Monaghan County Council

Tydavnet Waste Water Discharge Certificate of Authorisation (A0029-01)

Regulation 24 of the Waste Water Discharge (Authorisation) Regulation, 2007 (S.I. 684 of 2007)

Date: May 2010

Monaghan County Council
Tydavnet Waste Water Certificate of Authorisation Application
Appropriate Assessment Screening
Register No: A0029-01

Contents

Tables

Figures

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 22nd 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 Tydavnet agglomerations (EPA Application Register Numbers A0029-01) and to form a response to the EPA correspondence of 7th 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 L8/08 "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 Tydavnet Waste Water Treatment Plants and associated discharges), should be subjected to initial screening 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 or 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 or abstraction in the ground water catchment or within 5km of a nature conservation site with water-dependant 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 the 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 of the Appropriate Assessment process will be carried out to assess the potential adverse impact of the discharge on conservation objectives of any relevant Natura 2000 site, in line with the requirements of Article 6 of the Habitats Directive.

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 Appropriate Assessment process, the impact of the discharges from the Tydavnet 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.

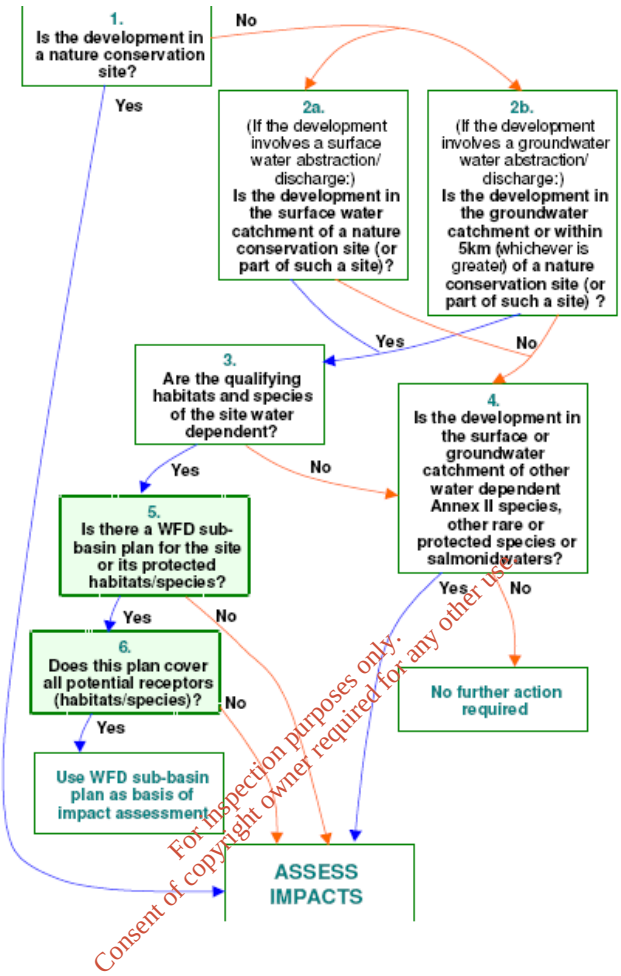


Figure 1. Flow Diagram for Screening Water Services Infrastructure Projects (Source: DoEHLG Circular L08/08 Sept 2008)

2 Pre Screening

As per the DoEHLG Circular 08/08, pre-screening is required to determine whether water services projects (in this case, Tydavnet WWTW Effluent Discharge) must be screened for impacts. If the answer is "yes" to any of the pre-screening questions, Stage 1 Appropriate Assessment Screening, must be carried out. If the conclusion of the screening outlined in the Natura 2000 Screening Protocol is to "Assess Impacts", then an Appropriate Assessment must be prepared. The requirement to screen for impacts will be determined in the sub sections below.

2.1 Background

The waste water works serving Tydavnet and the immediate environs and the immediate environs comprises gravity sewers, a pumping station and associated rising main and a waste water treatment works.

The waste water treatment plant, which provides treatment for a design load of 350 PE, comprises settlement, followed by a rotating biological contractor and clarification by reed beds, ponds and meandering constructed wetlands. Sludge from Tydavnet Waste Water Treatment plant is also treated by reed beds. The plant currently provides treatment for an estimated PE of 100.

The primary discharge of the waste water works is to an unnamed River which is a tributary of the Drumbarnet River (National Grid Reference 264369E 338765N) in the townland of Tirnaskea North, County Monaghan. The associated Waste Water Treatment Plant is located at 264412E 338793N also in the townland of Tirnaskea North, County Monaghan. The Drumbarnet River is in turn a tributary of the Blackwater River. The water course is situated within the Neagh Bann IRBD and Blackwater River Catchment.

Neither the unnamed river to which the works discharges to directly, nor the Drumbarnet River are identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001 nor are classified as a "salmonid river" under S.I. 293 of 1988. The Blackwater River, however, of which the Drumbarnet River is a tributary, is classified as "sensitive" from the confluence of the River Shambles to Newmills Bridge.

Further information on the Tydavnet Waste Water agglomeration is contained in Monaghan County Council's Waste Water Certificate of Authorisation application (Ref: A0029-01).

2.2 Tydavnet Pre-Screening

Table 2: The Requirement to Screen the Tydavnet WWTW for Impacts

Tydavnet 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
6. Is the treatment plant in an active or former floodplain or flood zone of a river, lake, etc.?	No
7. Is the development a surface discharge or abstraction to or from marine waters and within 3km of a marine nature 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 Tydavnet WWTW is not in or on the boundary of an NHA, SAC or SPA. The discharge is not immediately downstream of a nature conservation sites with water dependent habitats or species.

The nearest conservation site is **Mullaghmore Lake (South) NHA** (approximately 2.2 km south west as the crow flies). This is a shallow water body located and is colonised by reedbeds of Club Rush, Water Horsetail and common Water Lilies. Further back from the lake margins, woody vegetation forms a margin and comprises Alder and Willow. The site is in fact designated for the extent of floating vegetation located there (see **Figure 2**).

Other designated sites in the wider surroundings are the **Drumreaske Lough NHA** (NPWS site code 001602). This site is approximately 3.5km south (as the crow flies) of the discharge point. Drumreaske Lough is a small calcareous lough which is surrounded by marshland and mixed woodland. The lough margins feature stoneworts and the Great Fen Sedge (see **Figure 2**).

Rosefield Lake and Woodlands NHA (NPWS site code 001784) is located approximately 5km south west (as the crow flies) of the discharge point. It is a small lakeland site containing reedbeds and surrounded by Alder woodland. This is a calcareous lake surrounded by reed beds and an alder wood. The lake contains stoneweed, Canadian pondweed and pondweed. There is an emergent zone of clubrush, bullrush and saw sedge. This zone is surrounded by reed beds of Phragmites (common reed), bottle sedge and rush. This is a very good example of the transition from lake shore to alder woodland (see **Figure 2**).

Wrights Wood NHA (NPWS site code 001612) is approximately 4.7km south east of the discharge location (as the crow flies). This is a hilltop woodland which is noted for its species content, comprising very old Goat Willow trees and younger coppiced ash trees. The open canopy nature of it is such that a diverse range of species have developed as ground flora. These include Herb Robert, Wood Avens and Germander Speedwell (see **Figure 2**).

As the answer to **all** 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 7th 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.

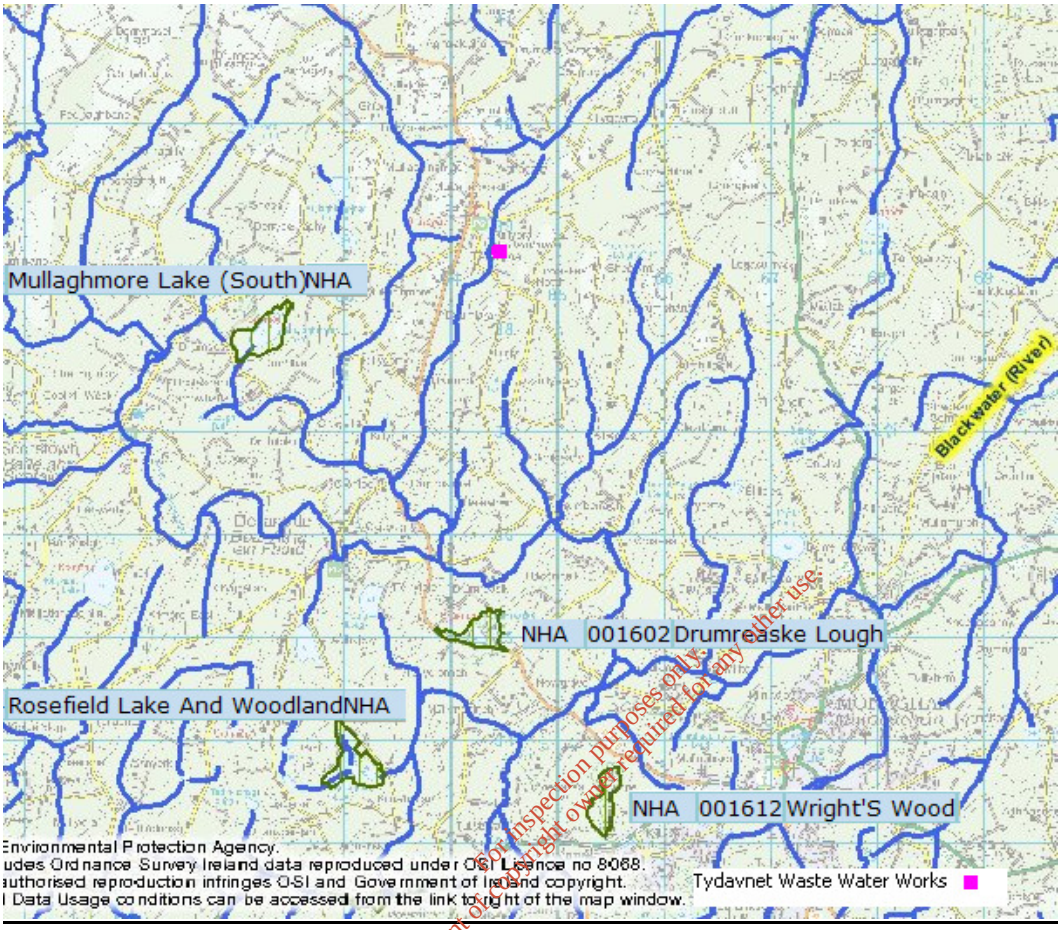


Figure 2. Nearest Designated Site to Tydavnet WWTW **(Source: EPA ENVision)**

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 7th April 2010.

This Screening exercise will identify the likely impacts (if any) from the Tydavnet waste water discharge effluent on the **Mullaghmore Lake (South)**, **Drumreaske Lough NHA**, **Rosefield Lake and Woodlands NHA** and **Wrights Wood NHA** and will consider whether these effects (if any) are likely to be significant.

3.2 Step 1 Management of the Site

The Tydavnet agglomeration and its discharge are neither directly connected to nor necessary to the management of the Mullaghmore Lake (South), Drumreaske Lough NHA, Rosefield Lake and Woodlands NHA and Wrights Wood 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 A0029-01.

The waste water works serving Tydavnet and the immediate environs comprises a network of gravity sewers, a pumping station and associated rising main and a waste water treatment works with a design capacity of 350 PE. The plant currently serves approximately 100 PE.

The primary discharge of the waste water works is to a River which is a tributary of the Drumbarnet River (National Grid Reference 264369E 338765N) in the townland of Tirnaskea North, County Monaghan. The

associated Waste Water Treatment Plant is located at 264412E 338793N also in the townland of Tirnaskea North, County Monaghan.

The receiving River is a tributary of NB_Blackwater68_BlackwaterTRIB_Drumbarnet which is in turn a tributary of the Blackwater River. This water course is situated within the Neagh Bann IRBD river basin and Blackwater River catchment.

Neither the unnamed river to which the works discharges to directly, nor the Drumbarnet River are identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001 nor are they classified as a "salmonid river" under S.I. 293 of 1988. The Blackwater River, however, of which the Drumbarnet River is a tributary, is classified as "sensitive" from the confluence of the River Shambles to Newmills Bridge.

The overall River Water Framework Directive status for the NB_Blackwater68_BlackwaterTRIB_Drumbarnet River is 1b, hence the water body is thought to be at risk of failing to meet the objective pending further investigation. The overall River Water Framework Directive status for the Drumbarnet, Trib of Blackwater Sub Basin is 1a, hence the water body is at risk of failing to meet good status in 2015 (Source: Water Matters Report).

The treated effluent has an average BOD concentration of 2.3 mg/l and average suspended solids concentration of 8.3 mg/l and COD concentration of 23.6mg/l. Average concentrations of nutrients are as follows; orthophosphate 1.5 mg/l (P), average Total Phosphorus 1.5mg/l (P) and Total Nitrogen 9.5mg/l (N). At present 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 the limits set on BOD, COD and suspended solids.

3.3.2 Tydavnet Waste Water Treatment Plant

The waste water treatment plant, which provides treatment for a design load of 350 PE, comprises settlement, followed by a rotating biological contactor and clarification by reed beds, ponds and meandering constructed wetlands. Sludge from the Tydavnet Waste Water Treatment plant is also treated by reed bed.

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 below) and a flume. Level measurement is available but not operational.

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. Settled sludge is pumped to a reed bed, where it is treated and the effluent returned to the inlet of the primary settlement tank.

Following primary settlement, flow passes over a v-notched weir and is pumped 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.

Photograph 2 Rotating Biological Contactor

Flow passes by gravity to a siphon tank, where it is rests until sufficient volume is retained to activate the siphon. The effluent is directed to a series of reed beds, ponds and meandering constructed wetlands for final clarification and polishing prior to discharge. There are 5 stages to the tertiary treatments, 3 stages of reed beds, followed by a pond equipped with cascade aeration and finally, a meandering wetland.

Photograph 3 Reed Bed

Sludge

There are no sludge collection facilities at Tydavnet.

3.3.3 In Combination Impacts

This Appropriate Assessment screening process only relates to the Tydavnet 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's are significant distances from the discharge location, no combination effects are predicted.

3.4 Step 3 Characteristics of the Site

3.4.1 General Description

Mullaghmore Lake (South) NHA

Mullaghmore Lake (South) is a shallow water body located and is colonised by reedbeds of Club Rush (*Scirpus lacustris*), Water Horsetail (*Equisetum fluviatile*) and common Water Lilies (*Nymphaea* spp). Further back from the lake margins, woody vegetation forms a margin and comprises Alder (Alnus glutinosa) and Willow (*Salix* spp). The site is in fact designated for the extent of floating vegetation located there. In addition, a better than average number and variety of waterfoul reside there.

Drumreaske Lough NHA

Drumreaske Lough is a small calcareous lough which is surrounded by marshland and mixed woodland. The lough margins feature stoneworts and the Great Fen Sedge. The wet marshy areas feature the wayfaring tree (*Viburnum lantana*) which is likely to have been planted here. The mixed woodland that surrounds the lough features both conifers and deciduous species as a mix of native and ornamental types. *Rhododendron ponticum* is also present, its invasive growth characteristics could be a potential threat to this area.

Rosefield Lake and Woodlands NHA

Rosefield Lake and Woodlands is a small lakeland site containing reedbeds and surrounded by Alder woodland. This is a calcareous lake surrounded by reed beds and an alder wood. The lake contains *Chara* (stoneweed), Elodea (Canadian pondweed) and *Potamo eton natans* (pondweed). There is an emergent zone of *Scir us lacustris* (clubrush), *Typha* (bullrush) and *Cladium* (saw sedge). This zone is surrounded by

reed beds of Phragmites (common reed), *Carex rostrata* (bottle sedge) and *Juncus articulosis* (rush). There is an alder wood on the north, east and west margins varying in width from 1-20 m which contains *Salix atrocinerea* (willow) and *Carex disticha* (creeping brown sedge). This is a very good example of the transition from lake shore to alder woodland.

Wrights Wood NHA

Wrights Wood NHA is a hilltop woodland which is noted for its species content, comprising very old Goat Willow trees (*Salix caprea*) and younger coppiced ash trees (*Fraxinus excelsior*). The woodland is likely to have been planted as it appears to be even aged. The open canopy nature of it is such that a diverse range of species have developed as ground flora. These include Herb Robert (*Geranium robertianum*), Wood Avens (*Geum urbanum*) and Germander Speedwell (*Veronica chamaedrys*). Wrights Wood is one of the best examples of coppiced ash woodland in Monaghan County).

3.4.2 NHA Qualifying Interest

Mullaghmore Lake (South) NHA

The Qualifying Interests of the site are (i.e. the species and habitats for which the site has been designated) floating vegetation and the better than average number and variety of waterfoul that reside there.

The Conservation Objective of this site is to maintain the qualifying interests for this NHA at favourable conservation status.

The qualifying interests for which the NHA is designated are water dependent; however this designated site is not located upstream or downstream of the discharge location and is a significant distance from the discharge location (approximately 2.2 km south west as the crow flies). No significant effects on the NHA's integrity and qualifying interests are likely, therefore no further assessment is required.

Drumreaske Lough NHA

This site has been designated (Qualifying Interests) as it is a calcareous lake surrounded by pockets of woodland and marshland with interesting plant species.

The Conservation Objective of this site is to maintain the qualifying interests for this NHA at favourable conservation status.

The qualifying interests for which the NHA is designated are water dependent; however this designated site is not located upstream or downstream of the discharge location and is a significant distance from the discharge location (approximately 3.5km south as the crow flies). No significant effects on the NHA's integrity and qualifying interests are likely, therefore no further assessment is required.

Rosefield Lake and Woodlands NHA

This site has been designated (Qualifying Interests) as it is as small calcareous lake surrounded by alder woodland and due to the presence of stonewort, reeds and willow and it is a site which is a good example of transition from lakeshore to alder woodland.

The Conservation Objective of this site is to maintain the qualifying interests for this NHA at favourable conservation status.

Some of the qualifying interests for which the NHA are designated water dependent. However the designated site is not located upstream or downstream of the discharge location and is a significant distance from the discharge location (approximately 5km south west as the crow flies). No significant effects on the NHA's integrity and qualifying interests are likely, therefore no further Assessment is required.

Wrights Wood NHA

This site has been designated (Qualifying Interests) as it is a woodland site with old and young trees, coppiced ash woodland and berries.

The Conservation Objective of this site is to maintain the qualifying interests for this NHA at favourable conservation status.

The qualifying interests for which the NHA is designated are not water dependent and the designated site is not located upstream or downstream of the discharge location or in the discharge's receiving water catchment. No significant effects on the NHA's integrity and qualifying interests are likely, therefore no further Assessment is required.

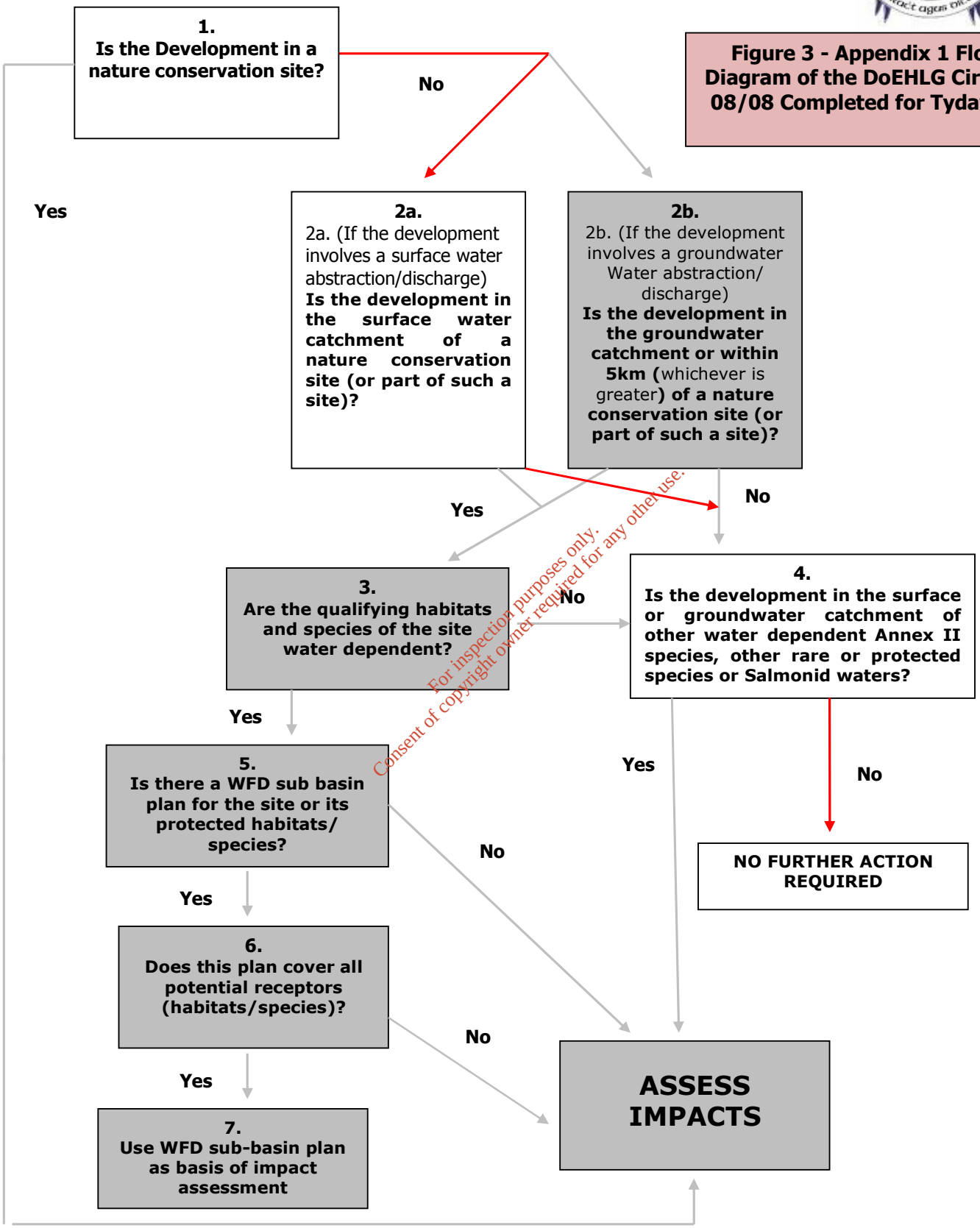
3.5 Step 4 Assessment of Significance

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 Tydavnet WWTW will not have significant adverse impacts on the conservation objectives or integrity of the Mullaghmore Lake (South) NHA, Drumreaske Lough NHA, Rosefield Lake and Woodlands NHA and Wrights Wood NHA. Therefore, Stage 2 of the Appropriate Assessment process is not required.

Figure 3 - Appendix 1 Flow Diagram of the DoEHLG Circular 08/08 Completed for Tydavnet



TYDAVNET 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

Tydavnet - 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 Tydavnet 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 Tydavnet falls under this category, having an agglomeration with a design PE of 350 and a current estimated PE of 100.

The waste water works serving Tydavnet and the immediate environs comprises a network of gravity sewers, a pumping station and associated rising main and a waste water treatment works. The plant is supervised/manned for ten hours Monday to Friday, giving a total of 10 hours a week.

The waste water treatment plant comprises settlement, followed by a rotating biological contactor and clarification by Reed Beds, ponds and meandering constructed wetlands. Sludge from the Tydavnet Waste Water Treatment plant is also treated by reed bed.

The primary discharge of the waste water works is to an unnamed River which is a tributary of the Drumbarnet River (National Grid Reference 264369E 338765N) in the townland of Tirnaskea North, County Monaghan. The associated Waste Water Treatment Plant is located at 264412E 338793N also in the townland of Tirnaskea North, County Monaghan. This River is in turn a tributary of the Blackwater River. The water course is situated within the Neagh Bann IRBD and Blackwater River catchment

Neither the unnamed river to which the works discharges to directly, nor the Drumbarnet River are identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001 nor are classified as a "salmonid river" under S.I. 293 of 1988. The Blackwater River, however, of which the Drumbarnet River is a tributary, is classified as "sensitive" from the confluence of the River Shambles to Newmills Bridge.

The overall River Water Framework Directive status for the Drumbarnet River is 1b, hence the water body is thought to be at risk of failing to meet the objective pending further investigation.

The Tydavnet WWTW is not in or on the boundary of an NHA, SAC or SPA. The discharge is not immediately downstream of a nature conservation sites with water dependent habitats or species.

The nearest conservation site is Mullaghmore Lake (South) NHA (approximately 2.2 km south west as the crow flies). Other designated sites in the wider surroundings are the Drumreaske Lough NHA (approximately 3.5km south as the crow flies), Rosefield Lake and Woodlands NHA (approximately 5km south west as the crow flies) and Wrights Wood NHA (approximately 4.7km south west as the crow flies).

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 Mullaghmore Lake (South) NHA, Drumreaske Lough NHA, Rosefield Lake and Woodlands NHA and Wrights Wood NHA of the Tydavnet waste water discharge and to consider whether these effects are likely to be significant.

It was concluded that the discharge from the Tydavnet WWTW will not have a significant adverse impact on the conservation objectives or integrity of the above NHA's and therefore, Stage 2 of the Appropriate Assessment process was not required.

The treated effluent has an average BOD concentration of 2.3 mg/l and average suspended solids concentration of 8.3 mg/l and COD concentration of 23.6mg/l. Average concentrations of nutrients are as follows; orthophosphate 1.5 mg/l (P), average Total Phosphorus 1.5mg/l (P) and Total Nitrogen 9.5mg/l (N). At present 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 the limits set on BOD, COD and suspended solids.

There is no EPA monitoring location upstream of the discharge point. The nearest EPA monitoring station downstream of the discharge point is located the 1st Br d/s Ballinode (Station 0300). A Q value of 4 was recorded at this station in from 1993 to 2004.

Monaghan County Council monitored directly upstream and downstream of the treatment plant on the 8/10/09. Monaghan County Councils upstream and downstream results are outlined below:

	Upstream	**Downstream**
BOD (mg/l)	<2	<2
TSS (mg/l)	10	24
Total N (mg/l N)	1.87	1.35

	Upstream	Downstream
Ammonia (mg/l NH3-N	0.06	0.06
Total P (mg/l)	0.12	0.19
MRP (derived from Total P)	0.04	0.06

With regard to dangerous substances (October 2009), upstream concentrations were below the detection level for 12 of the 19 parameters and downstream concentration were below the detection level for 15 of the 19 parameters. No levels upstream or downstream exceeded the standards as outlined in the Water Quality (Dangerous Substances) Regulations 2001.

Due to lack of flow data on the receiving water, the assimilative capacity was unable to be calculated. However, physiochemical water quality monitoring results (EPA and Monaghan County Council Data) would indicate that the discharges from the works are not having a significant detrimental impact on the receiving environment.