



JK  
**Monaghan**

**COUNTY COUNCIL**  
**COMHAIRLE CONTAE**  
**MHUINEACHÁIN**

Arts  
047 71114

Community &  
Enterprise  
047 30500

County Library  
047 51143

County Museum  
047 82928

Environment  
047 30593

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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

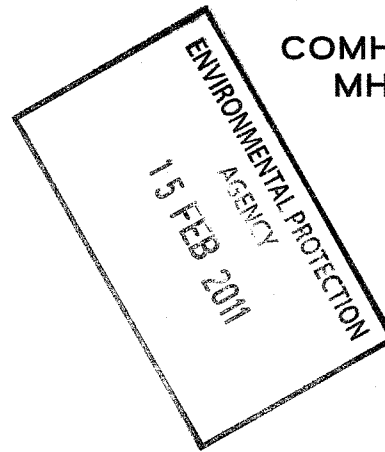
Register of Electors  
047 30547

Roads  
047 30597

Water Services  
047 30504

14<sup>th</sup> February 2011

Administration,  
Environmental Licensing Programme,  
Office of Climate, Licensing & Resource Use,  
Environmental Protection Agency,  
Headquarters,  
PO Box 3000,  
Johnstown Castle Estate,  
County Wexford



A Chara,

**RE: NOTICE IN ACCORDANCE WITH REGULATION 18(3)(b) OF THE WASTE WATER DISCHARGE (AUTHORISATION) REGULATIONS, 2007**

Further to your correspondence of the 29<sup>th</sup> July 2010, please find enclosed the following documentation and accompanying CD ROM relating to the Emyvale application (DO346-01).

- Two hard copies of Further Information Response
- CD-ROM of Further information Response (PDF)

I trust you will find everything in order, however, if you require anything further please let me know.

Mise le Meas,

  
Mark Johnston

**Senior Executive Engineer**

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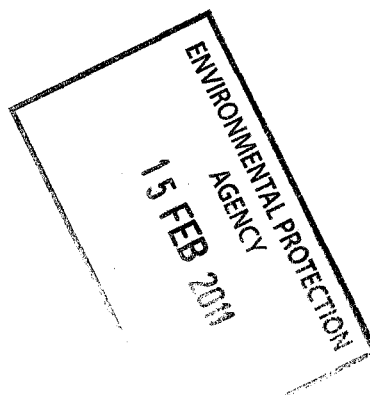
**Monaghan County Council  
Water Services Department  
Comhairle Chontae Mhuineacháin  
Roinn Seirbise Úisce**

**EMYVALE  
WASTEWATER TREATMENT WORKS**

**Waste Water Discharge License Application**

**Application Register Number: D0346-01**

**Regulation 18 (3) (b) Further Information Response**



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**Attachments**

- A. Discharge Parameter Concentrations Emyvale 2010
- B. Revised Non Technical Summary (February 2011)

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## **1. Introduction**

In accordance with the Waste Water Discharge (Authorisation) Regulations 2007 (S.I. 684 of 2007) Monaghan County Council submitted six Waste Water Discharge Certificates of Authorisation applications to the Environmental Protection Agency (EPA) on or before 31<sup>st</sup> March 2009. The Emyvale agglomeration was included within the six submissions.

The following report has been produced in accordance with the EPA correspondence of 29th July 2010 (Notice in accordance with Regulation 18(3)(b) of the Waste Water Discharge (Authorisation) Regulations 2007) requesting Monaghan County Council to provide further information in accordance with Regulation 18(3)(b) of the regulations, as detailed in the EPA correspondence of 29th July 2010.

This submission includes a revised non technical summary as stipulated in the original Waste Water Discharge Certificates of Authorisation application submission.

## **2. Revised Non-Technical Summary**

See attached document.

## **3. Management of the Site**

The Emyvale Waste Water Treatment Works (WwTW) and its discharge are not directly connected with or necessary to the management of any European site (Special Area of Conservation, SAC or Special Protection Area, SPA).

## **4. Project Description**

The waste water treatment works is designed to cater for a population equivalent of 2,000 and is currently accepting effluent flows of approximately 1045PE. A network of gravity sewers collect and transport waste water from the Emyvale agglomeration to the WwTW located east of the village.

Flows from the combined sewage network drain into an inlet screening works, and subsequently receives primary and secondary treatment (with nutrient removal) before discharging to the receiving water course (the Mountain River). The Mountain River is located in the Neagh Bann International River Basin District.

The treatment works consists of 1 no. inlet screen with storm overflow to storm tank, flow to full treatment measuring flume, 4 no. primary settlement tanks, 2 no. Rotating Biological Contactors, inter-stage pumping station, 2 no. trickling filters towers, 3 no. final settlement tanks, outlet flow measurement and 1 no. storm tank.

The plant is constantly monitored for flow and standard quality parameters at the effluent inlet and final discharge. The plant is also linked to the Monaghan County Council SCADA system which provides an alarm facility in the event of a fault.

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## 5. Characteristics of the Site

There are no SAC, SPA or NHA sites in the vicinity of Emyvale WwTW.

## 6. Assessment of Significance

### Protection of Natural Heritage and National Monuments

The screening methodology used for Emyvale Wastewater Treatment Works (WwTW) is in accordance with the Department of the Environment, Heritage and Local Government Circular L8/08, Water Services Investment Programmes – Protection of National Heritage and National Monuments.

Within the circular initial screening in accordance with Appendix 1 (natural heritage) and Appendix 2 (architectural heritage) are required.

### 7. Appendix 1 Screening (Natural Heritage)

Appendix 1 of Circular L8/08 prescribes 8 questions and a screening flow diagram (see attachment A) that are used to determine if a new development requires screening for potential impacts to habitats, flora or fauna. The 8 checklist questions are dealt with below.

**1. Is the development in or on the boundary of a nature conservation site NHA / SAC / SPA?**

No, Emyvale WwTW is not sited in or on the boundary of a nature conservation site.

Emy Lough, a proposed NHA, is located 900metres north east of the WwTW. This lake is located in a different surface water catchment - it is not hydraulically linked to the Emyvale WwTW catchment. The watercourse which drains Emy Lough enters the Mountain River at a location 1.1 km downstream of the discharge outfall location of the WwTW.

**2. Will nationally protected species be directly impacted? Wildlife Acts (1976 and 2000) Flora Protection order (S.I. 94 of 1999)?**

No. The existing WwTW is not sited within a protected area.

**3. Is the development a surface water discharge or abstraction in the surface water catchments or immediately downstream of a nature conservation site with water dependant qualifying habitats / species?**

Emyvale WwTW discharges into the Mountain River (surface water). The Mountain River is not a designated protected site nor are there any recorded water dependent habitats or species from Annex I or II listed within the surface water course.

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**4. Is the development a groundwater discharge or abstraction in the ground water catchment or within 5 km of a nature conservation site with water dependant qualifying habitats / species?**

No. The existing development does not discharge to groundwater or abstract groundwater. The discharge at Emyvale WwTW is to surface water.

**5. Is the development in the surface water or groundwater catchment of salmonid waters?**

No. The receiving water is not a designated salmonid water.

**6. Is the treatment plant in an active or former floodplain or zone of a river, lake, etc?**

Yes. The treatment plant is situated in an active floodplain. Flood incidents are recorded on the OPW National Flood Hazard Mapping database for Emyvale. Playing fields and agricultural fields on either side of the WwTW have been subject to flooding from the Mountain River. The WwTW serving Emyvale has been located at this site for over 40 years and is protected by an earth flood embankment.

**7. Is the development a surface water discharge or abstraction to or from marine waters and within 3 km of a marine nature conservation site?**

No. All discharges from the WwTW are to a surface water river course.

**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?**

The Emyvale WwTW has a treatment capacity of 2000 PE. The current load on the WwTW is approximately 1045PE (52 % of design capacity). There are no plans to extend or combine the existing plant. The WwTW and the discharges from it do not have any effect on the hydrology or water levels of any surface water courses.

The discharge point from the WwTW is 8 km from the Blackwater River and 46 km from Lough Neagh. With an average discharge of 184 m<sup>3</sup>/day (2.1 l/s) it will have minimal impact on the hydrology or water levels of these nature conservation areas.

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## 8. Appendix 2 Screening (Archaeological Heritage)

Appendix 2 provides an Archeological heritage checklist for Local authorities in which to assess the potential impacts on archeological material and recorded monuments.

The seven statements provided in appendix 2 are dealt with below.

- **Any scheme that extends within or impinges upon the confines of the “black line” drawn around a monument on the Record of Monuments and Places map.**

Emyvale WwTW does not impinge upon any protected monument sites or areas of archaeological importance.

The closest monument is a ringfort / cashel in Cornacreeve townland (MO006-003), located 740m km south-west of the WwTW.

The next closest monument is a Crannog in Emy/Tiramoan townland (MO006-004), located 1.13 km due east of the WwTW.

- **Any scheme that is likely to have an adverse impact on the setting and amenity of a monument on the Record of Monuments and Places map.**

The closest monument to the WwTW is the ringfort / cashel in Cornacreeve townland (MO006-003). The WwTW is separated from the monument by the Mountain Water River, the N2 public road, a mushroom farm and agricultural land.

Therefore the scheme will not have an adverse impact on the setting and amenity of these monuments.

- **Any scheme that may not be in proximity to known monuments but is large in scale.**

Emyvale WwTW is designed to treat effluent from a population equivalent of 2000. The WwTW site comprises 0.465 ha and is landscaped into the surrounding area. It is separated from the closest monument by a river, the N2 public road, a mushroom farm and agricultural land

- **Any scheme that may be unduly close to archeological complexes.**

Emyvale WwTW is not unduly close to any known archeological complexes and does not pose a threat to the archaeological heritage of the area.

- **Any scheme that will impact on rivers, lakes, the inter-tidal zone, the foreshore or any underwater area where historic shipwrecks or other underwater archeological objects may be located.**

The existing WwTW does not impact on any historic shipwrecks or other underwater archaeological objects.

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- **Any scheme that requires an Environmental Impact Statement**

The existing scheme does not require an Environmental Impact Statement. The scheme is not located within any designated areas and is not of a large scale.

- **Any scheme that may have an adverse impact on the setting and amenity of any national monument in the ownership or guardianship of the Minister for the Environment, Heritage and Local Government or any national monument in the ownership or guardianship of the local authority or any national monument that is subject to a preservation order.**

The existing scheme does not have any adverse impact on any national monument or any monument that is subject to a preservation order.

### **9. Screening Conclusion**

The above screening assessment concludes that the presence of Emyvale WwTW will not impact upon a European Site or on any National Monument. Therefore an Appropriate Assessment is not required.

Monaghan County Council will continue to mitigate the potential impacts to the receiving water by ensuring that sampling and monitoring of the discharges from the WwTW are in accordance with the Urban Waste Water Discharge Regulations.

In accordance with the procedure outlined in DoEHLG Circular L08/08, no significant effects are likely to occur.

### **Attachments:**

- A. Discharge Parameter Concentrations Emyvale 2010
- B. Revised Non Technical Summary (February 2011)



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**ATTACHMENT A**

**DISCHARGE PARAMETER  
CONCENTRATIONS  
EMYVALE 2010**

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DISCHARGE PARAMETER CONCENTRATIONS

PlantID	Influent Or Effluent	Date of Sampling	Sample Type (C or G)	BOD mg/l	COD mg/l	TSS mg/l	Total P mg/l P	Ortho P mg/l P	Total N mg/l N	NH3-N mg/l N
Emyvale	Effluent	23/03/2010	C	<2	60	15	3.97		31.01	0.61
Emyvale	Effluent	02/06/2010	C	<2	42	6	3.71		29.28	2.29
Emyvale	Effluent	22/06/2010	C	<2	52	12	5.56		29.77	1.92
Emyvale	Effluent	29/06/2010	C		67	6	0.1			3.5
Emyvale	Effluent	06/07/2010	C		54	12	4.6			3.25
Emyvale	Effluent	12/07/2010	C		31	11	2.07		17.4	0.73
Emyvale	Effluent	15/07/2010	C		62	18	4.7			2.1
Emyvale	Effluent	27/07/2010	C		36	24	3.1			5.25
Emyvale	Effluent	02/08/2010	C		106	16	1.8			3.75
Emyvale	Effluent	05/08/2010	C		36	18	2.2			6.5
Emyvale	Effluent	12/08/2010	C		48	14	2.6			10
Emyvale	Effluent	01/12/2010	C		55	2	5.43		23.07	1.88
		<b>Average</b>			<b>54.08</b>	<b>12.83</b>	<b>3.32</b>		<b>26.11</b>	<b>3.48</b>
		<b>Maximum</b>			<b>106</b>	<b>24</b>	<b>5.56</b>		<b>31.01</b>	<b>5.25</b>

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**ATTACHMENT B**

**REVISED NON TECHNICAL SUMMARY**

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**Monaghan County Council  
Water Services Department  
Comhairle Chontae Mhuineacháin  
Roinn Seirbise Úisce**

**EMYVALE  
WASTEWATER TREATMENT WORKS**

**Revised Non-technical Summary**

**Monaghan County Council  
County Offices  
The Glen  
Co. Monaghan**

**February 2011**



## **Revised Non Technical Summary**

Monaghan County Council is applying to the Environmental Protection Agency for a Waste Water Discharge Licence for the existing Waste Water Works at Emyvale. The Waste Water Works comprises a network of gravity sewers and five small pumping stations, pumped sewers and the wastewater treatment plant at Emyvale. There are no storm water overflows associated with the treatment works.

The Waste Water Treatment Works design capacity is 2000 PE. The Works currently collects and treats domestic and trade effluent from a population equivalent of approximately 1045. The Waste Water Treatment Plant treats in the region of 184 cubic metres of effluent every day and provides secondary treatment with nutrient removal (phosphorus reduction) for the effluent. The treated effluent has an average BOD concentration of 10.4 mg/l and average suspended solids concentration of 12.8 mg/l. Average concentrations of nutrients are as follows; orthophosphate 3.6 mg/l (P), Total Phosphorus 3.3 mg/l (P) and Total Nitrogen 26.1 mg/l (N).

The primary discharge of the Waste Water Works is to the Mountain Water River at 267964E, 343554N in the townland of Derrygasson Upper, Co. Monaghan. The associated Waste Water Treatment Plant is located at 267951E, 343612N in the townland of Derrygasson Upper, Co. Monaghan.

The Mountain Water River is not a designated Salmonid Water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988) nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. The River is a tributary of the Blackwater Monaghan which is designated as sensitive from the confluence of the River Shambles to Newmills Bridge under the Urban Waste Water Treatment Regulations 2001.

The Dry Weather Flow (DWF) of the Mountain Water River was calculated based on the catchment area of the Mountain Water River and the flows in the Blackwater Monaghan. The average flow was calculated as 1.49m<sup>3</sup>/sec with a 95%ile flow of 0.099m<sup>3</sup>/sec and 50%ile flow of 0.72m<sup>3</sup>/sec.

A Q value of 3-4 was recorded upstream of the discharge point (1<sup>st</sup> Bridge upstream of Emyvale) in 2004. Previous Q values of 4 and 4-5 were recorded at this location in 2001 and 1998 respectively. EPA Physiochemical water quality monitoring data at this site from 2001 and 2003 gave a median BOD level of 1.6mg/l, Ortho-phosphate level 0.04mg P/l, Oxidised Nitrogen 0.9 mg N/l and Total Ammonia level of 0.03 mg N/l.

A Q value of 3 was recorded downstream of the discharge point (Br 1.1km d/s of Emyvale) in 2004, 2001 and 1998. EPA Physiochemical water quality monitoring data at this site from 2001 and 2003 gave a median BOD level of 2.2mg O<sub>2</sub>/l, Ortho-phosphate level 0.05mg P/l, Oxidised Nitrogen 0.9 mg N/l and Total Ammonia level of 0.09 mg N/l.

**Monaghan County Council**  
**Emyvale WwTW Discharge Licence Application**  
**Revised Non Technical Summary**  
**Register No.: DO346-01**

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The overall River Water Framework Directive status for the Mountain Water River is 1a, hence it is at risk of failing to meet good status in 2015.

Monaghan County Councils upstream monitoring results indicate relatively good water quality in the river, with the average orthophosphate level recorded at 0.02 mg/l P, average ammonia levels of 0.216 mg/l NH<sub>3</sub>-N, average BOD of 2 mg/l, average TP of 0.22mg/l, average TN of 0.61mg/l N and average suspended solids of 7.75mg/l. Dangerous substances concentrations were below detection level for 16 of the 19 parameters tested in February 2009. No levels exceeded the standards as outlined in the Water Quality (Dangerous Substances) Regulations 2001.

Results from the downstream monitoring site (aSW1(P)d) indicates generally good water quality with average orthophosphate levels of 0.2 mg/l P, average ammonia 0.2 mg/l NH<sub>3</sub>-N, average BOD of 2.6 mg/l, average TP of 0.2mg/l, average TN of 1.6mg/l N and average suspended solids of 7.5mg/l. Dangerous substances concentrations were below detection level for 15 of the 19 parameters tested in February 2009. No levels exceeded the standards as outlined in the Water Quality (Dangerous Substances) Regulations 2001.

In summary, there is significant dilution capacity within the receiving water, even at low flows, to assimilate discharges from the Waste Water Works. Physiochemical water quality monitoring in the River both upstream and downstream of the primary discharge from the Waste Water Works indicate that the discharge from the works are not having a significant detrimental impact on the receiving environment.

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