secondary discharge, which shall be connected to the main drainage scheme within one year of the date of grant of the licence.

Stormwater Overflows (SWOs)

There is one SWO on the sewer network, located at New Pier pumping station, which is activated during storm conditions when flows exceed 6xDWF. Donegal County Council state that this device complies with the definition of a SWO, as per DoEHLG design criteria *'Procedures and Criteria for Storm Water Overflows'* (1995). There is a second SWO from the storm tanks at the WWTP which activates when the tanks exceed their holding capacity. This SWO joins the treated effluent and discharges into the estuary via the primary discharge point. *Schedule A.4* of the RL requires that all SWOs comply with DoEHLG criteria.

Emergency Overflows (EOs)

There are four pumping stations on the sewer network; New Pier (main pumping station), Drumark, Tullaghcullion and Brookfield. The latter three are fitted with sump overflow alarms which are monitored. Standby generators are provided to ensure operation of the pumps in the event of power failure. Condition 5.2(d) of the RL requires the licensee to assess all emergency overflows associated with the waste water works to determine the effectiveness of their operation.

3. Receiving waters and Impact

The Eske Estuary is bounded to the north by the Revlin and Ballyboyle peninsulas, on the west by the Murvagh peninsula and on the east by the indented coastline of the mainland. Donegal town is situated at the north east corner of the estuary and the narrow Eske river channel runs approximately 4km south westwards from Donegal town towards the open bay. A smaller channel, taking the Ballintra river, runs northwards from the southern tip of the estuary, parallel to the Murvagh peninsula. The two channels join to the east of Hassan's and exit the estuary through a narrow channel between Hassan's and the northern tip of Murvagh Strand (see map in Appendix A).

In general the estuary is very shallow over its entire area except for the main channel which reaches a maximum depth of 12-14m at Hassan's. Small islands and peninsulas are scattered throughout the estuary. Water is confined only to the main channel for long periods either side of low water during a spring tide. Average water depths of less than 1.5m cover the sand and mud banks during neap tides.

The River Eske is the principle source of fresh water flow to the estuary ($0.22m^3$/sec 95 percentile flowrate, $0.1m^3$/sec DWF). Biological water quality in the River Eske is monitored by the EPA. Results show unpolluted conditions (Q4) at Thrushbank Bridge, 3.5km upstream of Donegal Town. The most recent rating at East Bridge in Donegal Town showed slightly polluted conditions (Q3-4) in 2002. At that time the river was highly turbid due to major engineering works along the river bank.

The following table summarises the main considerations in relation to the Eske Estuary.

Table 1. Receiving waters

Characteristic	Classification	Comment
Receiving water name and type	Eske Estuary discharging to Inner Donegal Bay	Transitional waters
Resource use	Shellfish Production	Primary discharge is located approximately 1km from Donegal Bay shellfish designated area. No drinking water abstractions downstream of the agglomeration.
Amenity value	Fishing, boating, bathing	
Applicable Regulations	UWWT Regs [Note 1] Bathing Water Regs [Note 2] Shellfish Water Regs [Note 3]	Donegal Town WWTP is compliant. Primary discharge is located approx. 3km from designated bathing waters at Murvagh and 10km from Rossnowlagh.
Designations	Donegal Bay (Murvagh) SAC Donegal Bay SPA Lough Eske and Ardnamona Wood SAC	All discharges are directly into the Donegal Bay SAC & SPA. This SAC includes the River Eske where freshwater pearl mussel populations are present. This SAC is upstream of all discharges from the agglomeration.
EPA monitoring stations	Eske Estuary	Monitoring commenced in 2007
WFD status	Moderate	Provisional classification. Elevated chromium levels recorded.
WFD risk category	1a – At risk	Risk is due to WWTPs
WFD protected areas	RPA Beaches RPA Shellfish area	Murvagh & Rossnowlagh Donegal Bay

Note 1: Urban Waste Water Treatment Regulations, 2001 (S.I. No. 254 of 2001) as amended.
Note 2: Quality of Bathing Waters Regulations, 1992 (S.I. No. 155 of 1992).
Note 3: European Communities (Quality of Shellfish Waters) Regulations 2006 (S.I. No. 268 of 2006) as amended by S.I. No. 55 of 2009.

As part of the EIA for Donegal Main Drainage scheme, a mathematical modelling study of the Eske Estuary and Donegal Bay was developed to examine the impacts on water quality following the discharge of secondary treated effluent from the WWTP (Donegal Main Drainage Scheme Mathematical Modelling Study, MCS International, 1998). Analyses were performed using the validated model to simulate the dispersion of pollutants for a variety of environmental conditions including spring and neap tidal ranges, mean winds and mean and low river inflows. A daily waste water discharge flow rate of $3000m^3$ was adopted based on 12,000 p.e. @ 250 litres/person/day. The following parameters were modelled:

Parameter	Treated Concentrations	Storm Concentrations
BOD	25 mg/l	
Organic Nitrogen	25 mg/l	
Ammonia	5 mg/l	
Faecal Coliforms	$5.833x10^5$ /100ml	***1 hour*** $1.829x10^{13}$ /hour @ 4126 m^3/hour ***2 hour*** $1.096x10^{13}$ /hour @ 2720 m^3/hour

The principle regulations that apply to water quality within Donegal Bay are bathing waters and shellfish production. The Freshwater Fish Directive, Surface Water Directive, Salmonid Water Regulations, and Drinking Water Regulations do not apply to marine waters, however they were examined in the modelling study for a general indication of water quality. The principle conclusions of the modelling study were as follows:

BOD

Following initial dilution, increases in BOD concentrations resulting from the discharge of secondary treated effluent are not predicted to exceed 0.5 mg/l at any location within the bay during either mean spring or neap tides. Maximum predicted increases in concentration occur at the discharge site (0.242 mg/l). Downstream of Ballyboyle Island, maximum increases in BOD concentrations are not predicted to exceed 0.05 mg/l. BOD concentrations from the discharge greater than 0.1 mg/l are confined to within 500m of the discharge site.

Following the baseline survey carried out for the project, typical background BOD levels were less than 2.0 mg/l. Therefore, the sum of the modelled and background BOD concentrations are less than the Freshwater Fish Directive guideline levels (3 mg/l), and much less than the Surface Water Directive & Salmonid Water Regulations (5 mg/l).

Nitrogen

Maximum predicted increases in Ammoniacal Nitrogen concentrations are 0.048 mg/l. This increase occurs at the discharge site and is considerably lower than the maximum permissible by the Salmonid Water Regulations of 1 mg/l (Total Ammonia: $NH_3 + NH_4$) It is also considerably lower than the guideline value of 0.16 mg/l quoted in the Freshwater Fish Directive.

Background levels of Ammonia measured during surveys in 1989 were less than 0.14 mg/l. Therefore, assuming occurrence of the maximum Ammonia concentrations in conjunction with this background level, the guideline level of 0.16 mg/l would only be exceeded in the immediate area of the discharge site (maximum 0.188 mg/l). At all other locations within the estuary, levels would remain less than the guideline value.

Faecal Coliforms

Predicted faecal coliform concentrations resulting from the discharge of secondary treated effluent are only predicted to exceed 1,000/100 ml in the immediate vicinity of the discharge site. Maximum predicted concentrations at the outfall site are 5,083/100ml (spring tide), and maximum mean concentrations are 1,470/100ml (neap tide).

Maximum concentrations greater than 1,000/100ml are not predicted to occur at any stage of the tidal cycle at a distance greater than 500m from the discharge site. Faecal coliform concentrations from the proposed discharge are not predicted to exceed 100/100ml downstream of Hassan's.

Overall, based on the model predictions, the discharge of secondary treated effluent to Donegal Bay is of sufficient quality to ensure that the water quality standards set for the estuary would not be breached. The most affected area of the bay would be the upper estuary in the immediate vicinity of the discharge. However, even in this area, water quality standards are not predicted to be exceeded.

Short term adverse impacts were predicted following a one or two hour storm discharge. These impacts are confined to the main channel upstream of Hassan's. No adverse impact is predicted downstream of Hassan's. Traces of the storm discharge do not persist within the bay for a period of more than two tidal cycles.

While Donegal County Council has assessed the impact of Donegal Town's waste water discharge having regard to the legislative standards at the time of the modelling study, I have also considered the proposed quality standards in the *draft European Communities Environmental Objectives (Surface Waters) Regulations 2008.*

For **transitional waters**, the following proposed criteria apply:

Parameter	**Proposed Criteria** [Note 1]
BOD (mg O_2/l)	≤ 4mg/l (95%ile)
Dissolved Oxygen lower limit (Summer)	(0 psu [Note 2]) 95%ile >70% saturation (35 psu) 95%ile >80% saturation
Dissolved Oxygen upper limit (Summer)	(0 psu) 95%ile <130% saturation (35 psu) 95%ile <120% saturation
Total Ammonia (mg N/l)	N/A
Dissolved Inorganic Nitrogen (mg N/l)	N/A
Molybdate Reactive Phosphorus (MRP) (mg P/l)	(0-17 psu) ≤ 0.060 (median) (35 psu) ≤ 0.040 (median)

Note 1: Draft European Communities Environmental Objectives (Surface Waters) Regulations 2008
Note 2: Practical salinity units

The predicted BOD concentrations meet the proposed good status criteria of less than 4mg/l. MRP is the nutrient of concern in transitional waters. The RL does not specify a limit on ortho-P in the primary discharge, however Condition 5.1 requires the licensee to reduce phosphorus loadings in the discharge to the maximum practicable extent.

Foreshore Licence

A draft Foreshore Licence for Donegal Town sewerage scheme was issued by Department of Marine and Natural Resources. The draft licence requires that the design of the works shall facilitate the future retro-fitting of a UV or equivalent system, should in the opinion of the Minister such a treatment system be necessary. To date, no such UV treatment is in place or planned for Donegal Town WWTP. Under Regulation 45(1) of the Waste Water Discharge (Authorisation) Regulations 2007, where the Agency decides to grant a waste water authorisation and a foreshore licence has been granted in relation to the same discharge, any conditions attached to the foreshore licence shall, in so far as they are for the purposes of preventing environmental pollution, cease to have effect.

4. Ambient Monitoring

Donegal County Council has not carried out ambient monitoring of the receiving waters for the purposes of this licence application. However, the Agency's Office of Environmental Assessment (OEA) commenced monitoring the Eske Estuary in 2007 under the Water Framework Directive (WFD) monitoring programme. I have consulted the OEA in relation to this agglomeration. Based on available results, the estuary is classified as unpolluted. There have been some high chlorophyll levels on occasion but so far, the estuary is classified as HIGH status for nutrients, oxygen conditions and chlorophyll. However for WFD classification, the OEA have provisionally classified it as MODERATE due to breaches of standards for specific pollutants (elevated chromium levels). The data for this breach is not great so confidence is low for this classification. The estuary must achieve GOOD status by 2015 to comply with the WFD.

Donegal Bay will be monitored by the Marine Institute for compliance with the Shellfish Waters Directive. *Schedule B.3* of the RL sets the requirements for ambient monitoring of the Eske Estuary for a number of specified parameters. The licensee could use OEA or Marine Institute monitoring results (if available) to fulfil this requirement. In the event that such ambient monitoring results are not available, the licensee is required to undertake the necessary monitoring. This provision is included in Condition 4.17 of the RL.

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

The upgrade of Donegal Town sewerage scheme has been completed as part of the *Donegal Bay Waste Water Management Scheme Group A - Donegal, Ballyshannon & Rossnowlagh.* The Design, Build and Operate contract has an operation and maintenance period of 20 years. The operator, Veolia Water Ireland Ltd., reports to Donegal County Council on a monthly basis, detailing all operational matters, including volumes and quality of treated effluent.

The provision of the secondary WWTP for Donegal Town (commissioned in June 2008) will lead to an improvement of water quality in the receiving waters of the Eske Estuary.

7. Compliance with EU Directives

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

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 waters while *Schedule A: Discharges* specifies limit values for those substances contained within the waste water discharge. Those limits specified in the RL are determined with the aim of achieving good water quality status by 2015.

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

In accordance with the Urban Waste Water Treatment Regulations 2001, secondary or appropriate equivalent waste water treatment was required to be provided by 31st December 2005 in respect of all discharges to freshwaters and estuaries from agglomerations with a population equivalent of between 2,000 and 10,000. Donegal Town now complies with the requirements of the Urban Waste Water Treatment Directive, in terms of level of treatment provided and quality of treated effluent. The RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

Drinking Water Abstraction Regulations

There are no drinking water abstraction points downstream of the waste water works.

Sensitive Waters

Neither the River Eske nor the Eske Estuary are designated as nutrient sensitive areas under the Urban Waste Water Treatment Regulations 2001, as amended.

Bathing Water Directive [2006/7/EC]

The primary discharge from Donegal Town WWTP is located approximately 3km north-east of designated bathing waters at Murvagh and 10km north-east of designated bathing waters at Rossnowlagh. In the Agency's report on *'The Quality of Bathing Water in Ireland 2008'*, Donegal County Council are one of five local authorities who achieved compliance with the EU Mandatory and Guide Values (Good Quality) and National Standards for all of their designated bathing areas in 2008.

Schedule B.4 of the RL requires the licensee to report on the results of bacteriological monitoring undertaken at Murvagh Beach under the bathing water requirements.

EC Freshwater Fish Directive [2006/44/EC]

The River Eske is not a designated salmonid river.

EU Regulation 854/2004 & Shellfish Waters Directive [2006/113/EC]

The Sea Fisheries Protection Authority (SFPA) are the competent authority under Irish and European Food Safety legislation for the classification of live bivalve mollusc production areas. In accordance with the requirements of Annex II of EU Regulation 854/2004 Irish Shellfish Production areas are classified as being Class A, B, or C. As of 15th May 2009, all oyster and mussel beds in Donegal Harbour (from Doorin Point to Rossnowlagh Point) are Class B areas, from which live bivalve molluscs may be collected, but placed on the market for human consumption only after treatment in a purification centre or after relaying so as to meet the required health standards.

Donegal Bay is included amongst the 49 newly designated shellfish waters under the European Communities (Quality of Shellfish Waters) (Amendment) Regulations 2009 (S.I. No. 55 of 2009). The boundary of the shellfish designated area is located approximately 1km south-west of the primary discharge, therefore the shellfish waters mandatory values are not strictly applicable to the primary discharge.

Condition 5.5 of the RL recommends that the licensee makes provision for an assessment of the impact of the discharges from the waste water works on the bacteriological quality of the shellfish in the designated shellfish waters of Donegal Bay. Where such an assessment indicates that the discharges are having a deleterious bacteriological effect on the quality of shellfish in the designated shellfish waters, the licensee shall install UV disinfection at Donegal Town WWTP in accordance with Condition 5.6.

Dangerous Substances Directive [2006/11/EC]

Donegal County Council has provided average results for dangerous substances measured in three grab samples of the primary discharge for the purposes of the licence application. The results show exceedances of the environmental quality standards for copper (average level of 15.6 µg/l compared to the 5 µg/l standard), lead (average level of 35 µg/l compared to the 5 µg/l standard), and zinc (average level of 103.4 µg/l compared to the 40 µg/l standard). The dangerous substances standards are to be achieved in the ambient environment rather than in the discharge itself, therefore it is noted that the reported results are prior to any dilution.

Donegal County Council state that there is no known source of copper within the agglomeration other than in plumbing infrastructure and that it is commonly found in sewage samples. They state that elevated zinc levels are commonly found in sewage, the most probable source being galvanised sheeting used in buildings as roofing and cladding material. No explanation was provided for the lead exceedance. The Agency's *Dangerous Substances Regulations National Implementation Report 2005* notes that the geology and soft waters of Donegal contribute to copper and zinc exceedances measured in surface waters in this region.

The average reported levels of Tributyltin (<0.02 µg/l) and cyanide (<50 µg/l) were not low enough to determine compliance with the quality standards of 0.001 µg/l and 10 µg/l respectively. The reported levels represent the limits of detection of the contract laboratory that carried out the analysis. Donegal County Council state that there is no known source of

these substances in the agglomeration. The primary source of Tributyltin in the environment is likely to be antifouling paint used on boats, while cyanides arise in the electroplating, metals, plastics, pesticides and mining industries. Further monitoring will need to be carried out in a laboratory capable of achieving the required limits of detection.

Condition 4.11 of the RL requires further screening of the primary discharge for the presence of organic compounds and metals within six months of the date of grant of licence. If such substances are detected at significant levels, Condition 4.11.2 requires an investigation of the sources and requires Donegal County Council to take such measures as are necessary to minimise the discharge of dangerous substances from the waste water works.

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

Donegal Town and Environs waste water works is located within an area of significant environmental importance:

(i) Donegal Bay (Murvagh) SAC (site code 000133)

This site is of national importance due to the presence of a wide range of habitats (mud and sand flats, sea inlets and bays, tidal rivers, estuarine channels and sandy beaches) and the occurrence of significant bird populations (mainly Common Scoter and Brent Geese). A sizeable colony of Grey Seal occur in the bay. This species is an Annex II species under the Habitats Directive. The waste water discharges from the agglomeration are directly into this designated site.

(ii) Donegal Bay SPA (site code 004151)

This large coastal site is of high ornithological importance, with two species having populations of international importance (Great Northern Diver and Light-bellied Brent Goose) and a further three species having populations of national importance (Black-throated Diver, Common Scoter and Red-breasted Merganser). Five of the regularly occurring species are listed on Annex I of the Birds Directive. Donegal Bay also provides good quality habitat for common seal, a species listed in Annex II of the Habitats Directive.

The site synopsis for Donegal Bay SPA states that while there is no imminent threat to the birds, a concern is that an increase in the level of recreational activities, especially water-based sports, could cause disturbance to them. Bird populations may also be disturbed by aquaculture activities. The waste water discharges from the agglomeration are directly into this designated site.

(iii) Lough Eske and Ardnamona Wood SAC (site code 000163)

Lough Eske is located approximately 5km north-east of Donegal town. Ardnamona Wood is located on the western side of the lake. This site contains three habitats listed in the Habitats Directive:- lowland oligotrophic lake, petrifying springs and old oak woodland. Two threatened species which are also included in the Habitats Directive are also present in the site; the Killarney Fern and the freshwater pearl mussel (*Margaritifera margaritifera*). The SAC includes the River Eske where freshwater pearl mussel populations are present. This designated site is located upstream of all discharges from the agglomeration.

Donegal County Council has submitted correspondence (dated 3rd September 2008) from the National Parks and Wildlife Service which outlines the nature conservation recommendations of DoEHLG for this agglomeration as follows:

> *"An assessment is recommended. The river is an SAC, with freshwater pearl mussel populations. The bay is a marine SAC and the discharge is close to a seal haul out".*

For the purposes of licensing of municipal waste water discharges an Environmental Impact Assessment (EIA) is considered an appropriate assessment. An EIA was undertaken for this site and the resulting associated Environmental Impact Statement (dated January 1999) was submitted with this licence application. The waste water treatment works, as proposed in the

EIS (including the operation of the new WWTP discharge at Revlin Shore) has been constructed and is now fully operational. The EIS stated that there would be no significant adverse impacts on the Annex I Birds Directive species. The primary discharge is unlikely to have any effect on the common seal population of Inner Donegal Bay as these animals mostly keep to the sandbanks and small islands in the area of the Murvagh peninsula. Their main food source, fish, will not be adversely affected by the waste water discharges.

The overall impact on the scientific interests of Donegal Bay was considered to be positive as the new sewerage scheme will lead to an improvement in the water quality by eliminating the previous situation whereby untreated effluent entered the bay directly.

Environmental Liabilities Directive [2004/35/EC]

Condition 7.2 of the RL satisfies the requirements of the Environmental Liabilities Directive in particular those requirements outlined in Article 3(1) and Annex III of 2004/35/EC.

8. Compliance

The waste water works is currently in compliance with the Waste Water Treatment Regulations primarily due to the recent commissioning of the new secondary WWTP.

9. Site Visit

I visited Donegal WWTP and New Pier pumping station on 22/01/2009 and met with a representative of Donegal County Council and a representative of the WWTP operator, Veolia Water Ireland Ltd. A tour of the WWTP was conducted, which included the SCADA control system, inlet works, aeration & clarification tanks, storm water tanks, final effluent composite sampler and ultra-sonic flow measurement device. The WWTP plant appears to be well run and shows that significant investment has been made over the last number of years.

10. Submissions

One submission was received in relation to this application:

(i) Milton Matthews, Acting CEO, Northern Regional Fisheries Board (16/02/2009).

Mr. Matthews makes an observation that the new WWTP and associated network piping and pumping station has resulted in significant improvements in the quality of the receiving waters. He states that Donegal County Council, through its Housing Section, operate a stand-alone waste water treatement unit at Drumrooske Middle td, which discharges to the river Eske at a point upstream of Magees Factory. The unit has a long history of unsatisfactory performance and regularly produces an effluent which is unacceptable and indicates that the system is not operating to its design specification. This situation has been highlighted to the Housing and Sanitary Services Sections of the local authority and has been an item for the Standing Committee on the control of Water Pollution. It is currently on the Committee's agenda.

A huge investment in waste water infrastructure has been made in Donegal Town and it seems illogical that the houses served by the unit in question are not connected to the new sewer network, the nearest point of connection being a few hundred meters.

Donegal County Council has given a written assurance that this unsatisfactory situation will be resolved in early 2009. However, to date, little progress is evident on the ground.

Response: Donegal County Council has responded to the NRFB's submission in their Regulation 18(3)(b) response. They state that this package treatment plant is currently discharging to an open drain which feeds into the River Eske. The sewer network connecting this treatment plant is currently under construction and is 75% complete. The Council are having difficulties with the purchase of land required for the final section of sewer. This is to progress by compulsory purchase order which may delay the connection by some months, therefore no definite date for connection is obtainable.

This discharge is included in the RL as a secondary discharge, which is required to be discontinued, i.e. connected to the main drainage scheme within one year of the date of grant of the licence.

11. Charges

The RD sets an annual charge for the installation at €7,118 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

12. 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

Aoife Loughnane

Aoife Loughnane
Inspector
Office of Climate, Licensing and Resource Use