

Arts 047 71114

Community & Enterprise 047 30500

County Library

047 51143 County Museum

047 82928

Environment 047 30593

Finance 047 30589

Fire/Building Control 047 30521

Higher Education Grants 047 30550

Housing Estate Management 047 30529

Housing Loans/Grants 047 30527

> Human Resource Management 047 30586

> > Motor Tax 047 81175

Planning 047 30532

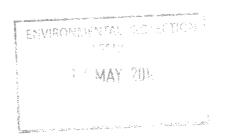
Register of Electors 047 30547

> Roads 047 30597

Water Services 047 30504

## Monaghan

COUNTY COUNCIL COMHAIRLE CONTAE MHUINEACHÁIN



10<sup>th</sup> April 2010

Administration,

Environmental Licensing Programme,

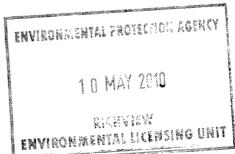
Office of Climate, Licensing & Resource Use,

Environmental Protection Agency,

Headquarters, PO Box 3000,

Johnston Castle Estate,

Co. Wexford.



Re: Notice in Accordance with Regulation 25(c) (ii) of the Waste Water Discharge (Authorisation) Regulations 2007

Further to your correspondence of the Printer April 2010, please find enclosed the following documentation and accompanying CD ROM's relating to our application for nine Waste Water Discharge Certificates of Authorisations (A0020-01, A0029-01, A0031-01, A0032-01, A0033-01, A0034 -01, A0035-01, A0036-01 and A0037-01):

Appropriate Assessment for each agglomeration - Original + 1 copy

Amended Non-Technical Summary for each agglomeration - Original + 1 copy

CD-ROM of each Appropriate Assessment & Amended Non-Technical Summary

I trust you will find everything in order, however should you require any further information, please do not hesitate to contact me.

Mark Johnston

Mise le Meas,

Senior Executive Engineer.



# Monaghan County Council

Tyholland Waste Water Discharge Certificate of Authorisation (A0037-01)

Appropriate Assessment Screening for the purposes of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No 684 of 2007)

Date: May 2010



### **Contents**

1	Introd	duction	3
	1.1 1.2 1.3 1.4	Background  Appropriate Assessment Legislation  Waste Water Discharge (Authorisation) Regulations, 2007  Methodology  1.4.1 Initial Screening of Projects  1.4.2 Appropriate Assessment Screening (Stage 1)  1.4.3 Appropriate Assessment (Stage 2)	3 4 5 5 5
2	Pre So	creening	8
	2.1	Tyholland Agglomeration	8
3	Stage	e 1-Screening1	.1
	3.1 3.2 3.3 3.4 3.5 3.6	Introduction	3 5 6 6 6
Tables			
Table 1: Init	tial Scr	reening for Waste Water Services Infrastructure Projects	5
Table 2: The	e Requ	uirement to Screen the Tyholland WWTW for Impacts	9

#### **Figures**

- Figure 1 Flow Diagram for Screening Water Services Infrastructure Projects
- Figure 2 Designated Sites and Tyholland WWTW
- Figure 3 Location of WWTW and Receiving Waters
- Figure 4 Completed Flow Diagram for Screening Tyholland Waste Water Discharge



#### 1 Introduction

#### 1.1 Background

As required under the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No 684 of 2007), Monaghan County Council submitted nine Certificates of Authorisation applications to the EPA on 22<sup>nd</sup> December 2009. The WwTW's concerned are Threemilehouse, Tydavnet, Clontibret, Knockatallon, Oram, Carrickroe, Drum, Magheracloone and Tyholland.

This report has been produced to support the Waste Water Certificate of Authorisation application for the Tyholland agglomerations (EPA Application Register Numbers A0037-01) and to form a response to the EPA correspondence of 7<sup>th</sup> April 2010 (in line with Regulation 25 c (ii) of the Waste Water Discharge (Authorisation) Regulations 2007) which requested Monaghan County Council to:

"Assess the likelihood of significant effects of the waste water discharges from the above agglomerations on the relevant European sites by referring to Circular L8708" Water Services Investment and Rural Water Programmes - Protection of Natural Heritage and National Monuments" issued by the Department of Environment Heritage and Local Government. In particular, the flow diagram in Appendix 1 should be completed within one month of the date of this notice. If significant effects are likely then an appropriate assessment must be carried out and a report of this assessment forwarded to the Agency within one month of the date of this notice".

#### 1.2 Appropriate Assessment Legislation

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora - the "Habitats Directive" - provide legal protection for habitats and species of European importance. The Directives requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conversation status and provides the legislation to protect habitats and species of community interest through the establishment and conservation of an EU-wide network of sites known as Natura 2000 sites.

Natura 2000 sites are Special Areas of Conservation (SAC) designated under the Habitats Directive and Special Protection Areas (SPA) designated under the Conservation of Wild Birds Directive (79/409/EEC). Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans or projects affecting Natura 2000 sites.



Article 6(3) establishes the requirement for Appropriate Assessment:

Any plan or project not directly connected with or necessary to the management of the site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subject to appropriate assessment of its implications for the site in view of the site's conservation objectives. In the light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public.

Article 6(4) of the Directive deals with alternative solutions, the test of "imperative reasons of overriding public interest" (IROPI) and compensatory measures:

If, in spite of a negative assessment of the implications for the site, and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of social or economic nature, the Member State shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

# 1.3 Waste Water Discharge (Authorisation) Regulations, 2007

All discharges to the aquatic environment from sewerage systems owned, managed and operated by water service authorities will require a waste water discharge licence or certificate of authorisation from the EPA. The authorities are required to apply to the Agency for a licence or certificate of authorisation by set dates depending on the population equivalent of the area served by the sewer network.

The authorisation process provides for the Agency to place stringent conditions on the operation of such discharges to ensure that potential effects on the receiving water bodies are strictly limited and controlled. In overall terms the aim is to achieve good surface water and ground water status in addition to complying with standards and objectives established for associated protected areas by 2015 at the latest.



#### 1.4 Methodology

#### 1.4.1 Initial Screening of Projects

In order to identify potential ecological constraints, all water services projects (in this case the Carrickroe Waste Water Treatment Plants and associated discharges), should be subjected to <u>initial screening</u> in accordance with the initial screening checklist in the *Circular L8/08 Water Services Investment and Rural Water Programmes – Protection of Natural Heritage and National Monuments (September 2008)* (see **Table 1** below). This process will confirm if the project is required to be screened for impacts (as per Appendix 1 Circular L8/08 DoEHLG Sept 2008).

#### **Table 1: Initial Screening for Waste Water Services Infrastructure Projects**

#### Initial Screening (as per DoEHLG Circular L8/08 September 2008)

- 1. Is the development in or on the boundary of a nature conservation site NHA/SAC/SPA?
- 2. Will nationally protected species be directly impacted? Wildlife Acts (1976 and 2000), Flora Protection order (S.I. 94 of 1999)?
- 3. Is the development a surface water discharge of abstraction in the surface water catchment, or immediately downstream of a nature conservation site with water dependant qualifying habitats/ species?
- 4. Is the development a groundwater discharge abstraction in the ground water catchment or within 5km of a nature conservation site with water-dependent qualifying habitats/species?
- 5. Is the development in the surface water or groundwater catchment of salmonid waters?
- 6. Is the treatment plant in an active or former floodplain or flood zone of a river, lake, etc?
- 7. Is the development a surface discharge or abstraction to or from marine waters and within 3km of a marine nature conservation site?
- 8. Will the project in combination with other projects (existing and proposed) or changes to such projects affect the hydrology or water levels of sites of nature conservation interest or the habitats of protected species?

#### 1.4.2 Appropriate Assessment Screening (Stage 1)

Where initial screening reveals that a project is required to be screened for impacts, an Appropriate Assessment Screening must be carried out in accordance with the Appendix 1 Flow Diagram of the DoEHLG Circular 08/08 (see **Figure 1** below).



The flow diagram in the DoEHLG Circular 08/08 will be used to screen for impacts. If the conclusion of the screening outlined in this Natura 2000 Screening Protocol is to "Assess Impacts", then Stage 2 Appropriate Assessment will be required to be carried out.

This screening methodology is designed to assist those planning and designing water services solutions when determining whether Appropriate Assessment for Natura 2000/European sites or habitats & species listed in the annexes of the EU Birds and Habitats Directives is necessary or not. It also should also be applied to Natural Heritage Areas (NHAs).

#### 1.4.3 Appropriate Assessment (Stage 2)

In Stage 2 of this process, the impact(s) of the project or plan on the integrity of the European Site is considered with respect to the Conservation Objectives of the site.

The impact of the discharges from the WwTW on the integrity of the European Designated Site(s) will be considered with respect to the Conservation Objectives of the site. This involves acquiring adequate information on the project, in this case the WWTWs, predicting the likely effects (direct, indirect, short and long term, isolated, interactive and cumulative) and their impacts on the conservation objectives and status of the European Designated Site. Finally, mitigation measures will need to be identified and assessed against the adverse effects the project is likely to cause.

This Appropriate Assessment process has been prepared in accordance with EPA guidance notes and Department of Environment Heritage and Local Government Circular Letter L8/08 (September 2008) with data from the NPWS, EPA and Water Matters web site, in combination with Monaghan County Council data.



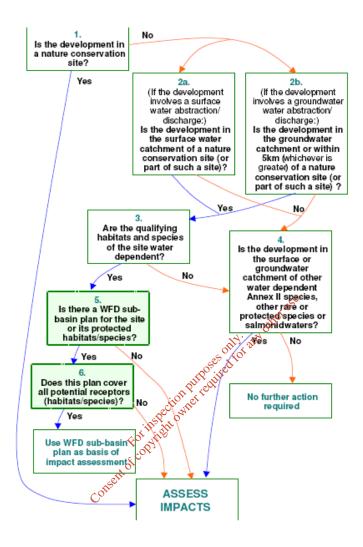


Figure 1. Flow Diagram for Screening Water Services Infrastructure Projects (Source: DoEHLG Circular L08/08 Sept 2008)

Register No: A0037-01



### 2 Pre Screening

As per the DoEHLG Circular 08/08, pre-screening is required to determine whether water services projects (in this case, Tyholland WWTW Effluent Discharge) must be screened for impacts. If the answer is "yes" to any of the pre-screening questions, a Stage 1 Appropriate Assessment Screening must be carried out.

The requirement to screen for impacts will be determined in the sub section below.

#### 2.1 Tyholland Agglomeration

#### 2.1.1 Background

The waste water works serving the immediate environs of Tyholland comprises a network of gravity sewers, one pumping station, associated rising main and a waste water treatment works with a design capacity of 150 PE. The plant currently serves a PE of 143.

The primary discharge of the waste water works is to Tyholland River, a tributary of the Silver Stream River, at National Grid Reference 272040E 335470N in the Townland of Killyneill, Co. Monaghan. The associated Waste Water Treatment Plant is located at 272059E 335485N also in the townland of Killyneill, County Monaghan.

The Tyholland River and Silver Stream River are not identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001 nor is it classified as a "salmonid river" under S.I. 293 OF 1988. The Blackwater River, however, of which the River Cor is a tributary, is classified as "sensitive" from the confluence of the River Shambles to Newmills Bridge.

The treated effluent has an average BOD concentration of 22.5 mg/l and average suspended solids concentration of 18.3 mg/l and COD concentration of 94mg/l. Average concentrations of nutrients are as follows; Total Ammonia 34.3mg/l (P), average Total Phosphorus 3.6mg/l (P) and Total Nitrogen 2.9mg/l (N).

Further information on the Knockatallon Waste Water agglomeration is contained in Monaghan County Council's Waste Water Certificate of Authorisation application (Ref: A0037-01).



#### 2.1.2 Tyholland Pre-Screening

Table 2. The Requirement to Screen the Tyholland WwTW for Impacts

Tyholland WwTW	Answer
1. Is the development in or on the boundary of a nature conservation site NHA/SAC/SPA?	No
2. Will nationally protected species be directly impacted? Wildlife Acts (1976 and 2000), Flora Protection order (S.I. 94 of 1999)?	No
3. Is the development a surface water discharge or abstraction in the surface water catchment or immediately downstream of a nature conservation site with water dependant qualifying habitats/ species?	No
4. Is the development a groundwater discharge or abstraction in the ground water catchment or within 5km of a nature conservation site with water-dependant qualifying habitats/species?	No
5. Is the development in the surface water or groundwater catchment of salmonid waters?	No aller list
6. Is the treatment plant in an active or former floodplain or flood zone of a river, lake, etc.?	
7. Is the development a surface discharge or abstraction to or from marine waters and within 3km of a marine mature conservation site?	No
8. Will the project in combination with other projects (existing and proposed) or changes to such projects affect the hydrology or water levels of sites of nature conservation interest or the habitats of protected species?	No

The Tyholland WWTW is not in or on the boundary of an NHA, SAC or SPA. The discharge is not immediately downstream or upstream or in the catchment of a nature conservation sites with water dependent habitats or species. The nearest designated site is the Glaslough Lake (Site Code 000559) which is located approximately 8km (as the crow flies) from discharge point (**Figure 2**).

Glaslough Lake NHA, is associated with the Glaslough Demesne, and is valued for the lake, its adjacent wetland habitats and the mixed species (non coniferous) woodland which was planted. Wooded islands in the southern end of the site serve as Herony sites. This particular lake is noted for having the greatest number of wildfoul species of all the lakes in the Blackwater Catchment (total 17 number). In particular it is an overwintering site for Greenland White Fronted Geese.



As the answer to <u>all</u> of the questions is 'no', the Screening Stage 1 of the Appropriate Assessment process is not required. However, in order to comply with the letter from the EPA dated 7<sup>th</sup> April 2010 which states that "*in particular, the flow diagram in Appendix 1 should be completed and the results of each section recorded*", the Screening Stage 1 and the Appendix 1 Flow Diagram of *Circular L8/08* have been completed for this project.

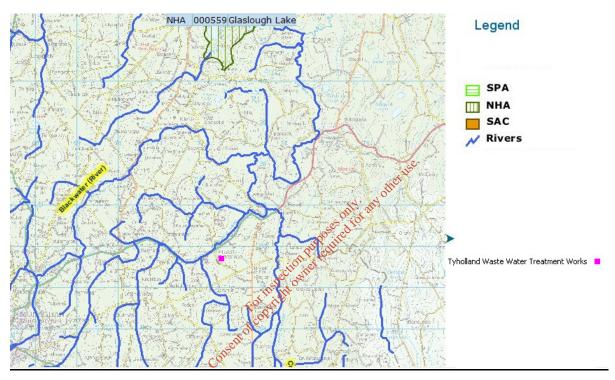


Figure 2. Nearest Designated Site to Tyholland WWTW (Source: EPA ENVision)



### 3 Stage 1-Screening

#### 3.1 Introduction

As noted in Section 1.3.2, where initial screening reveals that a project is required to be screened for impacts, an Appropriate Assessment Screening must be carried out in accordance with the Appendix 1 Flow Diagram of the DoEHLG Circular 08/08. However, as noted in Section 2.1.2, Screening Stage 1 is not required as a result of the pre-screening stage, but is has been completed in this instance, in order to comply with the EPA letter dated 7<sup>th</sup> April 2010.

This Screening exercise will identify the likely impacts (if any) from the Tyholland waste water discharge effluent on the Glaslough NHA and will consider whether these effects (if any) are likely to be significant.

#### 3.2 Step 1 Management of the Site

The Tyholland agglomeration and its discharge are neither directly connected to nor necessary to the management of the Glaslough NHA.

#### 3.3 Step 2 Description of the Project

#### 3.3.1 General

A brief description of the WwTW and associated discharge is given in this section. Further information is contained within the Waste Water Discharge Certificate of Authorisation application File Ref A0037-01.

The waste water works serving the immediate environs of Tyholland comprises a network of gravity sewers, one pumping station, associated rising main and a waste water treatment works with a design capacity of 150 PE.

The primary discharge of the waste water works is to Tyholland River, a tributary of the Silver Stream River, at National Grid Reference 272040E 335470N in the Townland of Killyneill, Co. Monaghan. The associated Waste Water Treatment Plant is located at 272059E 335485N also in the townland of Killyneill, County Monaghan



The Tyholland River flows in a northerly direction along the western boundary of the waste water treatment plant. This water course is situated within the Neagh Bann IRBD and Blackwater River catchment. The River meets the Silver Stream River approximately 230m downstream of the discharge point. The Silver Stream River is a tributary of the River Blackwater.

The Tyholland River and Silver Stream River are not identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001 nor is it classified as a "salmonid river" under S.I. 293 OF 1988. The Blackwater River, however, of which the River Cor is a tributary, is classified as "sensitive" from the confluence of the River Shambles to Newmills Bridge (see **Figure 3** below).

The Tyholland River is a tributary of NB\_Blackwater68\_CorTRIB\_SilverSteam which has an overall risk category under the Water Frame Work Directive of 1a, water body is at risk of failing to meet good status in 2015.

The treated effluent has an average BOD concentration of 22.5 mg/l and average suspended solids concentration of 18.3 mg/l and COD concentration of 94mg/l. Average concentrations of nutrients are as follows; Total Ammonia 34.3mg/l (P), average Total Phosphorus 3.6mg/l (P) and Total Nitrogen 2.9mg/l (N). The existing waste water treatment plant is meeting the required standards as set out in the Urban Waste Water Regulations 2001 (S.I 254 of 2001) for suspended solids. There were slight elevations recorded with regard to BOD and COD, however their required percentage reductions were achieved.

Monaghan County Council monitors the river directly upstream and downstream of the treatment plant are outlined below:

	Upstream	Downstream
BOD (mg/l)	<2	<2
TSS (mg/l)	4.5	5.5
Total N (mg/l N)	0.2	0.2
Total P (mg/l)	0.14	0.11
MRP (mg/l) (derived from Total P)	0.045	0.035



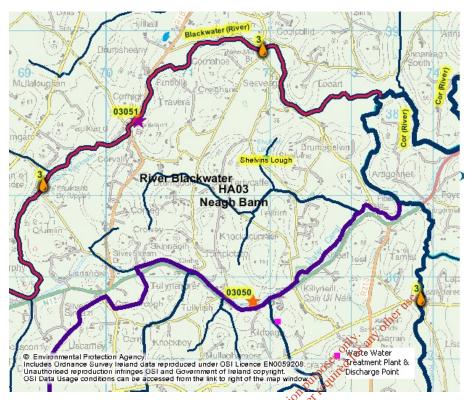


Figure 3 Location of WWTW and Receiving Waters. (Source: EPA ENVision Mapping)

### 3.3.2 Tyholland Waste Water Freatment Plant

The waste water treatment plant provides treatment for a design load of 150 PE. The plant currently serves a PE of 143.

#### **Inlet Works**

Flow through the works is by gravity and is screened. The inlet works comprises of screen (15mm bar screen, manually cleaned by rake – see photograph 1) and a flume. Level measurement is available. Flow measurement is calculated based on the level in the flume.





**Photograph 1 Inlet Works** 

#### **Treatment**

Flow passes by gravity from the inlet works and is split between two parallel primary settling tanks. Floated sludge is trapped by an underflow baffle, preventing it from entering the zone of the v-notched weir.



**Photograph 2 Settling Tanks** 

Following primary settlement, flow passes to a rotating biological contactor (RBC). The RBC is rotated slowly by a small electric motor and is arranged so that a proportion of the media is submerged in the effluent at any time. As the RBC rotates, the media is subjected alternately to wastewater and air, encouraging an aerobic, biologically active film of biomass to establish on the media sheets, oxidising the pollutants in the sewage.



The flow passes from the RBC to a humus tank. Flows enters the humus tank through a diffuser drum ensuring the flow is directed evenly toward the v-notched weir.



Photograph 3 Humus Tanks

Effluent passes over the v-notched weir, is collected in a channel and piped to the discharge point. A pumped sludge return is provided to the inlet of the primary settling tank.

#### **Sludge**

The settling tanks are de-sludged by tanker every two months. The sludge is transported to Monaghan Town WWTP for further treatment.

#### 3.3.3 In Combination Impacts

This AA screening process only relates to Tyholland WWTW discharge. The discharge has the potential to only have an effect on the aquatic environment, hence it can be inferred that in combination effects need only apply to other plans and projects that have an impact on the aquatic environment. Based on the above and a review of industrial and municipal discharges in the vicinity and the fact that the NHA is significantly down gradient of the discharge, no combination impacts are predicted.



#### 3.4 Step 3 Characteristics of the Site

#### 3.4.1 General Description

Glaslough Lake NHA, is associated with the Glaslough Demesne, and is valued for the lake, its adjacent wetland habitats and the mixed species (non coniferous) woodland which was planted. Wooded islands in the southern end of the site serve as Herony sites. This particular lake is noted for having the greatest number of wildfoul species of all the lakes in the Blackwater Catchment (total 17 number). In particular it is an overwintering site for Greenland White Fronted Geese.

#### 3.4.2 NHA Qualifying Interest

The site has been designated for its lake rich in calcium with stoneworts, mixed woodland, waterfowl, and birds.

Some of the qualifying interests above for which the NHA is designated are water dependent. However, the designated site is located a significant distance downstream of the discharge location and is not in the discharge's receiving water catchment. Therefore how significant effects on the NHA's integrity and qualifying interests resulting from the Tyholland WWTW discharge are likely and no further assessment is required.

#### 3.5 Step 4 Assessment of Significance

As per Circular L8/08 Water Services Investment and Rural Water Programmes - Protection of Natural Heritage and National Monuments issued by the DoEHLG, this section displays the outcome of the Appendix 1 Flow Diagram which was used to screen for impacts. It should be noted that the red line indicates the project-specific outcomes.

#### 3.6 Conclusion

The discharge from the Tyholland WWTW will not have significant adverse impacts on the conservation objectives or integrity of the Glaslough NHA. Therefore, Stage 2 of the Appropriate Assessment process is not required.

Tyholland Waste Water Certificate of Authorisation Application **Appropriate Assessment Screening** Register No: A0037-01 1. Figure 4 - Appendix 1 Flow Is the Development in a **Diagram of the DoEHLG Circular** nature conservation site? 08/08 Completed for Tyholland No Yes 2a. 2b. 2b. (If the development 2a. (If the development involves a groundwater involves a surface water Water abstraction/ abstraction/discharge) discharge) Is the development in Is the development in surface water the groundwater catchment of catchment or within nature conservation 5km (whichever is site (or part of such a greater) of a nature site)? conservation site (or part of such a site)? No Yes 3. Is the development in the surface Are the qualifying habitats or groundwater catchment of and species of the site other water dependent Annex II water dependent? species, other rare or protected species or Salmonid waters? Yes 5. Yes No Is there a WFD sub basin plan for the site or its protected habitats/ species? No **NO FURTHER ACTION REQUIRED** Yes Does this plan cover all potential receptors (habitats/species)? No Yes **ASSESS IMPACTS** 7. Use WFD sub-basin plan as basis of impact

**Monaghan County Council** 

assessment



## **TYHOLLAND WASTE WATER TREATMENT WORKS**

# WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION

**Revised Non Technical Summary** 

Monaghan County Council
County Offices
The Glen
Co. Monaghan

May 2010

#### Monaghan County Council Tyholland Waste Water Certificate of Authorisation Application Revised Non Technical Summary May 2010

Register No: A0037-01



#### **Tyholland - Revised Non Technical Summary**

Monaghan County Council is making an application to the Environmental Protection Agency (EPA) for a Waste Water Discharge Certificate of Authorisation for the Tyholland Waste Water Treatment Plant (WWTP) and agglomeration in compliance with the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

Under Schedule 2 of the above regulations, the prescribed date for submission of Waste Water Discharge Licence Applications for agglomerations (with discharges with a population equivalent of less than 500 PE) is 22nd December 2009. The WWTP at Tyholland falls under this category, having an agglomeration with a design PE of 150 and a current estimated PE of 143.

The waste water works serving the immediate environs of Tyholland comprises a network of gravity sewers, one pumping station, associated rising main and a waste water treatment works. The plant is supervised/manned for two hours Monday to Friday and half an hour on Saturdays and Sundays, giving a total of 11 hours a week.

The primary discharge of the waste water works is to Tyholland River, a tributary of the Silver

The primary discharge of the waste water works is to Tyholland River, a tributary of the Silver Stream River, at National Grid Reference 272040E 335470N in the Townland of Killyneill, Co. Monaghan. The associated Waste Water Treatment Plant is located at 272059E 335485N also in the townland of Killyneill, County Monaghan. The Tyholland River flows in a northerly direction along the western boundary of the waste water treatment plant. This water course is situated within the Neagh Bann IRBD and Blackwater River catchment.

The Tyholland River meets the Silver Stream River approximately 230m downstream of the discharge point. The Silver Stream River is a tributary of the River Blackwater.

The Tyholland River and Silver Stream River are not identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001 nor is it classified as a "salmonid river" under S.I. 293 OF 1988. The Blackwater River, however, of which the River Cor is a tributary, is classified as "sensitive" from the confluence of the River Shambles to Newmills Bridge. The Silver Steam has an overall risk category under the Water Frame Work Directive of 1a, water body is at risk of failing to meet good status in 2015.

The Tyholland WWTW is not in or on the boundary of an NHA, SAC or SPA. The discharge is not immediately downstream or upstream or in the catchment of a nature conservation sites with water

#### Monaghan County Council Tyholland Waste Water Certificate of Authorisation Application Revised Non Technical Summary May 2010 Register No: A0037-01



dependent habitats or species. The nearest designated site is the Glaslough Lake (Site Code 000559) which is located approximately 8km (as the crow flies) from discharge point.

Taking cognisance of the DoEHLG Circular L8/08 "Water Services Investment and Rural Water Programmes - Protection of Natural Heritage and National Monuments", a pre-screening and Appropriate Assessment Screening was carried out to determine the likely impacts on the Glaslough Lake NHA of the Tyholland waste water discharge and to consider whether these effects are likely to be significant.

It was concluded that the discharge from the Tyholland WWTW will not have a significant adverse impact on the conservation objectives or integrity of the Glaslough Lake NHA and therefore, Stage 2 of the Appropriate Assessment process was not required

The treated effluent has an average BOD concentration of 22.5 mg/l and average suspended solids concentration of 18.3 mg/l and COD concentration of 94 mg/l. Average concentrations of nutrients are as follows; Total Ammonia 34.3 mg/l (P), average Total Phosphorus 3.6 mg/l (P) and Total Nitrogen 2.9 mg/l (N). The existing waste water treatment plant is meeting the required standards as set out in the Urban Waste Water Regulations 2001(S.I 254 of 2001) for suspended solids. There were slight elevations recorded with regard to BOD and COD, however their required percentage reductions were achieved.

There are no EPA monitoring stations upstream and downstream of the discharge point or on the Silver Stream River. The nearest biological monitoring location is on the Cor River upstream of where the Silver Stream meets the River Cor. A Q value of 3 was recorded at this location.

Monaghan County Council monitors the river directly upstream and downstream of the treatment plant and the results are tabled below:

	Upstream	Downstream
BOD (mg/l)	<2	<2
TSS (mg/l)	4.5	5.5
Total N (mg/l N)	0.2	0.2
Total P (mg/l)	0.14	0.11
MRP (mg/l) (derived from Total P)	0.045	0.035

#### Monaghan County Council Tyholland Waste Water Certificate of Authorisation Application Revised Non Technical Summary May 2010 Register No: A0037-01



Due to lack of flow data on the receiving water, the assimilative capacity was unable to be calculated. However, water quality monitoring results indicate that the Environmental Objective (95%ile for Good Status) contained within the Surface Water Regulations 2009 (S.I. No. 272 of 2009) are being met for MRP and BOD.

Consent of copyright owner required for any other use.