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LICENSING & RESOURCE USE.

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Programme Manager Frank Clinton
Signed *Grainne Ogle* Date *6/5/10*

INSPECTOR'S REPORT ON A WASTE WATER DISCHARGE LICENCE APPLICATION

To:	DIRECTORS
From:	Jennifer Cope Environmental Licensing Programme
Date:	4 May 2010
RE:	Application for a Waste Water Discharge Licence from Meath County Council, for the agglomeration named Athboy, Rathcairn and their environs Reg. No. D0124-01.

Application Details	
Schedule of discharge licensed:	Discharges from agglomerations with a population equivalent of between 2,001 and 10,000.
Licence application received:	22 September 2008
Notices under Regulation 18(3)(b) issued:	15 April 2009
Information under Regulation 18(3)(b) received:	27 May 2009, 31 July 2009
Additional Information received:	21 April 2010
Site notice check:	14 October 2008
Site visit:	9 March 2009 (L. Joyce & L. Maher)
Submission(s) Received:	None

1. Agglomeration

This application relates to the agglomeration of Athboy, Rathcairn and their environs. The existing waste water treatment works was built in 1980. It is an extended aeration process with a design capacity of 2,500 population equivalent (p.e). The existing waste water treatment plant is overloaded in terms of biological load and is currently hydraulically overloaded during wet conditions. The applicant asserts that it continues to provide a high level of treatment during both wet and dry weather conditions.

A new waste water treatment plant (WWTP) in Athboy is due to be completed in June 2010 adjacent to the existing waste water treatment plant. The contract for the construction of the wastewater treatment plant was awarded under a bundled Design Build Operate (DBO) contract to EPS Limited in November 2007. The new waste water treatment plant consists of preliminary and secondary biological treatment with nutrient removal. It has a design capacity of 5,800 population equivalent (p.e.) and design effluent quality levels of 25 mg/l BOD, 35 mg/l total suspended solids, 125 mg/l COD, 20 mg/l total nitrogen and 1 mg/l total phosphorus. There was no design standard provided for ammonia, but as the WWTP includes an anoxic zone low levels of ammonia should be achievable. The new waste water treatment works has been designed and is being built to facilitate a future phase 2 expansion to 11,600

p.e., should the need arise. A review of the licence would be required to accommodate such an increase.

Based on the average BOD loading to the plant between April to June 2008, the population equivalent of the agglomeration is estimated to be 3,286 (approximately 2,502 p.e. domestic and 784 p.e. non-domestic) with an estimated increase to 3,871 p.e. expected by 2015.

The existing waste water treatment plant comprises of aeration tank with a central clarifier section and a sludge holding tank. Sludge is tankered to Navan waste water treatment plant.

The new waste water treatment plant will comprise of inlet works with screening and grit removal, anoxic and aeration tanks, phosphorus removal, sludge pumping station, sludge holding tank, sludge dewatering building and storm tanks. The sewer network consists of a mixture of combined and separate systems.

There will be two storm tanks provided at the new WWTP. Flows to the inlet works in excess of the capacity of the peak design flow of 163.1 m³/hr (3 dry weather flow) will overflow to the storm tanks via a storm overflow wall in the inlet works channel. The retention capacity of the storm water tanks is 1,100m³. If the retention capacity of the storm tanks is exceeded, screened sewage will overflow at SW2. This is where the overflow joins the primary discharge line and combines with the flow from the final effluent chamber before it discharges via the primary discharge point (PSW1) to the River Athboy.

Meath County Council has identified that there are to be five pumping stations within the sewer network. A new main pumping station at Athboy (adjacent to the existing pumping station) is to be constructed as part of the DBO contract. Three secondary pumping stations feeding one main pumping stations at Rathcairn, are to be commissioned as part of the DBO contract and should be in operation by June 2010.

2. Discharges to waters

Primary Discharge

The primary discharge (labelled PSW1) is to the River Athboy (a tributary of the River Boyne).

The agglomeration was compliant with the Urban Waste Water Regulations, 2001 (S.I. No. 254 of 2001 and amendments) in 2007, in terms of the number of samples taken and compliance with emission limit values. The applicable limits under the Urban Waste Water Treatment Regulations are BOD 25 mg/l, COD 125 mg/l and 35 mg/l suspended solids.

Storm water overflow

The application identified one Storm Water Overflow (SW2), which discharges via the primary discharge point (PSW1) to the River Athboy. The applicant states that SW2 complies with the design criteria as per '*Procedures and Criteria for Storm Water Overflows*', published by the DEHLG (1995).

Emergency Overflows

Meath County Council has identified five pumping stations within the sewer network. Meath County Council has identified that there is an emergency overflow associated with the Athboy Pumping Station within the agglomeration, which if activated would discharge to the River Athboy.

The emergency overflow will overflow in the event of power failure, pump failure or extreme storm conditions. As the overflow is activated in response to extreme storm conditions, I consider this overflow to be a stormwater overflow (i.e., a second SWO) and have included it in the RL as such.

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.

Site Inspection

An inspection of the Athboy agglomeration by L.Joyce and L. Maher on 3 March 2009 focussed on the old WWTP, the primary discharge point and the receiving waters. The new WWTP was in the process of being constructed.

3. Receiving waters and impact

The following table summarises the main considerations in relation to the Athboy River downstream of the primary discharge.

Table 1.0 Receiving waters

Characteristic	Classification	Comment
Receiving water name and type	River Athboy	A tributary of the River Boyne
Resource use	Fishing	Wild brown trout fishery.
	River Boyne Trim Public Water Supply, drinking water abstraction point, Register Code: PA1_2300PUB1009	There is no drinking water abstraction point from the River Athboy downstream of the primary discharge point (PSW1). However, the Trim drinking water abstraction point (2300PUB1009) on the River Boyne is approximately 16 km downstream of the primary discharge point (PSW1).
	River Boyne Kilcarn Water Treatment Plant, Navan–mid Meath Public Water Supply, drinking water abstraction point, Register Code: PA1_2300PUB1016	The primary discharge point (PSW1) is approximately 27 km upstream of this water treatment plant.
	River Boyne Staleen Water Treatment Plant Register Code: PA12100PUB1019	The primary discharge point (PSW1) is approximately 47 km upstream of this water treatment plant.
Amenity value	Fishing	
Applicable Regulations	UWWT Regulations ^{Note 1} Drinking Water Regulations ^{Note 2} Environmental Objectives Regulations ^{Note 3}	Compliant Compliant See below
Designations	Candidate Special Area of Conservation (cSAC) (River Boyne and River Blackwater, site code: 2299).	The primary discharge point (PSW1) discharges directly into this cSAC.
	River Boyne (main channel) designated as a Salmonid Water	The River Athboy is a tributary of the River Boyne
EPA monitoring stations	07A010200 Just u/s Athboy	Approximately 723 m u/s of PSW1
	07A010300 Br 2 km SE Athboy	Approximately 1.3 km d/s of PSW1
Biological quality rating (Q value)	Station 0200: Q 4 in 2006 Station 0300: Q 3-4 in 2009	(Q 3 in 1997) (Q3-4 in 1997)
WFD status ^{Note 4}	Poor	
WFD Risk Category	1 a (at risk of not achieving good status)	
WFD protected areas	River Athboy: RPA drinking water (WFD code: EA_07_971)	Approximately 6.7 km downstream of the WWTP, the Athboy Lower (Tremblestown river).
	River Boyne: Salmonid Water and RPA Habitat River.	The River Athboy is a tributary of the River Boyne

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

Note 2: European Communities (Quality of Surface Water Intended for the Abstraction of Drinking Water) Regulations, 1989, S.I. No. 294 of 1989.

Note 3: European Communities Environmental Objectives (Surface Waters) Regulations 2009, S.I. No 272 of 2009).

Note 4: Reported to Europe on 22/12/2008, see Water Framework Directive website, www.wfdireland.ie.

The Athboy Borehole (Register Code: PA1_2300PUB1001) which is a groundwater abstraction point is located beside the river Athboy, 730 m downstream of the Athboy WWTP's primary discharge point.

According to the draft Eastern River Basin Management Plan, 2008, the Athboy Lower (Tremblestown River) is designated as a *Protected Drinking Water Area*, approximately 6.7 km downstream of the Athboy WWTP.

There are three water abstraction points in the River Boyne downstream of the primary discharge point as shown in Table 1.0 above.

Approximately 3,200 m³/day of drinking water is abstracted from the River Boyne approximately 16 km downstream of the primary discharge point for the Trim Public Water Supply (Register Code: PA1_2300PUB1009). The Trim Regional Water Treatment Plant (Register Code: PA1_2300PUB1009) consists of full treatment. Trim Water Treatment Plant is on the '*Drinking Water Report 2007/2008 Remedial Action List*' for elevated levels of Trihalomethanes above the standard in the Drinking Water Regulations. These compounds are formed as a by-product of the drinking water treatment process and are not associated with discharges from the wastewater works.

The applicant states "*The long distance between the primary discharge point and any water abstractions and the high level of dilution means that there will be a negligible impact on the water abstraction. The dilution factor in the Athboy River (at DWF and 95 percentile flow in the river) is 11.25. This is further diluted by a factor of approximately 15 in the River Boyne, i.e. a total dilution factor of greater than 160.*"

The upgrade to the WWTP, based on the design effluent concentrations, should considerably improve the water quality downstream of the WWTP.

Condition 4.16 of the RL requires the licensee to prepare a risk assessment for the protection of the downstream drinking water abstraction point(s), in particular the Athboy Borehole abstraction point(s) and the Trim drinking water abstraction point(s). The risk assessment shall address as a minimum; the identification and minimisation of risks to the quality of water abstracted at the downstream drinking water abstraction point(s) from the discharge(s) listed in *Schedule A: Discharges*.

Condition 6.3 of the RL requires the licensee to notify the Water Service Authority and/or other groups responsible for the downstream abstraction of drinking water, of any exceedance of an ELV associated with the discharge, any storm water overflows, any emergency overflows or any other relevant incident as defined by the licence.

There are two waste water treatment plants upstream of the primary discharge point associated with Crossakeel and Clonmellon (as shown in Figure 1 below). Crossakeel WWTP, Reg. No. D0484-01 (approximately 275 p.e. in 2009) primary discharge point is to a tributary (River ID 07_1179) of the River Athboy, approximately 17.6 km upstream of the Athboy WWTP primary discharge point. Clonmellon WWTP, Reg. No. D0271-01 (approximately 816 p.e. in 2009) primary discharge point is to a tributary (River ID 07_1865) of the River Athboy approximately 12.5 km upstream of Athboy WWTP primary discharge point.

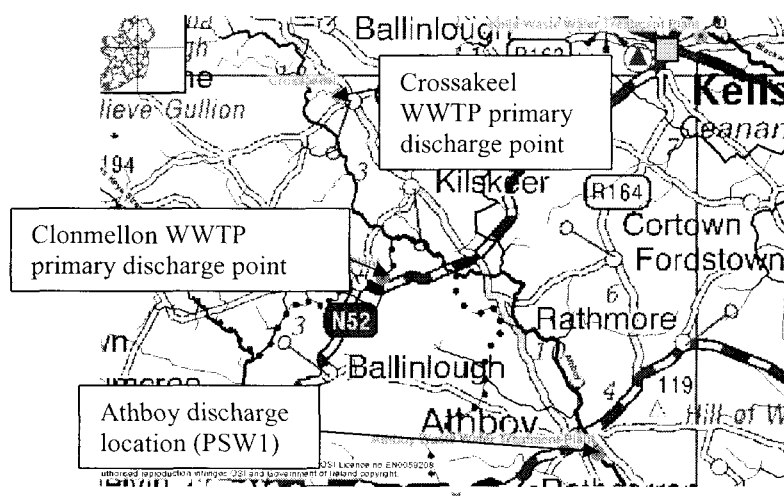


Figure 1. Locations of WWTP primary discharge points upstream of the Athboy WWTP.

Appropriate Assessment

An appropriate assessment of the impact on habitats, as required by Regulation 6(5) of the Waste Water Discharge (Authorisation) Regulations 2007 has been completed by Meath County Council.

The Athboy, Rathcairn and their environs WWTP discharges into the Athboy River within the River Boyne and River Blackwater candidate Special Area of Conservation (cSAC), site code 2299. The likely significant effects of the discharges on the River Boyne and River Blackwater cSAC were assessed and the effects on both the habitats and species within the cSAC were considered in the appropriate assessment.

The River Boyne and River Blackwater cSAC is designated for alkaline fen and alluvial woodlands, both habitats listed on Annex I of the E.U. Habitats Directive 92/43/EEC. It is also designated for the following species listed on Annex II of the EU Habitats Directive: Atlantic Salmon, Otter and River Lamprey.

According to the appropriate assessment the habitats for which the cSAC is designated downstream of the discharges from the Athboy, Rathcairn and their environs WWTP “*are not particularly vulnerable to discharges of wastewater*” from the Athboy WWTP. The species for which the cSAC is designated (Atlantic Salmon, Otter and River Lamprey) may be vulnerable to discharges of untreated wastewater. However, according to the appropriate assessment it has been shown that in Stage 1 and Stage 2 of the assessment, the waste assimilative calculations and a review of the results of the Dangerous Substances monitoring, that discharges from the WWTP do not cause adverse impacts on the integrity of the River Boyne and River Blackwater cSAC.

Assimilative Capacity

The new WWTP is due to be completed in June 2010 and this should improve the water quality of the Athboy river. The population equivalent is estimated to increase to 3,871 by 2015 (17.8% increase) and therefore is unlikely to meet the design capacity of the WWTP of 5,800 p.e. within the lifetime of the licence (six years).

The results of assimilative capacity (AC) calculations are depicted in Table 2.0. The assimilative capacity calculations are based on the loading of the WWTP at the estimated load of 3,871 p.e. by 2015, the design load of 5,800 p.e., and the effluent discharge emission limit values (ELV's) as specified in the RL. The RL proposes emission limit values of 20 mg/l BOD, 0.6 mg/l PO₄-P and 1.1 mg/l ammonia up to a p.e. of 3,871 and thereafter the ELV's are reduced as there is limited assimilative capacity as explained in greater detail below.

Table 2 (a) : Assimilative capacity calculations – at 3,871 p.e. loadings (estimated p.e. by 2015) (1,537 m³/day¹) and at 5,800 p.e. loadings (3,915m³/day).

Parameter		Back ground (mg/l) <small>Note 1</small>	Proposed ELV's for discharge from PSW-1 (mg/l)	Contribution from primary discharge	Predicted downstream quality	Relevant standard
BOD (3,871 p.e.)	Actual Background Notionally Clean River	2.78 0.26	20	1.89	4.67 2.15	≤2.6 (95%ile) <small>Note 2</small>
BOD (5,800 p.e.)	Actual Background Notionally Clean River	2.78 0.26	10	2.10	4.88 2.36	≤2.6 (95%ile) <small>Note 2</small>
PO₄-P (3,871 p.e.)	Actual Background Notionally Clean River	0.047 0.005	0.6 <small>Note 3</small>	0.057	0.10 0.062	≤0.075 (95%ile) <small>Note 2</small>
PO₄-P (5,800 p.e.)	Actual Background Notionally Clean River	0.047 0.005	0.22 <small>Note 3</small>	0.046	0.093 0.051	≤0.075 (95%ile) <small>Note 2</small>
Ammonia (3,871 p.e.)	Actual Background Notionally Clean River	0.07 0.008	1.1	0.10	0.17 0.11	≤0.14 (95%ile) <small>Note 2</small>
Ammonia (5,800 p.e.)	Actual Background Notionally Clean River	0.07 0.008	0.44	0.09	0.16 0.10	≤0.14 (95%ile) <small>Note 2</small>

Note 1: Background water quality data for January 2007 to November 2009.

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

Note 3: This limit is based on the effluent standard for total phosphorus (1mg/l). The water quality standard is for molybdenum reactive phosphate.

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

(i) Biochemical Oxygen Demand

At the proposed emission limit value for the phase 1 upgrade to the WWTP (25 mg/l), 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).

Table 2 highlights that the 95%ile upstream concentration of BOD (2.78 mg/l) is significant before consideration of the WWTP discharge contribution.

Based on the notionally clean river approach provided by the Office of Environmental Assessment (a hypothetically clean stretch of river) (for example with a background of 0.26 mg/l BOD) and an emission limit value of 25 mg/l BOD there would be inadequate assimilative capacity in the receiving water for BOD at 3,871 p.e. loadings based on the 95%ile standard under S.I. No. 272 of 2009. An emission limit value of 20 mg/l at 3,871 p.e. would be sufficient to ensure *no deterioration in the status of the water quality*.

¹ Volume per day extrapolated, based on the applicant's estimated increase to 3,871 p.e. by 2015.

For a notionally clean river (for example with a background level of 0.26 mg/l BOD), an emission limit value of 10 mg/l BOD at 5,800 p.e. would be necessary to avoid causing deterioration of the water quality.

The RL sets an emission limit value of 20 mg/l BOD, where population equivalent is less than 3,871 to ensure compliance with S.I. No. 272 of 2009. The RL sets a lower limit of 10 mg/l BOD to be achieved where the population equivalent is greater than or equal to 3,871 to ensure compliance with S.I. No. 272 of 2009.

(ii) *Phosphorus*

There is no 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).

Tables 2 highlights that the 95%ile upstream concentration of orthophosphate (0.047 mg/l) is significant before consideration of the WWTP discharge contribution.

If there were low background levels of orthophosphate (for example a notionally clean river with a background of 0.005 mg/l orthophosphate) and an emission limit value of 0.6 mg/l orthophosphate, there would be adequate assimilative capacity in the receiving water for orthophosphate at 3,871 p.e. loadings based on the 95%ile standard under S.I. No. 272 of 2009. An emission limit value of 0.6 mg/l at 3,871 p.e. would be sufficient to ensure *no deterioration in the status of the water quality*.

For a notionally clean river (with a background level of 0.005mg/l orthophosphate), an emission limit value of 0.22 mg/l at 5,800 p.e. would be necessary to avoid causing deterioration of the water quality.

The RL sets an emission limit value of 0.6 mg/l orthophosphate where the population equivalent is less than 3,871 to ensure compliance with S.I. No. 272 of 2009. The RL sets a lower limit of 0.22 mg/l orthophosphate to be achieved where the population equivalent is greater than or equal to 3,871 to ensure compliance with S.I. No. 272 of 2009.

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

(iii) *Ammonia*

There is no assimilative capacity in the receiving water for ammonia based on the 95%ile quality standard under the European Communities Environmental Objectives (Surface Water) Regulations, 2009, (S.I. No. 272 of 2009).

Table 2 shows that 95%ile concentration upstream of ammonia (0.07mg/l) is already elevated before consideration of the primary discharge contribution.

If there were low background levels of ammonia (for example a notionally clean river with a background of 0.008mg/l ammonia) and an emission limit value of 1.1 mg/l of ammonia, there would be adequate assimilative capacity in the receiving water for ammonia at 3,871 p.e. loadings, based on the 95%ile standard under S.I. No. 272 of 2009. An emission limit value of 1.1 mg/l of ammonia would be sufficient to ensure *no deterioration in the status of the water quality*.

For a notionally clean river (with a background level of 0.008mg/l ammonia), an emission limit value of 0.44 mg/l at 5,800 p.e. would be necessary to avoid causing deterioration of the water quality.

The RL sets an emission limit value of 1.1 mg/l ammonia where the population equivalent is less than 3,871 to ensure compliance with S.I. No. 272 of 2009. The RL sets a lower limit of 0.44 mg/l ammonia to be achieved where the population equivalent is greater than or equal to 3,871 to ensure compliance with S.I. No. 272 of 2009.

Condition 5.1 of the RL requires the licensee to continually reduce ammonia emissions.

The emission limit values set for the agglomeration up to 3,871 p.e. are likely to be achievable with the current WWTP (subject to minor upgrade) whereas the WWTP will require additional tertiary treatment technology to achieve the emission limit values where the loading to the plant exceeds 3,871 p.e. It may be a number of years before the population equivalent of the agglomeration exceeds 3,871. The RL does not specify the upgrade work to be completed to meet these tight limits or a timeframe for such works as they will not be necessary unless the agglomeration expands.

The draft Eastern River Basin Management Plan, 2008 recommends an exemption for the River Athboy, from the achievement of 'Good Status' until 2021 due to waste water treatment plant point source pollution and agricultural point and diffuse source pollution.

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. The draft Eastern River Basin Management Plan (2008) provides details of recommendations and planned measures to reduce pollution in water courses.

It is considered that the above plans, if fully implemented, in addition to the upgrade of the WWTP and the more stringent ELV's that the RL sets when the p.e. increases, as necessary, should address the pollutant loads in the Athboy river and assist in achieving compliance with the Water Framework Directive requirements, by the relevant date.

I have raised the issue that there is very limited assimilative capacity for BOD, orthophosphate and ammonia in the River Athboy at the current loadings (3,286 p.e., 1,305m³/day) or at 5,800 p.e. loadings (3,915 m³/day) with the DEHLG inspector. The DEHLG Inspector stated that *"if additional expenditure is required by Meath County Council to meet the requirements of the licence, Meath County Council can approach the DEHLG for financial assistance if the requirement to upgrade becomes a priority"*.

4. Ambient Monitoring

The water quality downstream of the WWTP discharge is poorer than that upstream indicating the plant is currently adversely affecting water quality. The water quality downstream of the WWTP is causing a 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 3.0 below. The upgrade to the WWTP, based on the design effluent concentrations, should considerably improve the situation for BOD, orthophosphate and ammonia.

Table 3.0 Summary of upstream and downstream monitoring results for the period January 2007 to November 2009.

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	1.31 mg/l (2.78mg/l) (8 samples)	1.55 mg/l (2.99 mg/l) (12 samples)	≤ 1.5 mg/l (mean) ≤ 2.6 mg/l (95%ile)
Ortho-phosphate ^{Note 3}	0.03 mg/l (0.047 mg/l) (23 samples)	0.046 mg/l (0.103 mg/l) (23 samples)	≤ 0.035 mg/l (mean) ≤ 0.075 mg/l (95%ile)
Ammonia	0.04 mg/l (0.07 mg/l) (23 samples)	0.16 mg/l (0.46mg/l) (23 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: Based on data from January 2007 to November 2009;

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

There is limited dilution available in the River Athboy at the primary discharge point (PSW1). Approximately 11 dilutions are available on the basis of existing normal discharge volume (1,305 m³/day and the 95%ile flow (0.17m³/s) in the River Athboy.

Approximately 3.8 dilutions are available on the basis of normal discharge volume at 5,800 p.e. (3,915m³/day) and the 95%ile flow (0.17m³/s) in the River Athboy.

Meath County Council has carried out ambient monitoring of the receiving waters for the purposes of this licence application. Schedule B.4 of the RL sets out the requirements for ambient monitoring, upstream and downstream of PSW1, (the primary discharge point) on the River Athboy.

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 amendments) 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

Athboy waste water works is included in the Water Services Investment Programme for 2007 to 2009. The existing plant is overloaded. The new Athboy Wastewater Treatment Plant is due to be completed by June 2010. The new plant will provide a higher level of effluent treatment and improve compliance with Council Directives. The provision of increased capacity at the main pumping station in Athboy will reduce the potential for any stormwater overflows within the sewer network. The pumping stations in Rathcairn will be operational in June 2010 and are designed to prevent overflows.

A further upgrade or significant expenditure may be required to meet the tighter emission limit values specified in the RL and applicable if the p.e. exceeds 3,871. 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) notably:

Drinking Water Abstraction Regulations

The nearest drinking water abstraction point is approximately 16 km downstream of the primary discharge point at Trim Public Water Supply (Register Code: PA1_2300PUB1009). Condition 4.16 of the RL, requires the licensee to prepare a risk assessment for the protection of downstream abstraction points (Trim drinking water abstraction points) and implement any relevant measures identified by the risk assessment for its protection.

The Condition 6.3 of the RL requires the licensee to immediately notify the Water Service Authority and/or other groups responsible for downstream abstraction points of any exceedance of ELV's or storm water overflows.

Sensitive Waters

The Athboy WWTP primary discharge point in the Athboy river is located approximately 33 km upstream from where the River Boyne becomes designated as a sensitive river. The RL addresses emissions of nutrients under Schedule A: *Discharges*, by setting emission limit values for total phosphorus and orthophosphate.

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 emission 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]

The primary discharge from the Athboy, Rathcairn and their environs agglomeration does comply with the requirements of the Urban Waste Water Treatment Directive in terms of the level of treatment provided. Secondary (or equivalent) 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.

The agglomeration was compliant with the Urban Waste Water Treatment Regulations, 2001 (S.I. No. 254 of 2001 and amendments) in 2006 and 2007, in terms of the number of samples taken and effluent quality. The RL, as drafted, has regard to the requirements of the Urban Waste Water Treatment Directive.

EC Freshwater Fish Directive [2006/44/EC]

The Athboy river is not designated as a salmonid water. However, the Athboy river is a tributary of the river Boyne which is designated as a salmonid water, under European Communities (Quality of Salmonid Waters) Regulations, 1988 (S.I. No. 293 of 1988) and has been considered in the setting of emission limit values.

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. Monitoring of receiving waters has shown compliance with the *European Communities Environmental Objectives (Surface Waters) Regulations, S.I. No. 272 of 2009*. However the limit of detection used for tributyltin and cyanide was not sufficiently low to confirm compliance with the Regulations, further monitoring will need to be carried out in a laboratory capable of achieving the required limit of detection.

Condition 4.10 requires screening of the waste water discharges for the presence of organic compounds and metals within twelve months of the date of grant of licence.

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

An appropriate assessment was carried out by the applicant. According to the appropriate assessment the habitats for which the cSAC is designated “*are not particularly vulnerable to discharges of wastewater*” downstream of the discharges from the Athboy WWTP. The species for which the cSAC is designated (Atlantic Salmon, Otter and River Lamprey) may be vulnerable to discharges of untreated wastewater. However according to the appropriate assessment it has been shown that in Stage 1 and Stage 2 of the assessment, the waste assimilative calculations and a review of the results of the Dangerous Substances monitoring, that discharges from the WWTP do not cause adverse impacts on the integrity of the River Boyne and River Blackwater cSAC.

It is considered that the RL as drafted will provide a high level of protection to the River Athboy, as it will ensure 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.

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.

Cross Office Liaison

I consulted with the Agency's Office of Environmental Assessment, Hyrdometric section in relation to the flow of the river Athboy. I consulted with the Agency's Office of Environmental Enforcement in relation drinking water abstraction points.

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.

Submissions

No submissions received in relation to this application.

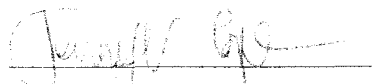
Charges

The RL sets an annual charge for the agglomeration at €3,460 and is reflective of the monitoring and enforcement regime being proposed for the agglomeration.

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

Athboy, Rathcairn and their environs, Reg. No. D0124-01

