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This document has been cleared for submission to the Director by the Programme Manager, Frank Clinton
Signed: N. Keavey Date: 23/4/2012

INSPECTOR'S REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	DIRECTOR	
From:	Jennifer Cope	Environmental Licensing Programme
Date:	23 April 2012	
RE:	Application for a Waste Water Discharge Licence from Monaghan County Council, for the Scotstown agglomeration, Reg. No. D0494-01.	

Application Details	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of between 500 and 1,000.
Licence application received:	22 June 2009
Notices under Regulation 18(3)(b) issued:	06 May 2011
Information under Regulation 18(3)(b) received:	06 October 2011, 02 November 2011, 16 December 2011
Additional Information received:	12 January 2012
Site notice check:	16 July 2009
Site visit:	18 April 2011
Submission(s) Received:	20 October 2010, William Walsh, Inland Fisheries Ireland.

1. Agglomeration

This application relates to the Scotstown agglomeration. Scotstown is located approximately 10 km north west of Monaghan town. The waste water works comprises of a network of gravity sewers, associated rising mains and a waste water treatment plant with a design capacity of 1,000 p.e. Based on 0.06kg BOD per head of population equivalent (p.e.), the load was estimated to be 520 p.e., in 2009 (approximately 90% domestic and 10% non-domestic) with an estimated increase to 630 p.e., expected by 2015.

Waste Water Treatment Plant

The waste water treatment plant (WWTP) provides secondary treatment with nutrient removal. The WWTP comprises biological treatment in rotating biological contactor followed by settlement and clarification. Sludge from Scotstown WWTP is tankered to Monaghan town WWTP (Reg. No. D0061-01) for treatment. The influent is screened and solids and particles greater than 6 mm in diameter are removed. The inlet screen is capable of a maximum flow of 15 l/s. Flows in excess of 3 DWF are diverted to the storm holding tank via a preset weir. The wastewater stored in the storm tank will be re-routed back to the inlet

upon cessation of storm conditions. In extreme storm conditions whereby the storm tank reaches its capacity (84 m³), the storm tank will overflow to the River Blackwater (Monaghan) via the storm water overflow point.

The screened sewage enters an open channel rectangular flume. Ferric sulphate is dosed into the open channel for phosphorus reduction. The flow is mixed with return activated sludge in the primary settlement tank splitting chamber and split equally before entering the two primary settlement tanks. The flow enters the Rotating Biological Contractor for two stage media disc treatment. The flow enters the settled effluent pumping station and is pumped to the elevated flow splitter tower. The elevated flow splitter tower divides the flow over the two biofilters (plastic media). The effluent trickles through the filter before discharging to the existing final settlement tank. The remaining solids settle out and the effluent flows to the final effluent chamber. It has a design capacity of 1,000 population equivalent (p.e.) and design effluent quality levels of 25 mg/l BOD, 35mg/l suspended solids, 125 mg/l COD. The catchment is served by a combined sewer network system.

It should be noted that the population equivalent (p.e.) of the agglomeration is below 2,000 p.e. Therefore "*appropriate treatment*" is required "*in respect of discharges to freshwater and estuaries from agglomerations with a population equivalent of less than 2,000*" as specified in Article 7 of the UWWT Regulations (S.I. No. 254 of 2001 and amendments). The term appropriate treatment is defined in the Regulations in terms of the level of treatment necessary to protect water quality.

The EPA's report on *Focus on Urban Waste Water Discharges in Ireland (2012)* identified that the Scotstown WWTP was not in compliance with the UWWT Regulations in 2009. According to the EPA's report, the agglomeration was deemed by the EPA to have taken less than the recommended number of samples in 2009. It should be noted however that there is no requirement for compliance with the absolute limits or sampling requirements in the Regulations for plants serving less than 2,000 p.e.

However, the discharge concentrations provided for March 2008 to July 2011, submitted as part of the application, indicate that the WWTP is achieving compliance with the design standards (25 mg/l BOD, 35mg/l suspended solids, 125 mg/l COD) and with the Urban Waste Water Regulations, 2001 (S.I. No. 254 of 2001 and amendments). New primary settlement tanks were installed at the WWTP in 2007 and the existing primary settlement tank was converted to a storm water holding tank, which was commissioned in 2008.

The Blackwater (Monaghan) river is designated as nutrient sensitive under the UWWT Regulations, *from the confluence of the River Shambles to Newmills Bridge*, the designated area is 11.4 km downstream of the Scotstown WWTP primary discharge point. The WWTP has a phosphorus removal system. The average total phosphorus in the final effluent is 1.5 mg/l (15 samples). The Blackwater (Monaghan) river is not designated as salmonid, however the Eastern River Fisheries Board identified that it is an important trout fishery.

2. Discharges to waters

Primary Discharge

The primary discharge is to the Blackwater (Monaghan) river (WFD code: IE_XB_03_08)).

Storm water overflow

The applicant identified one storm water overflow, located at the WWTP, which if activated would discharge to the Blackwater (Monaghan) river. According to the applicant the storm water overflow complies with the DECLG 'Procedures and criteria in relation to Storm Water Overflows', 1995. According to the applicant the storm water overflow would activate rarely, only after heavy prolonged periods of rainfall, possibly once per year.

Emergency overflows

According to Monaghan County Council there are no County Council operated pumping stations along the sewer network. However, there are three private pumping stations. The applicant identified no emergency overflows.

Site Inspection

An inspection of the Scotstown agglomeration was carried out on 18 April 2011 and focussed on the WWTP, storm water overflow and the primary discharge point. The primary discharge is to the Blackwater (Monaghan) river.

3. Receiving waters and impact

The following table summarises the main considerations in relation to the Blackwater (Monaghan) River downstream of the primary discharge.

Table 1.0 Receiving waters

Characteristic	Classification	Comment
Receiving water name and type	Blackwater (Monaghan) River (WFD code: IE_XB_03_08)	(EPA code: 03B01)
Resource use	None reported	There is no surface water (i.e. drinking) abstraction point identified downstream of the primary discharge point.
Amenity value	Trout fishery	
Applicable Regulations	UWWT Regulations ^{Note 1} Environmental Objectives Regulations ^{Note 2}	Compliant (See below) Non-compliant (See below)
Designations	River Blackwater (Monaghan) is designated as nutrient sensitive ^{Note 1} , <i>from the confluence of the River Shambles to Newmills Bridge.</i>	The river is designated as nutrient sensitive 11.4 km downstream of the primary discharge point (SW001).
EPA monitoring stations	Station ID: 03S020500	Scotstown river, tributary of the Blackwater (Monaghan) Br upstream of Scotstown Bridge (located approximately 1 km upstream of the SW001)
	Station ID: 03B010100	River Blackwater (Monaghan), Br 1 km u/s Scotstown (located approximately 1.2 km u/s of SW001)
	Station ID: 03B010130	River Blackwater (Monaghan), 1.5 km d/s Scotstown Br (located approximately 0.9 km d/s of SW001)
Biological quality rating (Q value)	Station No. 0500: Q4 in 2010 Station No. 0100: Not measured in 2010 Station No. 0130: Q4 in 2010	Q4-5 in 1998 most recent data is Q3-4 in 1985 Q4 in 1998
WFD status	Good	The Blackwater (Monaghan) river status is 'good' at SW001. The status is 'moderate' approximately 4.7 km downstream of the primary discharge point. Ballinode WWTP primary discharge is located approximately 3.8 km downstream of SW001.
WFD Risk Category ^{Note 3}	1 a (at risk of not achieving good status)	
WFD protected areas	The Blackwater (Monaghan) river is a RPA Nutrient Sensitive River.	The river is designated as nutrient sensitive 11.4 km downstream of the primary discharge point (SW001).

Note 1: Urban Waste Water Treatment Regulations, 2001 and amendments. S.I. No. 254 of 2001.

Note 2: European Communities Objectives (Surface Waters) Regulations 2009, S.I. No. 272 of 2009.

Note 3: Reported to Europe in July 2010.

The latest EPA river quality biological monitoring survey of the river Blackwater (Monaghan) was carried out in 2010. It concluded that *there had been no change in the ecological status of the river Blackwater since it was last sampled in 2007. Only the site downstream of Scotstown Br (0130) is achieving satisfactory quality, the remaining downstream sites*

continue to be of generally unsatisfactory ecological condition in 2010. The complete absence of sensitive macroinvertebrates below Monaghan (0650, 0800) was indicative of considerable ecological disruption, with continued pollution by suspected sewage and industrial discharges.

There is a waste water treatment plant downstream of the primary discharge point (SW001) associated with the Ballinode agglomeration. The primary discharge point from the Ballinode WWTP (Reg. No. D0435-01) is also to the River Blackwater (Monaghan), approximately 3.8 km downstream of the Scotstown WWTP primary discharge point.

Assimilative Capacity

The population equivalent is estimated to increase to 630 by 2015 and the design capacity of the plant is 1,000 p.e. I consulted with the Hydrometric section of the EPA who estimated the 95%ile flow of the river Blackwater (Monaghan) at the point of discharge to be 0.053 m³/s. The closest hydrometric station is station no. 03058 (Cappog Bridge). There are approximately 35 dilutions available for a discharge of 130 m³/day.

The results of the assimilative capacity (AC) calculations are depicted in Table 2.0. The assimilative capacity calculations are based on the estimated 2015 loading of 630 p.e., (130 m³/day) and the effluent discharge limit values (ELV's) for the WWTP as specified in the RL. According to the licensee, it should be noted that in the current economic climate it is probable that not all the planning permissions applied for within the timeframe of the licence will be realised. The assimilative capacity calculations use both the actual background concentrations and the 'notional clean river approach'¹ for BOD. The background water quality data used for the assimilative capacity calculations is based on EPA monitoring data at Station No. 0100, (1.2 km upstream of the primary discharge point (SW001), January 2007 to November 2010 (28 samples), as it was considered more representative than the limited data (March 2008 to June 2011) provided by the applicant for the upstream monitoring point, 170 m upstream of the primary discharge point (Grid Reference: 261094E, 336873N), BOD (7 samples), ammonia (3 samples) and orthophosphate (1 sample).

Table 2.0 Assimilative Capacity

Parameter		Background (mg/l)	Proposed ELV's for discharge from SW001 (mg/l)	Contribution from primary discharge	Predicted downstream quality	Relevant standard
BOD (630 p.e.)	Actual Background	2.27 ^{Note 1}	20	0.55	2.8	≤ 2.6 ^{Note 2}
	Notionally Clean River	0.26	20		0.81	
PO₄-P (630 p.e.)	Actual Background	0.04 ^{Note 1}	1	0.028	0.068	≤ 0.075 ^{Note 2}
Ammonia (630 p.e.)	Actual Background	0.07 ^{Note 1}	2	0.06	0.13	≤ 0.14 ^{Note 2}

Note 1: Background water quality data, based on EPA monitoring data at Station No. 0100, 1.2 km upstream of the primary discharge point (SW001), January 2007 to November 2010 (28 samples).

Note 2: Good status 95%ile value (as per European Communities Objectives (Surface Waters) Regulations 2009, S.I. No. 272 of 2009) to restore waters of less than good status by 2015.

The results of the assimilative capacity calculations are summarised as follows:

¹ Based on a notionally clean river approach provided by the EPA's Office of Environmental Assessment (a hypothetically clean stretch of river) (for example with a background of 0.26 mg/l BOD, 0.005 mg/l orthophosphate, 0.008 mg/l ammonia).

(i) *Biological Oxygen Demand*

At the design emission limit value (25 mg/l), and current background levels, there is no assimilative capacity in the receiving water for BOD based on the quality standards under the European Communities Environmental Objectives (Surface Water) Regulations, 2009, (S.I. No. 272 of 2009).

Based on the notionally clean river approach and an emission limit value (elv) of 20 mg/l BOD, there would be sufficient assimilative capacity in the receiving water to avoid causing deterioration of the water quality.

The RL sets an emission limit value of 20mg/l BOD. The March 2008 to July 2011 effluent monitoring data submitted as part of the application shows an average of 5.4 mg/l for BOD (16 samples), which indicates that the emission limit value set for BOD is achievable. It should be noted that the effluent monitoring data submitted shows a maximum level of 22 mg/l for BOD.

(ii) *Phosphorus*

At an emission limit value of 1 mg/l orthophosphate, there is assimilative capacity in the receiving water for orthophosphate based on the quality standards under the European Communities Environmental Objectives (Surface Water) Regulations, 2009, (S.I. No. 272 of 2009).

The RL sets an emission limit value of 1 mg/l orthophosphate. The March 2008 to July 2011 effluent monitoring data (15 samples) submitted as part of the application shows an average of 1.46 mg/l for total phosphorus, and that 7 out of 15 samples are greater than 1.46 mg/l total phosphorus. However, since March 2010 only 2 out of 10 samples were greater than 1.46 mg/l total phosphorus, which indicates that the emission limit value set for orthophosphate should be achievable. Phosphorus reduction is achieved at the WWTP by chemical dosing. Optimisation of phosphorus reduction may be required to achieve the emission limit value of 1 mg/l for orthophosphate. The RL does not specify upgrade works to be completed to meet the emission limit value for orthophosphate as improvement of the operation of the WWTP (chemical dosing) may be sufficient to achieve the emission limit value.

Condition 5 of the RL requires the licensee to continually reduce total phosphorus emissions in the discharge.

(iii) *Ammonia*

At an emission limit value of 2 mg/l, there is assimilative capacity in the receiving water for ammonia based on the quality standards under the European Communities Environmental Objectives (Surface Water) Regulations, 2009, (S.I. No. 272 of 2009).

The RL sets an emission limit value of 2 mg/l ammonia. The April 2009 to July 2011 effluent monitoring data (11 samples) submitted as part of the application shows an average of 1.01 mg/l of ammonia, which indicates that the emission limit value set for ammonia is achievable.

Condition 5 of the RL requires the licensee to reduce ammonia loadings in the discharge to the maximum practicable extent.

(iv) *Suspended Solids*

The effluent design standard of 35 mg/l for Suspended Solids has been set as the emission limit value in the RL, as there is sufficient assimilative capacity. The March 2008 to July 2011 effluent monitoring data (16 samples) submitted as part of the application shows an average of 7.8 mg/l of suspended solids, which indicates that

the emission limit value set for suspended solids is achievable. It should be noted that the effluent monitoring data submitted shows a maximum level of 20 mg/l for Suspended Solids.

The Neagh Bann International River Basin Management Plan (2009-2015) provides details of recommendations and planned measures to reduce pollution in water courses. In particular, the Blackwater Water Management Unit (WMU) Action Plan (2009-2015) identifies measures to protect and restore water status by addressing the main pressures such as waste water treatment plants and agriculture. Under the Blackwater WMU Action Plan, Blackwater (Monaghan) river (WFD code: IE_XB_03_8) was required to achieve good status by 2009, which has been achieved. The Blackwater WMU Action Plan requires the Scotstown WWTP to implement a performance management system by 2012.

4. Ambient Monitoring

As shown in Table 3.0, the water quality upstream (mean and 95%ile) and downstream (mean) of the primary discharge is in breach of the water quality standard for BOD, (for 'Good Status') stipulated in the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009). The mean and 95%ile concentrations of orthophosphate and ammonia upstream and downstream of the primary discharge are in compliance with the water quality standards (for 'Good Status') stipulated in the European Communities Environmental Objectives (Surface Waters) Regulations, 2009 (S.I. No. 272 of 2009).

Table 3.0 Summary of the applicant's monitoring data upstream and downstream of the primary discharge point (SW001).

Parameter	Upstream ^{Note 2}	Downstream ^{Note 2}	Water quality standard/guideline ^{Note 1}
	Average (95%ile values in brackets)	Average (95%ile values in brackets)	
BOD	2.28 mg/l (3.4 mg/l) (7 samples)	2 mg/l (2 mg/l) (7 samples)	≤ 1.5 mg/l (mean) ≤ 2.6 mg/l (95%ile)
Ortho-phosphate ^{Note 3}	0.03 mg/l (0.03 mg/l) (1 sample)	0.02 mg/l (0.02 mg/l) (1 sample)	≤ 0.035 mg/l (mean) ≤ 0.075 mg/l (95%ile)
Ammonia	0.03 mg/l (0.05 mg/l) (3 samples)	0.01 mg/l (0.02 mg/l) (3 samples)	≤ 0.065 mg/l (mean) ≤ 0.14 mg/l (95%ile)

Note 1: 'Good status' as per European Communities Environmental objectives (Surface Waters) Regulations 2009;

Note 2: Background water quality data, based on applicant monitoring data approximately 170 m upstream of the primary discharge point (SW001) and approximately 1.5 km downstream of SW001, March 2008 to June 2011.

Note 3: Water quality standard relates to molybdate reactive phosphorus.

However, it is recognised that the limited number of samples taken upstream and downstream of the primary discharge makes it more difficult to draw clear conclusions regarding the impact of the primary discharge. It is considered that comparing the physico-chemical monitoring data from the EPA monitoring stations upstream and downstream of the primary discharge point, as shown in Table 4.0 below, would be more representative due to the greater number of samples taken (28 samples upstream and 14 samples downstream). It is also considered that the EPA monitoring station 03B010130, located approximately 0.9 km downstream of the primary discharge point (SW001), would be a more suitable downstream monitoring location as it is closer to the primary discharge point (the applicant's downstream monitoring point is located approximately 1.5 km downstream of SW001). Also the EPA monitoring station (03B010130) is included in the Water Framework Directive Irish national monitoring programme for rivers and is an operational physico-chemical monitoring site. Physico-chemical data is available at this monitoring point and Table 4.0 provides a summary of the monitoring data for BOD, orthophosphate and ammonia from April 2009 to February 2011 at this point (in 2009 and 2010 it was monitored

at least six times per year). *Schedule B.4* requires the downstream monitoring point to be located at the EPA monitoring station 03B010130 (Grid Reference: 261322E, 335999N).

Table 4.0 Summary of EPA monitoring data upstream and downstream of the primary discharge point (SW001).

Parameter	Upstream ^{Note 2}	Downstream ^{Note 3}	Water quality standard/guideline ^{Note 1}
	Average (95%ile values in brackets)	Average (95%ile values in brackets)	
BOD	2.27 mg/l (4.3 mg/l) (28 samples)	2.4 mg/l (5.4 mg/l) (14 samples)	≤ 1.5 mg/l (mean) ≤ 2.6 mg/l (95%ile)
Ortho-phosphate ^{Note 4}	0.04 mg/l (0.08 mg/l) (28 samples)	0.03 mg/l (0.09 mg/l) (14 samples)	≤ 0.035 mg/l (mean) ≤ 0.075 mg/l (95%ile)
Ammonia	0.07 mg/l (0.08 mg/l) (28 samples)	0.09 mg/l (0.38 mg/l) (14 samples)	≤ 0.065 mg/l (mean) ≤ 0.14 mg/l (95%ile)

Note 1: 'Good status' as per European Communities Environmental objectives (Surface Waters) Regulations 2009;

Note 2: Background water quality data, based on EPA monitoring data at Station No. 0100, 1.2 km upstream of the primary discharge point (SW001), January 2007 to November 2010 (28 samples).

Note 3: Background water quality data, based on EPA monitoring data at Station No. 0130, 937 m downstream of the primary discharge point (SW001), April 2009 to February 2011 (14 samples).

Note 4: Water quality standard relates to molybdate reactive phosphorus.

Table 4.0 indicates that the average and 95%ile upstream concentrations of BOD, orthophosphate and ammonia are comparatively elevated before consideration of the impact of the WWTP discharge. Table 4.0 indicates that the 95%ile for ammonia downstream is raised to a significant degree.

The water quality upstream and downstream is in breach of the water quality standards for BOD, orthophosphate and ammonia) for 'Good Status' stipulated in the European Communities Environmental Objectives (Surface Waters) Regulations, 2009, as shown in Table 4.0.

Table 4.0 above highlights that other measures need to be put in place to reduce high background concentrations of BOD, orthophosphate and ammonia in the receiving waters upstream of the WWTP if the River Blackwater (Monaghan) is to maintain 'good status' under the Water Framework Directive. It is not the role of the Wastewater Discharge Licence to address these other pollutant sources, it can only address pollution from the urban waste water discharges. *Schedule A.1* sets emission limit values for BOD, orthophosphate and ammonia to contribute towards compliance with S.I. No. 272 of 2009.

Schedule B.4 of the RL sets out the requirements for ambient monitoring, upstream and downstream of SW001 (the primary discharge point) on the River Blackwater (Monaghan).

5. Combined Approach

The Waste Water Discharge Authorisation Regulations, 2007, as amended, 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) as amended 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 the Waste Water Discharge (Authorisation) Regulations 2007, as amended.

6. Programme of Improvements

Monaghan County Council has no planned improvement works to the WWTP and there is no specified improvement program in the RL. Optimisation of phosphorus reduction may be required to achieve the emission limit value of 1 mg/l for orthophosphate.

Condition 5 of the RL requires the licensee to prepare and submit to the Agency a programme of infrastructural improvements to maximise the effectiveness and efficiency of the waste water works.

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), as amended, notably:

Drinking Water Abstraction Regulations

There are no drinking water abstraction points identified on the Blackwater (Monaghan) river downstream of the primary discharge point.

Sensitive Waters

The Blackwater (Monaghan) is designated as nutrient sensitive '*from the confluence of the River Shambles to Newmills Bridge*' under the UWWT Regulations, 11.4 km downstream of the Scotstown WWTP primary discharge point. The RL under *Schedule A. Discharges* sets emission limit values for orthophosphate and ammonia.

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

The water quality upstream and downstream of the WWTP shows that the Blackwater (Monaghan) river does not comply with the water quality standards for BOD, orthophosphate and ammonia stipulated in S.I. 272 of 2009. The RL, as drafted, provides emission limit values that will assist towards compliance with these Regulations, based on actual background concentrations and hypothetically clean water quality upstream of the WWTP. *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 contributing towards compliance with S.I. No. 272 of 2009. The RL has regard to the requirements of S.I. No. 272 of 2009.

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 contributing towards maintaining good water quality status.

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

It should be noted that the population equivalent (p.e.) of the agglomeration is below the 2,000 p.e., threshold. Therefore "*appropriate treatment*" is required "*in respect of discharges to freshwater and estuaries from agglomerations with a population equivalent of less than 2,000*" as specified in Article 7 of the UWWT Regulations (S.I. No. 254 of 2001 and amendments). The term appropriate treatment is defined in the Regulations in terms of the level of treatment necessary to protect water quality. The agglomeration was deemed by the EPA to have taken less than the recommended numbers of samples in 2009. However there is no requirement for compliance with the absolute limits or sampling requirements in the Regulations for plants serving less than 2,000 p.e. New primary settlement tanks were

installed at the WWTP in 2007 and the existing primary settlement tank was converted to a storm water holding tank, which was commissioned in 2008.

The WWTP provides secondary treatment with nutrient reduction for the Scotstown agglomeration, which is considered to be "*appropriate treatment*". The RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

EC Freshwater Fish Directive [2006/44/EC]

The Blackwater (Monaghan) river is not designated as a salmonid water.

Dangerous Substances Directive [2006/11/EC]

The applicant has provided sampling results for all of the 19 dangerous substances in the primary discharge for the purposes of the licence application. The measured concentrations are not considered significant. The limit of detection used for tributyltin was not sufficiently low to confirm compliance with the *European Communities Environmental Objectives (Surface Waters) Regulations, S.I. No. 272 of 2009*. However, the Regulation standards are ambient standards which apply to receiving waters and are not directly applicable to the primary discharge. There are approximately 35 dilutions available for a discharge of 130 m³/day.

Monitoring of the receiving waters (upstream and downstream) has shown compliance with S.I. No. 272 of 2009 for 18 of the 19 dangerous substances. The limit of detection used for tributyltin was not sufficiently low to confirm compliance with the Regulations. The agglomeration is effectively domestic in nature with a limited contribution from some commercial activities. The RL requires the licensee to identify, 'as required', the relevant priority substances or pollutants for monitoring by under taking risk assessments in accordance with "Guidance on the Screening for Priority Substances for Waste Water Discharge Licences" issued by the Agency.

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

There are no discharges from the Scotstown agglomeration directly into any site designated under the E.U. Habitats or Birds Directives. A screening stage 1 for Appropriate Assessment (AA) from the agglomeration was undertaken to assess, in view of best scientific knowledge and in view of the conservation objectives of the site, if the discharge, individually or in combination with other plans or projects is likely to have a significant effect on the European Site(s).

The screening assessment undertaken demonstrates that the discharge is not likely to have significant effects, in terms of maintaining favourable conservation status of the qualifying interests, on the European Site(s) having regard to its conservation objectives. The primary discharge flows directly in to the River Blackwater (Monaghan). The AA screening report notes that the River Blackwater (Monaghan) is not in a surface water catchment of a nature conservation site with water dependent qualifying habitats or species. The Slieve Beagh Special Area of Conservation (SPA) (site code: 4167) is located approximately 6 km north west of Scotstown, upstream of the WWTP discharge. The AA screening report concludes that the Scotstown WWTP will not impact upon a European site or any National Monument, therefore an appropriate assessment is not required. The applicant states that '*Monaghan County Council will continue to mitigate the potential impacts to the receiving water by ensuring that sampling and monitoring of the discharges from the WWTP are in accordance with the Urban Waste Water Discharges Regulations.*' According to the applicant '*in accordance with the procedure outlined in the DECLG Circular L8/08, no significant effects are likely to occur.*'

It is considered that the RL as drafted will provide a high level of protection to the Blackwater (Monaghan) river, as it requires that all discharges from the agglomeration will be provided with an appropriate level of treatment as per Condition 3: *Discharges*. By ensuring that all waste water is treated to a high standard the RL will act to ensure no

deterioration of the receiving water quality and contribute to the Water Framework Directive's objective of safeguarding Protected Areas and maintaining 'good status' in the North Western International River Basin Management Plan.

Environmental Liabilities Directive (2004/35/EC)

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

Environmental Impact Assessment Directive (85/337/EEC as amended)

According to Monaghan County Council Scotstown WWTP was constructed in approximately 1984/85 and therefore did not require planning permission or Part VIII approval under the planning acts. There was no Environmental Impact Statement (EIS) required at the time of the construction of the WWTP. According to Monaghan County Council there was no EIS required for the extension of Scotstown waste water treatment plant (Part VIII planning approval was granted in on 27 October 2005, Planning Ref: 05/8012). Therefore, in accordance with Part IV (Regulation 17) of the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) there was no requirement for an EIS to be submitted in support of this licence application. Monaghan County Council confirmed that no EIS was required in support of the planning application for the Scotstown WWTP. If an EIS is required as part of future WWTP improvements/upgrade, it will be dealt with as per Condition 1.8 of the RL.

Cross Office Liaison

I consulted with Rebecca Quinn in the Agency's Office of Environmental Assessment, Hydrometric section in relation to the flow of the Blackwater (Monaghan) river.

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

There was one submission received in relation to this application from William Walsh, Inland Fisheries Ireland (IFI) on 20 October 2010.

The following summarises the points raised in the submission from the IFI:

1. The IFI made a number of observations in relation to the quality of the monitoring data provided in application documents as follows:
 - (i) *Biological Monitoring: The applicant refers to the EPA station 0500 (1 Km u/s Scotstown). This is located on the Scotstown river and not on the Blackwater river. According to the IFI there are no EPA biological monitoring stations upstream of Scotstown on the Blackwater river and the IFI suggests that the applicant should carry out a biological assessment upstream of Scotstown (on the River Blackwater). Also biological data provided in the application should be updated to reflect the 2010 results for Station 0130, 1.5 km d/s of Scotstown.*
 - (ii) *Water Quality Monitoring results, upstream and downstream: Only one sampling occasion when NH₃N results are provided. High orthophosphate (mg/l P) results in 2008 are significantly higher than with the EPA monitoring results (River Quality Report, 2008). The IFI recommend using the EPA monitoring results when assessing the impact of the discharge on the receiving water.*

- (iii) *The IFI carried out a mass balance calculation based on the information provided by the applicant and the EPA monitoring results (River Quality Report, 2008) and have noted a potential significant increase in orthophosphate levels in the receiving water downstream of the discharge.*
2. *The IFI note the following:*
- (i) *orthophosphate levels in the effluent, contained in Table 1, Attachment E4 range from 11.9 to 2.39 mg/l.*
 - (ii) *the lower limit of detection for BOD analysis is 2 mg/l and suggest a limit lower than 2 mg/l be sought given the standards set in S.I. 272 of 2009 and suggest that the assimilative capacity in the application include a comparison to the environmental quality standards in S.I. 272 of 2009.*
 - (iii) *Error in the labelling of the upstream and downstream monitoring locations in Drawing No. 4. Attachment B.3.*
3. *The Inland Fisheries Ireland states that 'the Monaghan Blackwater river, is valuable natural resource. The river holds stocks of Brown Trout, Eels, Lamprey, Gudgeon, Stoneloach, Minnow and 3-spined stickleback.' According to the IFI 'the River Blackwater, since drainage works were carried out, water levels are very often particularly low during dry periods. This impacts on the fish holding capacity of the river in localised areas and may also impact on the assimilative capacity of the river in these areas. The IFI states 'given the value of fisheries/aquatic habitat of the Monaghan Blackwater river it is vital that appropriate discharge limits are set in the licence to ensure that there is, at the very least, no deterioration of the existing conditions, in accordance with S.I. No. 272 of 2009.'*

Response

1. Monitoring data

- (i) **Biological Monitoring:** The assessment in Section 3 above, refers to current biological monitoring data for the receiving water. There is an EPA biological monitoring station located approximately 1.2 km upstream of Scotstown's primary discharge (SW001). However, it was not measured in the 2010 biological monitoring regime, the most recent data is Q3-4 in 1985.
- (ii) **Water Quality Monitoring results, upstream and downstream:** As part of the Regulation 18(3)(b) notice issued by the EPA, the applicant was requested to demonstrate that the effluent discharge, via the primary discharge point to the receiving water does not cause an exceedance of S.I. No. 272 of 2009 for BOD, total ammonia and molybdate reactive phosphorus (MRP). In response to the notice the applicant provided updated assimilative capacity calculation data with reference to S.I. No. 272 of 2009, clarification regarding monitoring results for total phosphorus, orthophosphate and molybdate reactive phosphorus. The mass balance calculation in Section 3 above, is based on EPA monitoring data (January 2007 to November 2010) from Station No. 100, 1.2 km upstream of the WWTP and predicts the impact of the primary discharge on the receiving water.
- (iii) **Schedule A: Discharges** of the RL specifies limit values for those substances contained within the waste water discharge with the aim of contributing towards compliance with S.I. No. 272 of 2009. The RL does not specify upgrade works to be completed to meet the emission limit value for orthophosphate as improvement of the operation of the WWTP (chemical dosing) may be sufficient to achieve the emission limit value.

2. (i) Clarification regarding monitoring results for total phosphorus, orthophosphate and molybdate reactive phosphorus was provided by the applicant in response to the Regulation 18(3)(b) notice issued by the EPA.
(ii) The mass balance calculation in Section 3 above, is based on EPA monitoring data (January 2007 to November 2010) from Station No. 100, 1.2 km upstream of the WWTP and predicts the impact of the primary discharge on the receiving water. *Schedule A: Discharges* of the RL specifies limit values for those substances contained within the waste water discharge with the aim of contributing towards compliance with S.I. No. 272 of 2009. In response to the Regulation 18(3)(b) notice the applicant provided updated assimilative capacity calculation data with reference to S.I. No. 272 of 2009.
(iii) In response to the Regulation 18(3)(b) notice the applicant provided an updated version of Drawing No.4, Attachment B.3.
3. *Schedule A: Discharges* of the RL specifies limit values for those substances contained within the waste water discharge with the aim of contributing towards compliance with S.I. No. 272 of 2009.

9. Charges

The RL sets an annual charge for the agglomeration at €2,966.26 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



Jennifer Cope

Office of Climate, Licensing and Resource Use