Monaghan
COUNTY COUNCIL
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Arts
047 71114

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County Library
047 51143

County Museum
047 82928

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047 30593

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047 30589

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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

10th 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

A Chara,

Further to your correspondence of the 7th April 2010, please find enclosed the following documentation and accompanying CD-ROMs 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.

Mise le Meas,

Mark Johnston

Senior Executive Engineer.

Monaghan County Council, Council Offices, The Glen, Monaghan, Ireland
Tel 00353 47 30500 | Fax 00353 47 82739 | Email info@monaghancoco.ie

Monaghan County Council

Magheracloone Waste Water Discharge Certificate of Authorisation (A0036-01)

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

Date: May 2010

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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 Magheracloone agglomerations (EPA Application Register Numbers A0036-01) 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 Magheracloone Waste Water Treatment Works), 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 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.

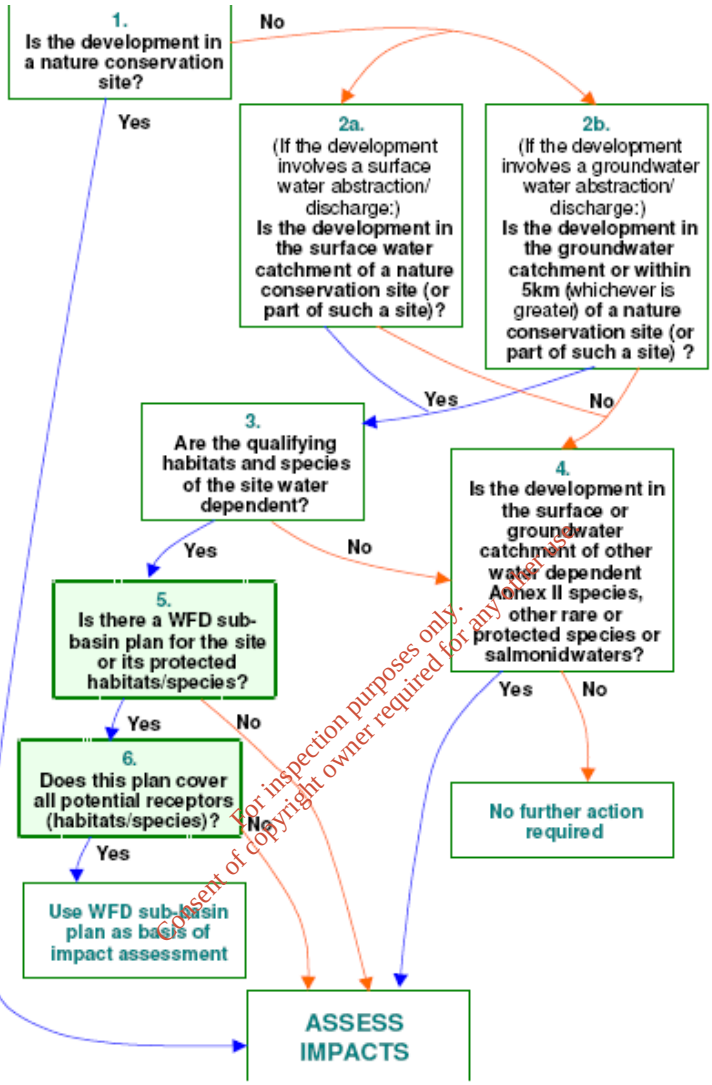


Figure 1. Flow Diagram for Screening Water Services Infrastructure Projects (Source: DoEHLG Circular L08/08 Sept 2008)

2 Pre Screening

As per the DoEHLG Circular 08/08, pre-screening is required to determine whether water services projects (in this case, Magheracloone 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 sections below.

2.1 Magheracloone Agglomeration

2.1.1 Background

The Waste Water Works, serving the Clonsedy Housing Estate and the immediate environs, comprises a network of gravity sewers, and associated rising main and a Waste Water Treatment Works with a design capacity of 160 PE. The associated Waste Water Treatment Plant is located at 281322E 300296N in the townland of Clonsedy, Magheracloone, Co. Monaghan

Effluent from the plant is discharged to an unnamed stream (NGR 281305E 300300N) approximately 292m upstream of the Magheracloone Stream. There is no emergency overflow or storm water overflow facility located within the treatment plant site boundary. The Magheracloone Stream discharges to Lough Fea downstream of which is the Bursk River. The Bursk River (NB_Glyde95_GlydeTRIB_Rahans1_Lower) is a tributary of the Lagan River, which becomes the Glyde River below Aclint Bridge.

The treated effluent has an average BOD concentration of 6.9 mg/l and average suspended solids concentration of 18 mg/l and COD concentration of 69mg/l. Average concentrations of nutrients are as follows; orthophosphate 9.33 mg/l (P), average Total Phosphorus 4.2 mg/l (P), ammonia 2.5mg/l and Total Nitrogen 35.9 mg/l (N).

There has been no change in water quality along the River Bursk since 2006. Water quality on the Bursk River remains at Q3-4, the same as in 2006 and both Lough Fea and Ballyhoe Lough have been classified as mesotrophic by the EPA (EPA, 2005). The nearest EPA monitoring site downstream of the discharge is at Lagan Br on the River Glyde. A Q value of 4 was recorded at this station in 2003.

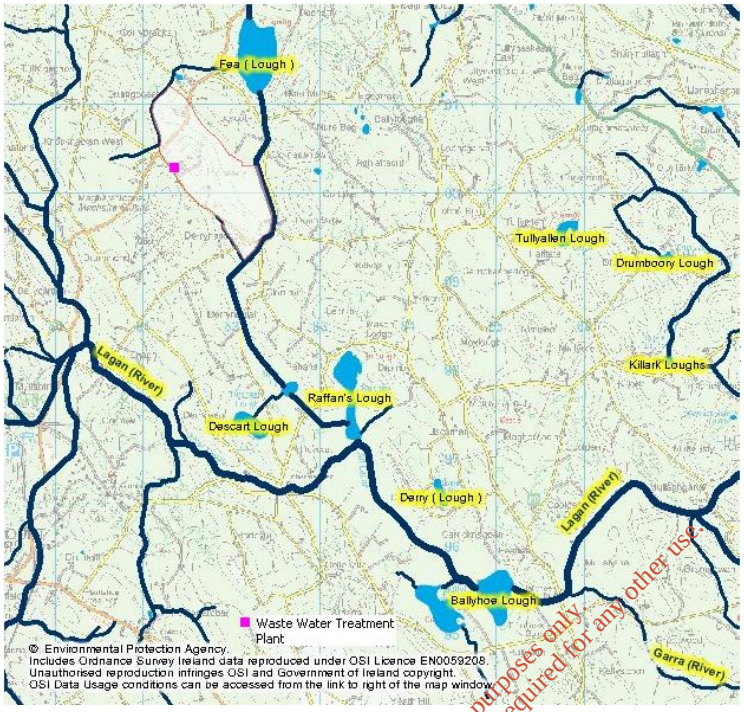


Figure 2 Location of WWTW and Receiving River (Source: EPA ENVision Mapping)

Further information on the Magheracloone Waste Water agglomeration is contained in Monaghan County Council's Waste Water Certificate of Authorisation application (Ref: A0036-01).

2.1.2 Magheracloone Pre-Screening

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

Magheracloone 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

Magheracloone WwTW	Answer
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 Magheracloone WWTW is not in or on the boundary of an NHA, SAC or SPA. The discharge is not immediately downstream of nature conservation sites with water dependent habitats or species. The nearest sites are the Ballyhoe Lough NHA (approximately 8km south east of the discharge point) and Lough Fea Demesne NHA (approximately 3km north east of the discharge point as the crow flies) (see **Figure 3** below).

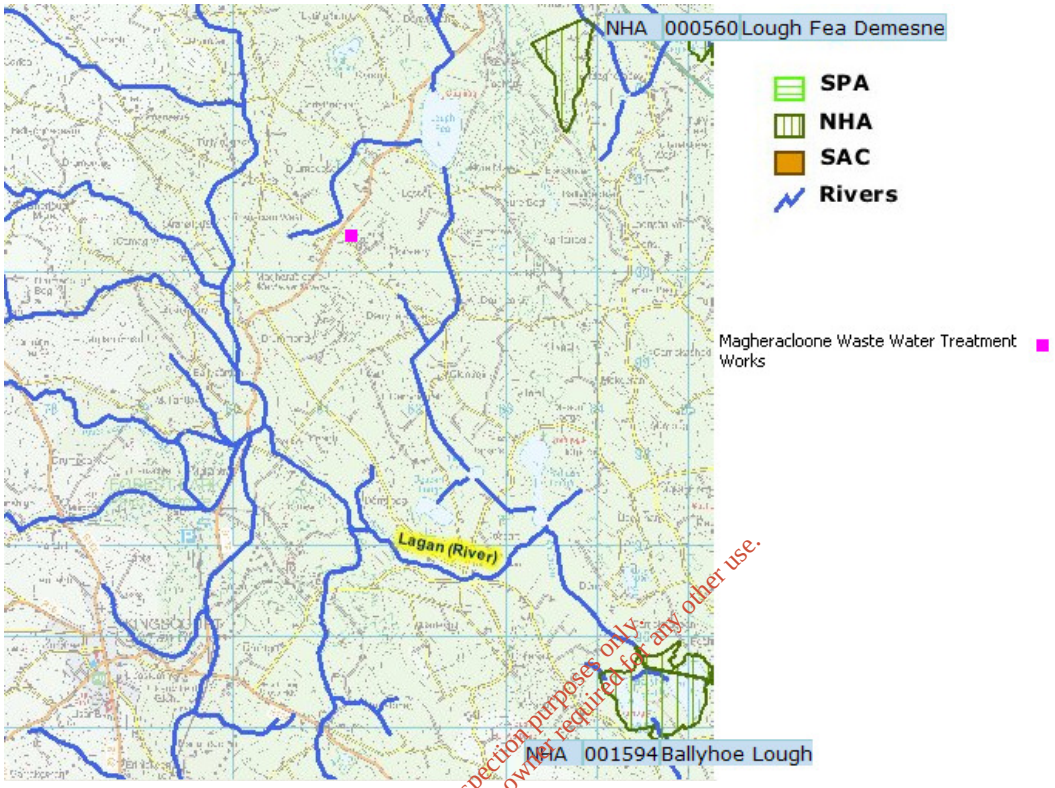


Figure 3 Magheracloone WWTW and Designated sites (Source: EPA ENVision)

<u>Ballyhoe Lough NHA</u>

Ballyhoe Lough NHA, located on the Monaghan/Meath border, is a fairly acid, peaty lough which is divided into two by a strip of land covered by willow (*Salix* sp.), Common Reed (*Phragmites communis*) and Alder (*Alnus glutinosa*). Around the edge is a fringe of Common Reed (*Phragmites communis*), Clubrush (*Scirpus lacustris*) and White Water-lily (*Nymphea alba*). The site includes a peninsula which contains wet grassland habitats and islands, covered with trees and shrubs, which are believed to be crannogs. The Lough is of local importance mainly because it is acid and peaty, in contrast to most Loughs in County Meath. In addition, the bird populations present are of great interest and this combination of interests make the lake one of the more unusual lakes in the county. Bones of the Irish Giant Deer, mainly skulls and antlers, have been found in and around the lake.

Lough Fea Demesne

Lough Fea Demesne comprises large areas of limestone grassland which are extremely rich in numbers and varieties of orchids. Rock outcrops are present and these support unusual or uncommon plant communities. The area also features an ecologically valued woodland which includes magnificent Beech specimens (Fagus sylvatica) The site also includes a cave, the Kilmactrashna Cave contains a sloping passage within that terminates in a chamber.

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 "i*n 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.

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 Magheracloone waste water discharge effluent on the **Ballyhoe Lough NHA** and **Lough Fea Demesne NHA** and will consider whether these effects are likely to be significant.

3.2 Step 1 Management of the Site

The Magheracloone agglomeration and its discharge are neither directly connected to nor necessary to the management of the Ballyhoe Lough NHA and Lough Fea Demesne 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 A0036-01.

The outfall from the Magheracloone Waste Water Plant discharges an unnamed stream which drains into the Magheracloone Stream at National Grid Reference 281305E 300300N in the Townland of Clonsedy, Co. Monaghan.

The Magheracloone Stream discharges to Lough Fea downstream of which is the Bursk River. The Bursk River (NB_Glyde95_GlydeTRIB_Rahans1_Lower) is a tributary of the Lagan River, which becomes the Glyde River below Aclint Bridge. The known beneficial use of the Magheracloone Stream and Bursk River is as a

source of drinking water for livestock. The known beneficial use of the Glyde River is as a surface water abstraction for drinking water at Tallanstown Bridge, Co. Louth; however, this abstraction point is significantly downstream (approximately 23km) of the Magheracloone discharge point. The Bursk and Lagan/ Glyde support fish life. The River Glyde contains stocks of wild brown trout and salmon throughout. There are no designated Sensitive Areas in the vicinity of the discharge point.

Fea Lough into which the Magheracloone Stream discharges is a 36-hectare private fishery, which is, located on the Kingscourt Road 3km south west of Carrickmacross. Tench to over 6lbs have been taken on the lake and it also contains good bream. There are a small number of swims available on the northern shoreline and boats are not permitted. This lake has a mesotrophic status and maximum chlorophyll of 16.

The receiving water is not identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001. The same stretch of river is also not classified as a "salmonid river" under S.I. 293 of 1988. The river is located within the Neagh Bann IRBD. The nearest Sensitive Area identified under the Urban Waste Water Treatment Regulations 2001 is the River Proules - downstream of Carrickmacross sewage outfall, to confluence with the River Glyde.

The overall River Water Framework Directive status for the Bursk River (NB_Glyde95_GlydeTRIB_Rahans1_Lower) is 1b, hence possibly at risk of failing to meet good status in 2015 (Source: EPA website). The Magheracloone Stream and River Bursk are part of the Rahans, Trib of Glyde Waterbody. Although the Bursk River is classified as 1b, the Waterbody of Rahans, Trib of Glyde has an overall risk of 1a.

The treated effluent has an average BOD concentration of 6.9 mg/l and average suspended solids concentration of 18 mg/l and COD concentration of 69mg/l. Average concentrations of nutrients are as follows; orthophosphate 9.33 mg/l (P), average Total Phosphorus 4.2 mg/l (P), ammonia 2.5mg/l and Total Nitrogen 35.9 mg/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. The level of dangerous substances both in the effluent and in the Magheracloone Stream upstream and downstream of the discharge point show a level below those in the Water Quality (Dangerous Substances) Regulations 2001 and therefore the emissions are not considered likely to impair the environment.

There has been no change in water quality along the River Bursk since 2006. Water quality on the Bursk River remains at Q3-4, the same as in 2006 (Source: IPPC Licence No. P06519-02) and both Lough Fea and Ballyhoe Lough have been classified as mesotrophic by the EPA (EPA, 2005). The nearest EPA monitoring site downstream of the discharge is at Lagan Br on the River Glyde. A Q value of 4 (Good Status) was recorded at this station in 2003.

3.3.2 Magheracloone Waste Water Treatment Plant

The Waste Water Treatment Plant (WWTP) which provides treatment for a design load of 160 PE comprises extended aeration followed by upward flow clarification. Sludge from the Magheracloone Waste Water Treatment plant is tankered to Monaghan Town WWTP for treatment.

Inlet Works

Unscreened sewage flows by gravity from the connected houses. The inlet works comprises of a flume and grit trap. Level measurement is available but not operational. Flow is piped to the aeration tank immediately adjacent to the inlet works.

Photograph 1 Inlet Works

Treatment

Aeration is by a rotary surface aerator located at the inflow end of the aeration tank. The tank dimensions are 4m x 10m long, 4m in depth approximately. Floated scum and sludge is collected in a trough, which

also acts as an underflow baffle. Forward flow is under this trough and decants over v-notched weirs, where it is piped to the base of an upward flow clarifier, equipped with coarse media.

Photograph 2 Treatment Plant

Sludge

Floated scum and sludge is collected in the trough at the aeration tank and settled sludge in the aeration tank is removed every 4-6 weeks. The sludge is transported to Carrickmacross WWTP for further treatment. The clarifier is cleaned and de-sludged annually.

3.3.3 In Combination Impacts

This AA screening process only relates to Magheracloone 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. There are no industrial and municipal discharges in the vicinity or upstream or downstream of the discharge location, hence no combination impacts with other plans and projects are predicted.

3.4 Step 3 Characteristics of the Site

3.4.1 General Description

Ballyhoe Lough NHA

Ballyhoe Lough NHA, located on the Monaghan/Meath border, is a fairly acid, peaty lough which is divided into two by a strip of land covered by willow (*Salix* sp.), Common Reed (*Phragmites communis*) and Alder (*Alnus glutinosa*). Around the edge is a fringe of Common Reed (*Phragmites communis*), Clubrush (*Scirpus lacustris*) and White Water-lily (*Nymphea alba*). The site includes a peninsula which contains wet grassland habitats and islands, covered with trees and shrubs, which are believed to be crannogs. The Lough is of local importance mainly because it is acid and peaty, in contrast to most Loughs in the area. In addition, the bird populations present are of great interest and this combination of interests make the lake one of the more unusual lakes in the county. Bones of the Irish Giant Deer, mainly skulls and antlers, have been found in and around the lake.

Lough Fea Demesne NHA

Lough Fea Demesne is about 1km south of Carrickmacross and comprises large areas of limestone grassland which are extremely rich in numbers and varieties of orchids. Rock outcrops are present and these support unusual or uncommon plant communities.

To the west of the grassland are the Lough Fea woods. This substantial area of mixed woodland consists mainly of magnificent Beech (*Fagus sylvatica)*. Also present is Ash (*Fraxinus excelsior*), Scots Pine (*Pinus sylvestris*), Larch (*Larix decidual*), Sycamore (*Acer pseudoplatanus*) and Oak (*Quercus spp.*). Further into the demesne birch trees and conifers replace the Beech.

The ground flora along the eastern boundary is a complete sword of Dog's Mercury (*Mercuralis perennis*) which is scarce in Ireland.

The woodland supports a number of uncommon breeding birds such as Jay, as well as accommodating most of the common species.

The site also includes a cave, the Kilmactrashna Cave contains a sloping passage within that terminates in a chamber.

3.4.2 NHA Qualifying Interest

Lough Fea Demesne NHA

The site is considered to be regionally important because of the limited extent of limestone grasslands within Monaghan County, with most limestone areas restricted to small outcrops in the South and North West. This area is of outstanding botanical interest, even though it is small in extent, with a rich abundance of species. The presence of two scare species adds interest to this site.

The qualifying interests for which the NHA is designated are water dependent however the site is located north east of the discharge point and is not located upstream or downstream of this location. Therefore, no significant effects are likely and no further assessment is required.

Ballyhoe Lough NHA

The Lough is of local importance mainly because it is acid and peaty, in contrast to most Loughs in County Monaghan. In addition, the bird populations present are of great interest and this combination of interests make the lake one of the more unusual lakes in the County.

The qualifying interests, for which the NHA is designated, are water dependent. However, the NHA site is located a significant distance downstream of the discharge location (approximately 8 km). This along with the EPA water quality data for the receiving surface water would indicate that no significant effects are likely on the Ballyhoe Lough NHA. Hence, no further assessment is required.

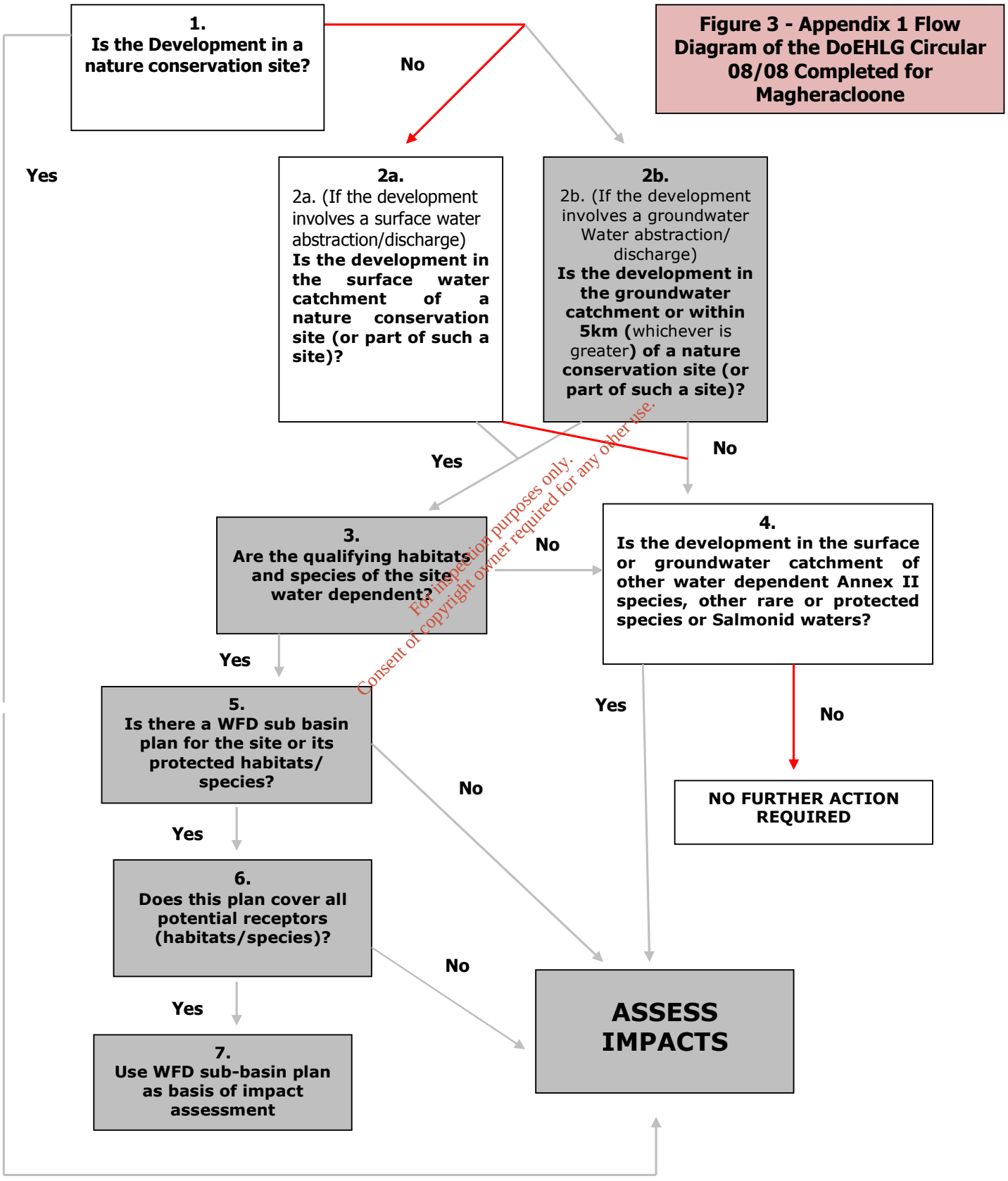
3.5 Step 4 Assessment of Significance

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 Magheracloone WWTW will not have a significant adverse impact on the conservation objectives or integrity of the Ballyhoe Lough NHA and Lough Fea Demesne 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 Magheracloone



MAGHERACLOONE 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

Magheracloone - 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 Magheracloone 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 Magheracloone falls under this category, having an agglomeration with a design population equivalent of 160 and a current estimated population equivalent of 160.

Magheracloone WWTP is located in the townland of Clonsedy off the R179 on the Carrickmacross to Kingscourt Road. The treatment works only serves the council owned housing development (NGR E281400 N300305) and a detached house on the western corner of the housing development. There are no plans to expand the sewerage network within the 6 year timeframe of the Certificate of Authorisation.

The combined collection system flows by gravity to the works which is located beside the Clonsedy housing estate. The Waste Water Treatment Plant (WWTP) comprises of extended aeration followed by upward flow clarification. Sludge from the Magheracloone Waste Water Treatment plant is tankered to Monaghan Town WWTP for treatment. The treatment plant is located in the townland of Clonsedy at NGR 281322E, 300296N. The plant is supervised/manned for 2 hours Monday to Friday giving a total of 10 hours a week.

Effluent from the plant is discharged to an unnamed stream (NGR 281305E 300300N) approximately 292m upstream of the Magheracloone Stream. There is no emergency overflow or storm water overflow facility located within the treatment plant site boundary. The Magheracloone Stream discharges to Lough Fea downstream of which is the Bursk River. The Bursk River (NB_Glyde95_GlydeTRIB_Rahans1_Lower) is a tributary of the Lagan River, which becomes the Glyde River below Aclint Bridge.

With regard to Designated Sites, the Magheracloone WWTW is not in or on the boundary of an NHA, SAC or SPA. The discharge is not immediately downstream of nature conservation sites with water dependent habitats or species. The nearest sites are the Ballyhoe Lough NHA (approximately 8km south east of the discharge point) and Lough Fea Demesne NHA (approximately 3km north east of the discharge point 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 Ballyhoe Lough NHA and Lough Fea Demesne NHA of the Magheracloone waste water discharge and to consider whether these effects are likely to be significant.

It was concluded that the discharge from the Magheracloone WWTW will not significant adverse impacts on the conservation objectives or integrity of the Ballyhoe Lough NHA and Lough Fea Demesne NHA and therefore, Stage 2 of the Appropriate Assessment process was not required

The receiving water is not identified as a "sensitive" waterway under the Urban Waste Water Treatment Regulations S.I. 254 2001. The same stretch of river is also not classified as a "salmonid river" under S.I. 293 of 1988. The river is located within the Neagh Bann IRBD. The nearest Sensitive Area identified under the Urban Waste Water Treatment Regulations 2001 is the River Proules - downstream of Carrickmacross sewage outfall, to confluence with the River Glyde.

The treated effluent has an average BOD concentration of 6.9 mg/l, average suspended solids concentration of 18 mg/l and COD concentration of 69mg/l. Average concentrations of nutrients are as follows; orthophosphate 9.33 mg/l (P), average Total Phosphorus 4.2 mg/l (P), ammonia 2.5mg/l and Total Nitrogen 35.9 mg/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. The level of dangerous substances both in the effluent and in the Magheracloone Stream upstream and downstream of the discharge point show a level below those in the Water Quality (Dangerous Substances) Regulations 2001.

There has been no change in water quality along the River Bursk since 2006. Water quality on the Bursk River remains at Q3-4, the same as in 2006 (Source: IPPC Licence No. P06519-02) and both Lough Fea and Ballyhoe Lough have been classified as mesotrophic by the EPA (EPA, 2005). The nearest EPA

monitoring site downstream of the discharge is at Lagan Br on the River Glyde. A Q value of 4 was recorded at this station in 2003.

There is no EPA monitoring station on the Magheracloone Stream. However, Monaghan Co. Co. monitors the river both upstream and downstream of the discharge point.

Monaghan County Councils upstream monitoring results indicate relatively good water quality in the river, with an orthophosphate level recorded at 0.071 mg/l P, ammonia level of 0.056 mg/l NH_3-N, BOD of <2 mg/l, TP of 0.124mg/l, TN of 1.59 mg/l N and suspended solids of <2 mg/l. Dangerous substances concentrations were below detection level for 15 of the 19 parameters tested in October 2009. No levels exceeded the standards as outlined in the Water Quality (Dangerous Substances) Regulations 2001.

Results from the downstream monitoring site indicates generally good water quality with an orthophosphate level of 0.015 mg/l P, ammonia 0.235mg/l NH_3-N, BOD of <2 mg/l, TP of 0.127 mg/l, TN of 1.9mg/l N and suspended solids levels of 48 mg/l. Dangerous substances concentrations were below detection level for 14 of the 19 parameters tested in October 2009. No levels 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, water quality monitoring results (EPA and Monaghan County Council Data) indicate that the discharges from the works are not having a significant detrimental impact on the receiving environment.