ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER CERTIFICATE OF AUTHORISATION APPLICATION

PREPARED BY:
WATER SERVICES SECTION
ROSCOMMON COUNTY COUNCIL
22nd DECEMEBER 2009

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Housing	6637230
Human Resources	6637144
Information Technology	6637200
Library HQ	6637270
L-I-T-T-E-R	1850 54 88 37
Motor Tax	6637250
Planning	6637175
Regional Offices NRA	6627004
Rates	6637210
RCDB	6637325
Reg. of Electors	6637147
Roads	6637152
Stores	6637225
Water Services	6637165

Tá fáilte romhat gnó a dhéanamh as Gaeilge

22nd December 2009.
Water Services,
Roscommon County Council,
Ref.: BALLINAMEEN-WWCA-01

Administration,
Inspector Environmental Licensing Programme,
Office of Climate, Licensing and Resources Use,
Environmental Protection Agency,
Headquarters,
P.O. Box 3000,
Johnstown Castle Estate,
County Wexford.

Re: Ballinameen and Environs Waste Water Certificate of Authorisation Application.

A Chara

Please find enclosed the completed Waste Water Certificate of Authorisation Application in respect of Ballinameen and Environs, Ballinameen Townland, Ballinameen, Co. Roscommon.

I can confirm that the contents of the electronic files on the accompanying CD-ROM is a true copy of the original application form.

Mise le meas

John Cunningham
Director of Services,
Planning and Water Services

This is a draft document and is subject to revision.

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Waste Water Discharge Certificate of Authorisation Application Form

EPA Ref. Nº: *(Office use only)*	

Environmental Protection Agency
PO Box 3000, Johnstown Castle Estate, Co. Wexford
Lo Call: 1890 335599 Telephone: 053-9160600 Fax: 053-9160699
Web: www.epa.ieEmail: info@epa.ie

Tracking Amendments to Draft Application Form

Version No.	Date	Amendment since previous version	Reason
V. 1.	12/06/2009	N/A	
V.2.	17/06/2009	Delete reference to Design Build and Operate	To accurately reflect the information required for the small schemes programme
		Delete the requirement to provide contact information for the associated waste water treatment plant	To accurately reflect the information required and the scale of the waste water works
		Replace references to the Water Services investment Programme with the Small Schemes Programme	To accurately reflect the information required for the small schemes programme
		Update references to new legislation	To reflect changes in legislation
		Inclusion of the requirement to submit information on private WWTPs within the agglomeration.	To obtain an overview of all discharges within the agglomeration.

Environmental Protection Agency

Application for a Waste Water Discharge Certificate of Authorisation Waste Water Discharge (Authorisation) Regulations, 2007.

CONTENTS

ABOUT THIS APPLICATION FORM

This form is for the purpose of making an application for a Waste Water Discharge Certificate of Authorisation under the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) or for the review of an existing Waste Water Discharge Certificate of Authorisation.

The Application Form **must** be completed in accordance with the instructions and guidance provided in the *Waste Water Discharge Certificate of Authorisation Application Guidance Note.* The Guidance Note gives an overview of Waste Water Certificates of Authorisation, outlines the certification application process (including the number of copies required) and specifies the information to be submitted as part of the application. The Guidance Note and application form are available to download from the licensing page of the EPA's website at www.epa.ie.

A valid application for a Waste Water Discharge Certificate of Authorisation must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 24 of the Regulations sets out the statutory requirements for information to accompany a Certificate of Authorisation application. The application form is designed in such a way as to set out these questions in a structured manner and not necessarily in the order presented in the Regulations. In order to ensure a legally valid application with respect to Regulation 24 requirements, please complete the Regulation 24 Checklist provided in the following web based tool: http://78.137.160.73/epa_wwd_licensing/.

This Application Form does not purport to be and should not be considered a legal interpretation of the provisions and requirements of the Waste Water Discharge (Authorisation) Regulations, 2007. **While every effort has been made to ensure the accuracy of the material contained in the Application Form, the EPA assumes no responsibility and gives no guarantee, or warranty concerning the accuracy, completeness or up-to-date nature of the information provided herein and does not accept any liability whatsoever arising from any errors or omissions.**

Should there be any contradiction between the information requirements set out in the Application Form and any clarifying explanation contained in the accompanying Guidance Note, then the requirements in this Application Form shall take precedence.

PROCEDURES

The procedure for making and processing of applications for waste water discharge Certificates of Authorisation, and for the processing of reviews of such Certificates, appears in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) and is summarised below. The application fees that shall accompany an application are listed in the Third Schedule to the Regulations.

An application for a Certificate of Authorisation must be submitted on the appropriate form (available from the Agency website – http://www.epa.ie/whatwedo/licensing/wwda/) with the correct fee, and should contain relevant supporting documentation as attachments. The application should be based on responses to the form and include supporting written text and the appropriate use of tables and drawings. Where point source emissions occur, a system of unique reference numbers should be used to denote each discharge point. These should be simple, logical, and traceable throughout the application.

The application form is divided into a number of sections of related information. The purpose of these divisions is to facilitate both the applicant and the Agency in the provision of the information and its assessment. **Please adhere to the format as set out in the application form and clearly number each section and associated attachment, if applicable, accordingly.** Attachments should be clearly numbered, titled and paginated and must contain the required information as set out in the application form. Additional attachments may be included to supply any further information supporting the application. Any references made should be supported by a bibliography.

All questions should be answered. Where information is requested in the application form, which is not relevant to the particular application, the words "not applicable" should be clearly written on the form. The abbreviation "N/A" should not be used.

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information (under notices provided for in the Regulations) if it considers that its provision is material to the assessment of the application. Advice should be sought from the Agency where there is doubt about the type of information required or the level of detail.

Information supplied in this application, including supporting documentation will be put on public display and be open to inspection by any person.

Applicants should be aware that a contravention of the conditions of a waste water discharge Certificate of Authorisation is an offence under the Waste Water Discharge (Authorisation) Regulations, 2007.

The provision of information in an application for a waste water discharge Certificate of Authorisation which is false or misleading is an offence under Regulation 35 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

Note: Drawings. The following guidelines are included to assist applicants:

- *All drawings submitted should be titled and dated.*
- *All drawings should have a unique reference number and should be signed by a clearly identifiable person.*
- *All drawings should indicate a scale and the direction of north.*
- *All drawings should, generally, be to a scale of between 1:20 to 1:500, depending upon the degree of detail needed to be shown and the size of the facility. Drawings delineating the boundary can be to a smaller scale of between 1:1000 to 1:10560, but must clearly and accurately present the required level of detail. Drawings showing the waste water treatment plant location, if such a plant exists, can be to a scale of between 1:50 000 to 1:126 720. All drawings should, however, be A3 or less and of an appropriate scale such that they are clearly legible. Provide legends on all drawings and maps as appropriate.*
- *In exceptional circumstances, where A3 is considered inadequate, a larger size may be requested by the Agency.*

It should be noted that it will not be possible to process or determine the application until the required documents have been provided in sufficient detail and to a satisfactory standard.

SECTION A: NON-TECHNICAL SUMMARY

Advice on completing this section is provided in the accompanying Guidance Note.

A non-technical summary of the application is to be included here. The summary should identify all environmental impacts of significance associated with the discharge of waste water associated with the waste water works. This description should also indicate, where applicable, the hours during which the waste water works is supervised or manned and days per week of this supervision.

The following information must be included in the non-technical summary:

A description of:

- the waste water works and the activities carried out therein,
- the sources of emissions from the waste water works,
- the nature and quantities of foreseeable emissions from the waste water works into the receiving aqueous environment as well as identification of significant effects of the emissions on the environment,
- the proposed technology and other techniques for preventing or, where this is not possible, reducing emissions from the waste water works,
- further measures planned to comply with the general principle of the basic obligations of the operator, i.e., that no significant pollution is caused;
- measures planned to monitor emissions into the environment.

Supporting information should form **Attachment Nº A.1**
Refer to attachment A.1. Ballinameen WWTP Non-Technical Summary.

SECTION B: GENERAL

Advice on completing this section is provided in the accompanying Guidance Note.

B.1 Agglomeration Details

Name of Agglomeration:	Ballinameen and Environs

Refer to Drawing 1 Attachment B.1:- Agglomeration served by Ballinameen Waste Water Treatment Plant.

Applicant's Details

Name and Address for Correspondence

Only application documentation submitted by the applicant and by the nominated person will be deemed to have come from the applicant.

Provide a drawing detailing the agglomeration to which the Certificate of Authorisation application relates. It should have the boundary of the agglomeration to which the Certificate of Authorisation application relates clearly marked in red ink.

Name*:	Roscommon County Council
Address:	Water Services Department
	Roscommon County Council
	Court House
	Roscommon
Tel:	090 6637100
Fax:	090-6637108
e-mail:	info@roscommoncoco.ie

*This should be the name of the Water Services Authority in whose ownership or control the waste water works is vested.

*Where an application is being submitted on behalf of more than one Water Services Authority the details provided in Section B.1 shall be that of the lead Water Services Authority.

Name*:	Mr. Kieran Madden, Senior Engineer
Address:	Water Services Department
	Roscommon County Council
	Court House
	Roscommon
Tel:	0906637100
Fax:	090-6637108
e-mail:	kmadden@roscommoncoco.ie

*This should be the name of person nominated by the Water Services Authority for the purposes of the application.

Co-Applicant's Details

Name*:	Not Applicable
Address:	Not Applicable
Tel:	Not Applicable
Fax:	Not Applicable
e-mail:	Not Applicable

*This should be the name of a Water Services Authority, other than the lead authority, where multiple authorities are the subject of a waste water discharge Certificate of Authorisation application.

Attachment B.1 should contain appropriately scaled drawings / maps (≤A3) of the agglomeration served by the waste water works showing the boundary clearly marked in red ink. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.2, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	√	

B.2 Location of Associated Waste Water Treatment Plant(s)

Give the location of the waste water treatment plant associated with the waste water works, if such a plant or plants exists.

Name*:	Tom Shiels
Address:	Ballinameen Wastewater Treatment Works
	Ballinameen Townland,
	Ballinameen, Ballabhaderreen,
	County Roscommon
Grid ref (6E, 6N)	180229E, 294376N
Level of Treatment	Preliminary, Secondary and Tertiary treatment.

Refer to Drawing 2 Attachment B.2:- Overall Ballinameen WWTP Site Plan & Boundary.

*This should be the name of the person responsible for the supervision of the waste water treatment plant.

Attachment B.2 should contain appropriately scaled drawings / maps (≤A3) of the site boundary and overall site plan, including labelled discharge, monitoring and sampling points. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.1, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	√	

B.3 Location of Primary Discharge Point

Give the location of the primary discharge point, as defined in the Waste Water Discharge (Authorisation) Regulation, associated with the waste water works.

Discharge to	Tributary of Breedoge River
Type of Discharge	Open Discharge to watercourse
Unique Point Code	SW 1
Location	Ballinameen WWTP, Ballinameen Townland.
Grid ref (6E, 6N)	180259E, 294381N

Refer to Drawing 3 Attachment B.3:- Location of Primary Discharge Point SW1.

Attachment B.3 should contain appropriately scaled drawings / maps (≤A3) of the discharge point, including labelled monitoring and sampling points associated with the discharge point. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing the drawings and tabular data requested in sections B.1, B.2, B.4, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	√	

B.4 Location of Secondary Discharge Point(s)

Give the location of **all** secondary discharge point(s)* associated with the waste water works. Please refer to Guidance Note for information on Secondary discharge points.

Discharge to	Tributary of Breedoge River
Type of Discharge	Emergency discharge to tributary of Breedoge River.
Unique Point Code	SW2
Location	Ballinameen Wastewater Treatment Plant, Ballinameen Townland.
Grid ref (6E, 6N)	180244E, 294366N

Refer to Drawing 4 Attachment B.4:- Location of Secondary Discharge Point SW2.

*Where a septic tank is in existence simultaneous to a package plant within an agglomeration, discharges from the septic tank shall be considered as a secondary discharge.

Attachment B.4 should contain appropriately scaled drawings / maps (≤A3) of the discharge point(s), including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.5, C.1, D.2, E.3 and F.2.

Attachment included	Yes	No
	√	

B.5 Location of Storm Water Overflow Point(s)

Give the location of **all** storm water overflow point(s) associated with the waste water works.

Type of Discharge	Not Applicable
Unique Point Code	Not Applicable
Location	Not Applicable
Grid ref (6E, 6N)	Not Applicable

Attachment B.5 should contain appropriately scaled drawings / maps (≤A3) of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s). These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, C.1, D.2, E.3 and F.2.

Attachment included	**Yes**	**No**
		Not Applicable

B.6 Planning Authority

Give the name of the planning authority, or authorities, in whose functional area the discharge or discharges take place or are proposed to take place.

Name:	Roscommon County Council
Address:	Planning Department
	Courthouse
	Roscommon
Tel:	090-6637100
Fax:	090-6637108
e-mail:	info@roscommoncoco.ie

Planning Permission relating to the waste water works which is the subject of this application:- (tick as appropriate)

has been obtained	√	***is being processed***	
is not yet applied for		***is not required***	

Local Authority Planning File Reference Nº:	Not Applicable

Attachment B.6 should contain ***the most recent*** planning permission, including a copy of ***all*** conditions, and where an EIS was required, copies of any such EIS and any certification associated with the EIS, should also be enclosed. Where planning permission is not required for the development, provide reasons, relevant correspondence, *etc.*

Attachment included	**Yes**	**No**
	√	

B.7 Other Authorities

B.7 (i) Shannon Free Airport Development Company (SFADCo.) area

The applicant should tick the appropriate box below to identify whether the discharge or discharges are located within the Shannon Free Airport Development Company (SFADCo.) area.

Attachment B.7(i) should contain details of any or all discharges located within the SFADCo. area.

Within the SFADCo Area	Yes	No
		Not Applicable

B.7 (ii) Health Services Executive Region

The applicant should indicate the **Health Services Executive Region** where the discharge or discharges are or will be located.

Name:	Western Health Board
Address:	Merlin Park Regional Hospital
	Dublin Road
	Galway
Tel:	091 751131
Fax:	091 752644
e-mail:	eservices@mailn.hse.ie

B. 8(i) Population Equivalent of Agglomeration

TABLE B.8.1 POPULATION EQUIVALENT OF AGGLOMERATION

The population equivalent (p.e.) of the agglomeration to be, or being, served by the waste water works should be provided and the period in which the population equivalent data was compiled should be indicated.

Population Equivalent	247 (Design PE WWTP)
Data Compiled (Year)	2009
Method	BOD loading analysis

Note: - Refer to attachment B.9 (i) for current 2009/future population equivalent for Ballinameen WWTP. The 2009 population equivalent for Ballinameen WWTP is 327 with a projected 2015 PE of 339 at a low growth rate of 0.6%.The 2029 PE is 369.

B.8 (ii) Pending Development

Where planning permission has been granted for development(s), but development has not been commenced or completed to date, within the boundary of the agglomeration and this development is being, or is to be, served by the waste water works provide the following information;

- information on the calculated population equivalent (p.e.) to be contributed to the waste water works as a result of those planning permissions granted,
- the percentage of the projected p.e. to be contributed by the non-domestic activities, and
- the ability of the waste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving waters.

Refer to Drawing 7 attachment C.1:- WWTP Process Flow Diagram.

B.8 (iii) FEES

State the relevant Class of waste water discharge as per Regulation 5, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

Class of waste water discharge	Fee (in €)
Less than 500 PE	€3,000

Appropriate Fee Included	Yes	No
		√

B.9 Capital Investment Programme

State whether a programme of works has been prioritised for the development of infrastructure to appropriately collect, convey, treat and discharge waste water from the relevant agglomeration. If a programme of works has been prioritised provide details on funding (local or national small schemes programme) allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

Funding for Waste Water infrastructure is currently provided in the main through the Department of the Environment, Heritage and Local Government (DOEHLG). Roscommon County Council having to provide for the non domestic element. This funding from the DOEHLG is administered through the Water Services Investment Programme. This programme is updated on a regular basis following on the submission to the DOEHLG by Roscommon County Council Assessment of Needs. The Capital Investment Programme for Ballinameen WWTP was completed in 2002. This upgrade work has increased the design population equivalent capacity of the WWTP to 247 with a final effluent standard of BOD 25mg/l, SS 35mg/l and Phosphorous 2mg/l.

Attachment B.9 should contain the most recent development programme, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
		√

B.10 Significant Correspondence

Provide a summary of any correspondence resulting from a Section 63 notice issued by the Agency in relation to the waste water works under the Environmental Protection Agency Acts, 1992 and 2003, as amended by Section 13 of Protection of the Environment Act, 2003.

Attachment B.10 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
		√

B.11 Foreshore Act Licences.

Provide a copy of the most recent Foreshore Act licence issued in relation to discharges from the waste water works issued under the Foreshore Act 1933.

Attachment B.11 should contain the most recent licence issued under the Foreshore Act 1933, including a copy of ***all*** conditions attached to the licence and any monitoring returns for the previous 12-month period, if applicable.

Attachment included	Yes	No
		√

SECTION C: INFRASTRUCTURE & OPERATION

Advice on completing this section is provided in the accompanying Guidance Note.

C.1 Operational Information Requirements

Provide a description of the plant, process and design capacity for the areas of the waste water works where discharges occur, to include a copy of such plans, drawings or maps (site plans and location maps, process flow diagrams) and such other particulars, reports and supporting documentation as are necessary to describe all aspects of the area of the waste water works discharging to the aquatic environment. Maps and drawings must be no larger than A3 size.

C.1.1 Storm Water Overflows

For each storm water overflow within the waste water works the following information shall be submitted:

- An assessment to determine compliance with the criteria for storm water overflows, as set out in the DoEHLG '*Procedures and Criteria in Relation to Storm Water Overflows*', 1995 and any other guidance as may be specified by the Agency, and
- Identify whether any of the storm water overflows are to be decommissioned, and identify a date by which these overflows will cease, if applicable.

C.1.2 Pumping Stations

For each pump station operating within the waste water works, provide details of the following:

- Number of duty and standby pumps at each pump station;
- The measures taken in the event of power failure;
- Details of storage capacity at each pump station;
- Frequency and duration of activation of emergency overflow to receiving waters. Clarify the location where such discharges enter the receiving waters.

Refer to:-
Drawing 8 attachment C.1.2:– Discharge Point SW2 Details,

Attachment C.1 should contain supporting documentation with regard to the plant and process capacity, systems, storm water overflows, emergency overflows, etc., including flow diagrams of each with any relevant additional information. These drawings / maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, D.2, E.3 and F.2.

Refer to Drawing 6 attachment C.1:- Ballinameen WWTP Detail Process Plan and Drawing 7 attachment C.1:- Ballinameen WWTP Flow Process Diagram.

Attachment included	Yes	No
	√	

SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

Advice on completing this section is provided in the accompanying Guidance Note.

Give particulars of the source, location, nature, composition, quantity, level and rate of discharges arising from the agglomeration and, where relevant, the period or periods during which such discharges are made or are to be made.

Details of all discharges of waste water from the agglomeration should be submitted via the following web based link: http://78.137.160.73/epa_wwd_licensing/. ***The applicant should address in particular all discharge points where the substances outlined in Tables 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions' are emitted***

Where it is considered that any of the substances listed in Annex X of the Water Framework Directive (2000/60/EC) or any of the Relevant Pollutants listed in Annex VIII of the Water Framework Directive (2000/60/EC) are being discharged from the waste water works or are seen to be present in the receiving water environment downstream of a discharge from the works (as a result of any monitoring programme, e.g., under the Water Framework Directive Programme of Measures) the applicant shall screen the discharge for the relevant substance.

D.1(i) Discharges to Surface Waters

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the waste water treatment plant this data should also be provided in response to Section D.1(i).

Supporting information should form **Attachment D.1(i)**

Attachment included	**Yes**	**No**
	√	

D.1(ii) Discharges to Groundwater

Details of all discharges of waste water from the agglomeration should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Discharge Point Details', 'Emissions to Surface/Groundwaters and 'Dangerous Substances Emissions', should be completed for the primary discharge point from the agglomeration and for **each** secondary discharge point, where relevant. Table 'Discharge Point Details' should be completed for **each** storm water overflow. Individual Tables must be completed for each discharge point.

Where monitoring information is available for the influent to the waste water treatment plant this data should also be provided in response to Section D.1(ii).

Supporting information should form **Attachment D.1(ii)**

Attachment included	**Yes**	**No**
		√

D.1 (iii) Private Waste Water Treatment Plants

Provide information on all independently owned/operated private waste water treatment plants operating within the agglomeration. Submit a copy of the Section 4 discharge licence issued under the Water Pollution Acts 1977 to 1990, as amended for each discharge.
None

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

Table D.2:

PT_CD	PT_TYPE	LA_NAME	RWB_TYPE	RWB_NAME	DESIGNATION	EASTING	NORTHING
SW1	Primary	Roscommon County Council	Tributary	Breedoge River	None	180259E	294381N
SW2	Secondary	Roscommon County Council	Tributary	Breedoge River	None	180244E	294366N

Refer to Drawing 9 Attachment D.2 – Overview of Discharge Points.

An individual record (i.e. row) is required for each discharge point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.

SECTION E: MONITORING

Advice on completing this section is provided in the accompanying Guidance Note.

E.1 Waste Water Discharge Frequency and Quantities – Existing & Proposed

Provide an estimation of the quantity of waste water likely to be emitted in relation to all primary and secondary discharge points applied for. This information should be included in Table 'Discharge Point Details' via the following web based link: http://78.137.160.73/epa_wwd_licensing/.

Provide an estimation of the quantity of waste water likely to be emitted in relation to all storm water overflows within the agglomeration applied for. This information should be included in Table 'Discharge Point Details' via the following web based link: http://78.137.160.73/epa_wwd_licensing/.

Indicate if composite sampling or continuous flow monitoring is in place on the primary or any other discharge points. Detail any plans and timescales for the provision of composite sampling and continuous flow monitoring.

E.2. Monitoring and Sampling Points

Programmes for environmental monitoring should be submitted as part of the application. These programmes should be provided as Attachment E.2.

Reference should be made to, provision of sampling points and safe means of access, sampling methods, analytical and quality control procedures, including equipment calibration, equipment maintenance and data recording/reporting procedures to be carried out in order to ensure accurate and reliable monitoring.

In determining the sampling programme to be carried out, the variability of the discharge and its effect on the receiving environment should be considered.

Details of any accreditation or certification of analysis should be included.
Attachment E.2 should contain any supporting information.

Refer to Drawing 10 Attachment E2: – Location of Sampling and Monitoring points.

Attachment included	Yes	No
	√	

E.3. Tabular data on Monitoring and Sampling Points

Applicants should submit the following information for each monitoring and sampling point:

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
aSW1u	Primary	M	180688E	294436N	Y
aSW1d	Primary	M	180090E	294376N	Y
ES1	Primary	S	180237E	294377N	Y
ES3	Primary	S	180254E	294386N	Y

Table E.3: Monitoring and Sampling Points.

aSW1d is a sampling point located at the bridge near Ballinameen crossroads. This point is downstream of the Primary Discharge point SW1. This location is sampled and tested monthly.

Sample points ES1 and ES3 are all located within the boundary of the WWTP. These locations are sampled and tested monthly.

ES1 is a 24 hr composite sampling point of raw effluent on the inlet to the treatment works site.

ES3 is a 24 hr composite sampling point of the treated effluent on the outlet of the treatment works.

An individual record (i.e., row) is required for each monitoring and sampling point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and F.2.

E.4 Sampling Data

Regulation 24(i) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing discharge to specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application.

Regulation 24(m) requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
	√	

SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

Advice on completing this section is provided in the accompanying Guidance Note.

Clear and concise information is required to enable the Agency to assess the existing receiving environment. This section requires the provision of information on the ambient environmental conditions within the receiving water(s) upstream and downstream of any discharge(s) and/or the ambient environmental conditions of the groundwater upgradient and downgradient of any discharges.

Where development is proposed to be carried out, being development which is of a class for the time being specified under Article 24 (First Schedule) of the Environmental Impact Assessment Regulations, the information on the state of the existing environment should be addressed in the EIS. **In such cases, it will suffice for the purposes of this section to provide adequate cross-references to the relevant sections in the EIS.**

F.1. Impact on Receiving Surface water or Groundwater

- Details of monitoring of the receiving surface water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Surface water monitoring locations upstream and downstream of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of surface water shall be carried out at not less than two points, one upstream from the discharge location and one downstream.

- Details of monitoring of the receiving ground water should be supplied via the following web based link: http://78.137.160.73/epa_wwd_licensing/. Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed for the primary discharge point. Ground water monitoring locations upgradient and down gradient of the discharge point shall be screened for those substances listed in Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details'. Monitoring of ground water shall be carried out at not less than two points, one upgradient from the discharge location and one downgradient.

- For discharges from secondary discharge points Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed.

- Describe the existing environment in terms of water quality with particular reference to environmental quality standards or other legislative standards. Submit a copy of the most recent water quality management plan or catchment management plan in place for the receiving water body. Give details of any designation under any Council Directive or Regulations that apply in relation to the receiving surface or groundwater.

- Provide a statement as to whether or not emissions of main polluting substances (as defined in the *Dangerous Substances Regulations S.I. No. 12 of 2001*) to water are likely to impair the environment.

- In circumstances where drinking water abstraction points exist downstream/down gradient of any discharge describe measures to be undertaken to ensure that discharges from the waste water works will not have a significant effect on faecal coliform, salmonella and protozoan pathogen numbers, e.g., Cryptosporidium and Giardia, in the receiving water environment.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on –

  (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive) —

    (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,

    (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or

    (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,

  (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC[1] in accordance with the procedures laid down in Article 21 of that Directive,

  (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or

  (d) an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC[2];

  [1]Council Directive 92/43/EEC of 21 May 1992 on the conservation of natural habitats and of wild fauna and flora (OJ No. L 206, 22.07.1992)

  [2]Council Directive 79/409/EEC of 2 April 1979 on the conservation of wild birds (OJ No. L 103, 25.4.1979)

- This section should also contain details of any modelling of discharges from the agglomeration. Any other relevant information on the receiving environment should be submitted as **Attachment F.1.**

Attachment included	Yes	No

F.2 Tabular Data on Drinking Water Abstraction Point(s)

Applicants should submit the following information for each downstream or downgradient drinking water abstraction point. The zone of contribution for the abstraction point should be delineated and any potential risks from the waste water discharge to the water quality at that abstraction point identified.

Not Applicable

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable	Not Applicable

Refer to Drawing 11 Attachment E2: - Water Abstraction Point.

Note: Attach any risk assessment that may have been carried out in relation to the abstraction point(s) listed.

An individual record (i.e. row) is required for each abstraction point. Acceptable file formats include Excel, Access or other upon agreement with the Agency. A standard Excel template can be downloaded from the EPA website at www.epa.ie. This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, D.2 and E.3.

Attachment F.2 should contain any supporting information.

SECTION G: PROGRAMMES OF IMPROVEMENTS

Advice on completing this section is provided in the accompanying Guidance Note.

G.1 Compliance with Council Directives

Provide details on a programme of improvements to ensure that emissions from the agglomeration or any premises, plant, methods, processes, operating procedures or other factors which affect such emissions will comply with, or will not result in the contravention of the;

- Dangerous Substances Directive 2006/11/EC,
- Water Framework Directive 2000/60/EC,
- Birds Directive 79/409/EEC,
- Groundwater Directives 80/68/EEC & 2006/118/EC,
- Drinking Water Directives 80/778/EEC,
- Urban Waste Water Treatment Directive 91/271/EEC,
- Habitats Directive 92/43/EEC,
- Environmental Liabilities Directive 2004/35/EC,
- Bathing Water Directive 76/160/EEC, and
- Shellfish Waters Directive (2006/113/EC).

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	√	

G.2 Compliance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009

Provide details on a programme of improvements, including any water quality management plans or catchment management plans in place, to ensure that improvements of water quality required under the European Communities Environmental Objectives (Surface Waters) Regulations 2009 are being achieved. Provide details of any specific measures adopted for waste water works specified in Phosphorus Measures Implementation reports and the progress to date of those measures. Provide details highlighting any waste water works that have been previously identified as the principal sources of pollution under the Phosphorous Regulations (S.I. No. 258 of 1998).

Attachment G.2 should contain the most recent programme of improvements and any associated documentation requested under Section G.3 of the application.

Attachment included	Yes	No
	√	

G.3 Impact Mitigation

Provide details on a programme of improvements to ensure that discharges from the agglomeration will not result in significant environmental pollution.

Attachment G.3 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
	√	

G.4 Storm Water Overflows

Provide details on a programme of improvements to ensure that discharges other than the primary and secondary discharges comply with the definition of 'storm water overflow' as per Regulation 3 of the Waste Water Discharge (Authorisation) Regulations, 2007.

Not Applicable

Attachment G.4 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

Attachment included	Yes	No
		√

SECTION H: DECLARATION

Declaration

I hereby make application for a waste water discharge Certificate of Authorisation/revised Certificate of Authorisation, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission, whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Signed by : _____ **Date :** 14/12/09
(on behalf of the organisation)

Print signature name: JOHN CUNNINGHAM

Position in organisation: Director of Services

SECTION I: JOINT DECLARATION

Joint Declaration [Note1]

I hereby make application for a waste water discharge Certificate of Authorisation /revised Certificate of Authorisation, pursuant to the provisions of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).

I certify that the information given in this application is truthful, accurate and complete.

I give consent to the EPA to copy this application for its own use and to make it available for inspection and copying by the public, both in the form of paper files available for inspection at EPA and local authority offices, and via the EPA's website.

This consent relates to this application itself and to any further information or submission whether provided by me as Applicant, any person acting on the Applicant's behalf, or any other person.

Lead Authority

Signed by : Not Applicable **Date :**
(on behalf of the organisation)

Print signature name: Not Applicable

Position in organisation: Not Applicable

Co-Applicants

Signed by : Not Applicable **Date :**
(on behalf of the organisation)

Print signature name: Not Applicable

Position in organisation: Not Applicable

Signed by : Not Applicable **Date :**
(on behalf of the organisation)

Print signature name: Not Applicable

Position in organisation: Not Applicable

Note 1: In the case of an application being lodged on behalf of more than a single Water Services Authority the following declaration must be signed by all applicants.

Agglomeration details

Leading Local Authority	Roscommon County Council
Co-Applicants	
Agglomeration	Ballinameen and Environs
Population Equivalent	327
Level of Treatment	Preliminary, secondary and tertiary treatment
Treatment plant address	Ballinameen Waste Water Works, Ballinameen Townland, Ballinameen, County Roscommon
Grid Ref (12 digits, 6E, 6N)	180229 / 294376 (Verifed using GPS)
EPA Reference No:	

Contact details

Contact Name:	Mr. Kieran Madden
Contact Address:	Water Services Section, Courthouse, Roscommon Town, County Roscommon
Contact Number:	0906637185
Contact Fax:	0906637108
Contact Email:	kmadden@roscommoncoco.ie

Table D.1(i)(a): EMISSIONS TO SURFACE/GROUND WATERS (Primary Discharge Point)

Discharge Point Code: SW-1

Local Authority Ref No:		
Source of Emission:	Open discharge	
Location:	Ballinameen Td., Ballinameen	
Grid Ref (12 digits, 6E, 6N)	180259 / 294381 (Verifed using GPS)	
Name of Receiving waters:	Tributary of Breedoge River	
Water Body:	River Water Body	
River Basin District	Shannon IRBD	
Designation of Receiving Waters:	None	
Flow Rate in Receiving Waters:	0.025	$m^3.sec^{-1}$ Dry Weather Flow
	99999	$m^3.sec^{-1}$ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)		

Emission Details:

(i) Volume emitted			
Normal/day	75.21 m^3	Maximum/day	99999 m^3
Maximum rate/hour	99999 m^3	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.00087 m^3/sec		

Table D.1(i)(b): EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	24 hr composite	= 7.6	
Temperature	°C	24 hr composite	= 99999	
Electrical Conductivity (@ 25°C)	µS/cm	24 hr composite	= 609	
Suspended Solids	mg/l	24 hr composite	= 16	1.18
Ammonia (as N)	mg/l	24 hr composite	= 0.06	0.004
Biochemical Oxygen Demand	mg/l	24 hr composite	= 5.8	0.4
Chemical Oxygen Demand	mg/l	24 hr composite	= 45.9	3.45
Total Nitrogen (as N)	mg/l	24 hr composite	= 1.19	0.09
Nitrite (as N)	mg/l	24 hr composite	= 0.15	0.01
Nitrate (as N)	mg/l	24 hr composite	= 1.06	0.08
Total Phosphorous (as P)	mg/l	24 hr composite	= 1.46	0.11
OrthoPhosphate (as P)	mg/l	24 hr composite	= 1.23	0.09
Sulphate (SO_4)	mg/l	24 hr composite	= 65.37	4.92
Phenols (Sum)	µg/l	24 hr composite	< 0.1	0.0075

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Table D.1(i)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Primary Discharge Point)

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
Atrazine	µg/l	24 hr composite	< 0.01	0.0008
Dichloromethane	µg/l	24 hr composite	< 1	0.075
Simazine	µg/l	24 hr composite	< 0.01	0.0008
Toluene	µg/l	24 hr composite	< 0.28	0.021
Tributyltin	µg/l	24 hr composite	< 0.02	0.0015
Xylenes	µg/l	24 hr composite	< 1	0.075
Arsenic	µg/l	24 hr composite	< 0.96	0.072
Chromium	µg/l	24 hr composite	< 0.93	0.07
Copper	µg/l	24 hr composite	= 99.5	7.48
Cyanide	µg/l	24 hr composite	< 5	0.38
Flouride	µg/l	24 hr composite	= 99999	99999
Lead	µg/l	24 hr composite	= 0.65	0.05
Nickel	µg/l	24 hr composite	= 2.05	0.15
Zinc	µg/l	24 hr composite	= 30	2.3
Boron	µg/l	24 hr composite	= 0.127	0.01
Cadmium	µg/l	24 hr composite	< 0.09	0.0068
Mercury	µg/l	24 hr composite	< 0.115	0.0086
Selenium	µg/l	24 hr composite	= 0.74	0.056
Barium	µg/l	24 hr composite	= 8.85	0.67

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

TABLE E.1(i): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Primary and Secondary Discharge Points

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)
SW-1	365	27451.649999999

TABLE E.1(ii): WASTE WATER FREQUENCY AND QUANTITY OF DISCHARGE – Storm Water Overflows

Identification Code for Discharge point	Frequency of discharge (days/annum)	Quantity of Waste Water Discharged (m^3/annum)	Complies with Definition of Storm Water Overflow

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	180090 / 294376 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	31/03/09	19/05/09	26/08/09	30/09/09			
pH			= 7.4	= 7.5	Grab		pH Meter
Temperature			= 14.5	= 14.1	Grab		DO Meter
Electrical Conductivity (@ 25°C)			= 291	= 520	Grab		Conductivity Meter
Suspended Solids			= 2.8	= 5	Grab	1.8	Membrane Filtration
Ammonia (as N)		= 0.03		= 0.03	Grab	0.002	Kone Autoanalyser
Biochemical Oxygen Demand	= 1.8	= 1.5		= 0.7	Grab		DO Meter
Chemical Oxygen Demand			= 94	= 103.7	Grab	6	Hach
Dissolved Oxygen			= 8.08	= 4.89	Grab		DO Meter
Hardness (as $CaCO_3$)			= 137.3	= 19.87	Grab		Kone Autoanalyser
Total Nitrogen (as N)	= 0.858	= 0.201	= 0.149		Grab	0.007	Kone Autoanalyser
Nitrite (as N)	= 0.016	< 0.001	= 0.006		Grab	0.001	Kone Autoanalyser
Nitrate (as N)	= 0.842	= 0.201	= 0.143		Grab	0.006	Kone Autoanalyser
Total Phosphorous (as P)			= 0.095		Grab	0.002	Ganimede Autoanalyser
OrthoPhosphate (as P)	< 0.141	= 0.029	< 0.064		Grab	0.002	Kone Autoanalyser
Sulphate (SO_4)			< 1.786		Grab	0.11	Kone Autoanalyser
Phenols (Sum)			< 0.1	< 0.1	Grab	0.5	APHA 5530C

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	22/10/09	12/11/09					
pH	= 7.7	= 7.3			Grab		pH Meter
Temperature	= 11.9	= 8			Grab		DO Meter
Electrical Conductivity (@ 25°C)	= 401	= 183			Grab		Conductivity Meter
Suspended Solids					Grab	1.8	Membrane Filtration
Ammonia (as N)		< 0.01			Grab	0.002	Kone Autoanalyser
Biochemical Oxygen Demand		= 2.8			Grab		DO Meter
Chemical Oxygen Demand	= 54.6	= 53			Grab	6	Hach
Dissolved Oxygen	= 8.04	= 9.88			Grab		DO Meter
Hardness (as $CaCO_3$)	= 193.6	= 78			Grab		Kone Autoanalyser
Total Nitrogen (as N)		= 0.457			Grab	0.007	Kone Autoanalyser
Nitrite (as N)		< 0.004			Grab	0.001	Kone Autoanalyser
Nitrate (as N)		= 0.457			Grab	0.006	Kone Autoanalyser
Total Phosphorous (as P)	= 0.425	= 0.087			Grab	0.002	Ganimede Autoanalyser
OrthoPhosphate (as P)		= 0.097			Grab	0.002	Kone Autoanalyser
Sulphate (SO_4)		< 1.786			Grab	0.11	Kone Autoanalyser
Phenols (Sum)					Grab	0.5	APHA 5530C

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1d
Grid Ref (12 digits, 6E, 6N)	180090 / 294376 (Verifed using GPS)

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/01	26/08/09	30/09/09				
Atrazine		< 0.01	< 0.01		Grab	0.01	GC/MS
Dichloromethane		< 1	< 1		Grab	5	USEPA 5035
Simazine		< 0.01	< 0.01		Grab	0.01	EO 129 GC/MS
Toluene		< 0.28	< 0.28		Grab	0.1	USEPA 5035
Tributyltin		< 0.02	< 0.02		Grab	0.02	GC/MS
Xylenes		< 1	< 1		Grab	0.1	USEPA 5035
Arsenic		< 0.96	< 0.96		Grab	0.2	ICP-MS
Chromium		< 0.93	= 2.2		Grab	1.0	ICP-MS
Copper		= 0.2	= 8		Grab	3	ICP-MS
Cyanide		< 5	= 11		Grab	5	Spectrophotometry
Flouride	= 99999				Grab		IC
Lead		< 0.38	< 0.38		Grab	0.3	ICP-MS
Nickel		= 1.9	= 3.5		Grab	0.5	ICP-MS
Zinc		< 4.6	= 11		Grab	1	ICP-MS
Boron		= 0.01	= 0.113		Grab	0.02	ICP-MS
Cadmium		< 0.09	< 0.09		Grab	0.1	ICP-MS
Mercury		< 0.2	< 0.03		Grab	0.02	ICP-MS
Selenium		= 0.74	= 3.3		Grab	0.2	ICP-MS
Barium		= 3.7	= 4.5		Grab	1	ICP-MS

Additional Comments:	

TABLE F.1(i)(a): SURFACE/GROUND WATER MONITORING

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	180688 / 180090 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	26/08/09	30/09/09	22/10/09	12/11/09			
pH	= 7.4		= 7.7	= 7.4	Grab		pH Meter
Temperature		= 15.1	= 11.9	= 7.9	Grab		DO Meter
Electrical Conductivity (@ 25°C)		= 240	= 404	= 170.1	Grab		Conductivity Meter
Suspended Solids	= 4.8				Grab	1.8	Membrane Filtration
Ammonia (as N)	= 0.017			< 0.01	Grab	0.002	Kone Autoanalyser
Biochemical Oxygen Demand	= 1.3				Grab		DO Meter
Chemical Oxygen Demand	= 67		= 79.5	= 26.8	Grab	6	Hach
Dissolved Oxygen	= 7.79		= 9.34	= 10.92	Grab		DO Meter
Hardness (as $CaCO_3$)	= 112.9		= 194.4	= 69.7	Grab		Kone Autoanalyser
Total Nitrogen (as N)	< 0.036			< 0.036	Grab	0.007	Kone Autoanalyser
Nitrite (as N)	< 0.004			< 0.004	Grab	0.001	Kone Autoanalyser
Nitrate (as N)				< 0.032	Grab	0.006	Kone Autoanalyser
Total Phosphorous (as P)	= 0.053		= 0.083	= 0.063	Grab	0.002	Ganimede Autoanalyser
OrthoPhosphate (as P)	= 0.023			= 0.082	Grab	0.002	Kone Autoanalyser
Sulphate (SO_4)	< 1.786		= 4.43	< 1.786	Grab	0.11	Kone Autoanalyser
Phenols (Sum)	< 0.1				Grab	0.5	APHA 5530C

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper
For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Additional Comments:	

TABLE F.1(i)(b): SURFACE/GROUND WATER MONITORING (Dangerous Substances)

Primary Discharge Point

Discharge Point Code:	SW-1
MONITORING POINT CODE:	aSW-1u
Grid Ref (12 digits, 6E, 6N)	180688 / 180090 (Verifed using GPS)

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	01/01/01	26/08/09					
Atrazine		< 0.01			Grab	0.01	GC/MS
Dichloromethane		< 1			Grab	5	USEPA 5035
Simazine		< 0.01			Grab	0.01	EO 129 GC/MS
Toluene		< 0.28			Grab	0.1	USEPA 5035
Tributyltin		< 0.02			Grab	0.02	GC/MS
Xylenes		< 1			Grab	0.1	USEPA 5035
Arsenic		< 0.96			Grab	0.2	ICP-MS
Chromium		< 0.93			Grab	1.0	ICP-MS
Copper		< 0.2			Grab	3	ICP-MS
Cyanide		< 5			Grab	5	Spectrophotometry
Flouride	= 99999				Grab		IC
Lead		< 0.38			Grab	0.3	ICP-MS
Nickel		= 2.4			Grab	0.5	ICP-MS
Zinc		< 4.6			Grab	1	ICP-MS
Boron		= 0.19			Grab	0.02	ICP-MS
Cadmium		< 0.09			Grab	0.1	ICP-MS
Mercury		< 0.2			Grab	0.02	ICP-MS
Selenium		= 0.74			Grab	0.2	ICP-MS
Barium		= 1.6			Grab	1	ICP-MS

Additional Comments:	

Annex 2: Check List For Regulation 16 Compliance

Regulation 16 of the waste water discharge (Authorisation) Regulations 2007 (S.I. No. 684 of 2007) sets out the information which must, in all cases, accompany a discharge licence application. In order to ensure that the application fully complies with the legal requirements of regulation 16 of the 2007 Regulations, all applicants should complete the following.

In each case, refer to the attachment number(s), of your application which contains(s) the information requested in the appropiate sub-article.

Regulation 16(1) **In the case of an application for a waste water discharge licence, the application shall -**		**Attachment Number**	**Checked by Applicant**
(a)	give the name, address, telefax number (if any) and telephone number of the applicant (and, if different, of the operator of any treatment plant concerned) and the address to which correspondence relating to the application should be sent and, if the operator is a body corporate, the address of its registered office or principal office,	B1	Yes
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,	Not Applicable	No
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the waste water treatment plant and/or the waste water discharge point or points to which the application relates,	B2	Yes
(d)	state the population equivalent of the agglomeration to which the application relates,	B8	Yes
(e)	specify the content and extent of the waste water discharge, the level of treatment provided, if any, and the flow and type of discharge,	A1, A3, C1, D1	Yes
(f)	give details of the receiving water body, including its protected area status, if any, and details of any sensitive areas or protected areas or both in the vicinity of the discharge point or points likely to be affected by the discharge concerned, and for discharges to ground provide details of groundwater protection schemes in place for the receiving water body and all associated hydrogeological and geological assessments related to the receiving water environment in the vicinity of the discharge.	A4, F1	Yes
(g)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and, if Regulation 17 does not apply, provide details of the likely environmental consequences of any such discharges,	E2, E3, F1	Yes
(h)	in the case of an existing waste water treatment plant, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,	D1, E4	Yes
(i)	describe the existing or proposed measures, including emergency procedures, to prevent unintended waste water discharges and to minimise the impact on the environment of any such discharges,	C1.2	Yes
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,	Not applicable	No
(k)	give details, and an assessment of the effects, of any existing or proposed emissions on the environment, including any environmental medium other than those into which the emissions are, or are to be made, and of proposed measures to prevent or eliminate or, where that is not practicable, to limit any pollution caused in such discharges,	F1, G3	Yes
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,	A5, G1, E2, E4	Yes
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.	B6, B10, E4	Yes
(n)	Any other information as may be stipulated by the Agency.	Not applicable	No
Regulation 16(3) **Without prejudice to Regulation 16 (1) and (2), an application for a licence shall be accompanied by -**		**Attachment Number**	**Checked by Applicant**
(a)	a copy of the notice of intention to make an application given pursuant to Regulation 9,	Not Applicable	No
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,	Not Applicable	No
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		Yes
(c) (i)	the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and	B3, B4, D2	Yes
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,	E3	Yes
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		No

Regulation 16(4) An original application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under Regulation 16(3) in hardcopy or in an electronic or other format as specified by the Agency.		Attachment Number	Checked by Applicant
1	An Original Application shall be accompanied by 2 copies of it and of all accompanying documents and particulars as required under regulation 16(3) in hardcopy or in electronic or other format as specified by the agancy.		Yes
Regulation 16(5) **For the purpose of paragraph (4), all or part of the 2 copies of the said application and associated documents and particulars may, with the agreement of the Agency, be submitted in an electronic or other format specified by the Agency.**		**Attachment Number**	**Checked by Applicant**
1	Signed original.		Yes
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		Yes
3	1 CD of geo-referenced digital files provided.		Yes
Regulation 17 **Where a treatment plant associated with the relevant waste water works is or has been subject to the European Communities (Environmental Impact Assessment) Regulations 1989 to 2001, in addition to compliance with the requirements of Regulation 16, an application in respect of the relevant discharge shall be accompanied by a copy of an environmental impact statement and approval in accordance with the Act of 2000 in respect of the said development and may be submitted in an electronic or other format specified by the Agency**		**Attachment Number**	**Checked by Applicant**
3	2 CD versions of EIS, as PDF files, provided.		No
1	EIA provided if applicable		No
2	2 hardcopies of EIS provided if applicable.		No
Regulation 24 **In the case of an application for a waste water discharge certificate of authorisation, the application shall –**		**Attachment Number**	**Checked by Applicant**
(a)	give the name, address, telefax number (if any) and telephone number of the applicant and the address to which correspondence relating to the application should be sent and, if the operator of the waste water works is a body corporate, the address of its registered office or principal office		
(b)	give the name of the water services authority in whose functional area the relevant waste water discharge takes place or is to take place, if different from that of the applicant,		
(c)	give the location or postal address (including where appropriate, the name of the townland or townlands) and the National Grid reference of the location of the discharge point or points to which the application relates,		
(d)	state the population equivalent of the agglomeration to which the application relates,		
(e)	in the case of an application for the review of a certificate, specify the reference number given to the relevant certificate in the register,		
(f)	specify the content and extent of the waste water discharge, the level of treatment provided and the flow and type of discharge,		
(g)	give details of the receiving water body, its protected area status, if any, and details of any sensitive areas or protected areas, or both, in the vicinity of the discharge point or points or likely to be affected by the discharge concerned,		
(h)	identify monitoring and sampling points and indicate proposed arrangements for the monitoring of discharges and of the likely environmental consequences of any such discharges,		
(i)	in the case of an existing discharge, specify the sampling data pertaining to the discharge based on the samples taken in the 12 months preceding the making of the application,		
(j)	describe the existing or proposed measures, including emergency procedures, to prevent unauthorised or unexpected waste water discharges and to minimise the impact on the environment of any such discharges,		
(k)	give particulars of the location of the nearest downstream drinking water abstraction point or points to the discharge point or points associated with the waste water works,		
(l)	give details of any designation under any Council Directive or Regulations that apply in relation to the receiving waters,		
(m)	give details of compliance with any applicable monitoring requirements and treatment standards,		
(n)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work,		
(o)	give any other information as may be stipulated by the Agency, and		
(p)	be accompanied by such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		

TABLE OF CONTENTS

ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX A

NON TECHNICAL SUMMARY

SECTION A: NON-TECHNICAL SUMMARY

A.1 General

This application refers to the Ballinameen Waste Water Works which serves an agglomeration including Ballinameen townland and Environs. The Ballinameen WWTP is located to the north of Ballinameen Townland and discharges into the tributary of Breedoge River. There is one secondary discharge point within the Waste Water network agglomeration.

Ballinameen is located to the north of County Roscommon. The townland is 3km west of the N61 Secondary Road to Boyle and is located along the R370 Regional Road, crossed by a local road.

The town is served by a foul system which is a separate collection system. The wastewater network flows by gravity through the Regional Road (R370) and the local road into the north of the townland, where Ballinameen WWTP is located.

A.2 Wastewater Treatment Works

The plant includes preliminary, secondary and tertiary treatment process and is designed to serve a population equivalent (p.e) of 247.

The plant is made up of the following elements:-

- Preliminary Treatment

  The influent flows via gravity to the inlet chamber then it passes through a manually raked screen. The screen is capable of passing the design flow. Floating solids, paper, plastic, etc are all removed. The removed solids, known as screenings are very unhygienic due to faecal matter. The screenings are manually removed from the flow, washed and compacted and deposited in a skip for removal off site.

  After screening the influent flows to the pump sump. From here, wastewater is pumped directly into the aeration tank. There are two pumps (duty/standby) within the pump sump.

  The treatment plant is designed for 3 DWF. Any flows above this overflow from the pump sump via gravity to the stream

to the south of the WWTP, which is a tributary of Breedoge River.

Flow measurements are carried out on the rising main from the pump sump to the aeration tank via an electromagnetic flow meter. Influent samples are also collected from the pump sump via a 24-hour automatic composite sampler.

- Biological, Secondary Treatment

Flow from the pump sump is pumped directly to the package wastewater treatment plant - aeration zone. The aeration system is fine bubble diffused aeration whereby air is induced into a steel aeration tank by an air blower and membrane disk diffusers. This ensures that adequate mixing is maintained in the tank. At the aeration tank, the influent is mixed with returned activated sludge from the settlement tank.

After aeration, the mixed liquor is forward through the internal wall slots into the settlement tank (clarifier) that has a hopper bottom configuration. The clarifier is sized to provide the required retention time based on an average twenty-four hour design flow. During the settling period, solids settle on the bottom of the clarifier. The supernatant liquid from these tanks is decanted off the top through the overflow weir and baffle plate.

- Tertiary Treatment

The supernatant liquid from the clarifier passes through the sand filter into the backwash sump. At the sand filter, suspended solids are removed from the effluent by a combination of straining action of the filter and the adhesion of particles onto the sand.

The backwash sump has a discharge pipe gravitates the effluent into the tributary of Breedoge River, adjacent to the south boundary of the WWTP. Effluent samples are collected from the outlet sump via a 24-hour automatic composite sampler.

Backwashing cycle: As the filter begins to blind with filtered material the flow going through the filter slows. This results in the effluent level within the filter rising. At a pre-determined level a pneumatic switch activates the backwash cycle. The pump in the backwash sump pumps water through

the pipework at the filter base. As the upward velocity is high the filter media is fluidised and solids are removed from the bed. The backwash water is fed back to the pump sump of the WWTP.

There is no facility for the removal of phosphorus at this WWTP.

- Sludge Treatment

  There is no sludge treatment on-site. A portion of the sludge is returned to the aeration tank in order to maintain the activated sludge process. Sludge settles at the bottom of the wastewater package plant, especially at the clarifier. The sludge is withdrawn by tanker every two weeks. The Sludge Management Plan for County Roscommon designated Ballaghaderreen WWTP to dewater sludge produced at Ballinameen WWTP.

- Plant Controls

  The WWTP is manned by a caretaker who also maintains the sewer network. There is no SCADA system in place at the WWTP. The control panel is housed in a metal kiosk adjacent to the Package Treatment Unit. The control panel uses a Programmable Logic Controller (PLC) system, providing both control and data recording. All functions within the WWTP are controlled by the PLC.

A.3 Sources of Emissions

All effluent from the WWTP discharges through a dedicated outfall line to a tributary of Breedoge River. This is a primary discharge point (SW1) and discharges effluent through a gravity pipe into the stream that is adjacent to the south of the WWTP. The incoming effluent is treated in the wastewater plant through a series of preliminary, secondary and tertiary treatment processes.

There is a potential secondary discharge point (SW2) located in Ballinameen WWTP, Ballinameen Townland. This is an emergency overflow pipe from the inlet pump sump that discharges to the tributary of Breedoge River. SW2 is connected to PLC. Refer to Drawing 4 & 8.

There is no other secondary discharge point on the wastewater collection system.

A.4 Nature and Quantities of Foreseeable Emissions Technology for prevention or reduction of emissions. Further measures planned to eliminate or reduce emissions.

All effluent from the Ballinameen WWTP discharges to the tributary of Breedoge River through a single discharge point (SW1). The treatment plant collects sewage from agglomerations highlighted in Drawing 1. The incoming untreated effluent entering the works is consistent with a predominantly domestic source with some commercial loadings. There is no loading that would be considered radically different from what would be considered normal municipal sewage.

The potential loadings to the receiving waters would be BOD, COD, Suspended Solids, Phosphorus, Nitrates and Ammonia. These potential loadings to the aquatic environment are greatly reduced by the process and levels leaving the works are well below levels indicated in the Urban Waste Water Directive and the parameters indicated for the plant.

The plant is designed to achieve an effluent of BOD5 = 25 mg/l, and suspended solids = 35 mg/l after filtration, complying with the EC Directive No. 91/281/EEC. The treated effluent is currently meeting the required parameters.

The plant is designed to provide secondary treatment for a population equivalent (PE) of 247 (1 PE = 0.06kg BOD/d).

Emissions from the emergency overflow could occur during periods of very heavy rainfall. Flows in tributary and Breedoge River will be in flood conditions during these spillages and dilution factors very high.

A.5 Supervision, Control and Emissions Monitoring

The Ballinameen treatment plant is run by a team of two i.e. an Executive Technician and a caretaker. The Executive Technician and caretaker report to the Senior Executive Engineer in the Boyle Area office. The Senior Executive Engineer – Boyle Area reports to the Senior Engineer, Water Services. The Executive Technician will also report to the Chief Technician (Laboratory) Senior Executive

Engineer, Water Services. The Senior Executive Engineer reports to the Senior Engineer, Water Services. The plant is manned from Monday to Friday from 8.00am to 4.30pm.

A contract is in place with a service provider to carry out maintenance to the plant on a regular basis. The contract is awarded through a tendering process. The contract includes rates for rapid response to emergency situations and call out rates for breakdowns.

The current monitoring and sampling programme in River Suck is carried out on a monthly basis at the location on Drawing 10. The results are published every three years in the EPA's report on Water Quality in Ireland.

Sampling and testing procedures are carried out by Roscommon County Council in accordance with Standard Operating Procedure No. 900, a copy of which is provided in Annex I of the Waste Water Discharge Certificate of Authorisation Application.

The Executive technician from Roscommon County Council Environment Department takes samples more than 12 times a year at the following locations with the waste water treatment plant:

1. Inlet pipe into the aeration tank 1
2. Aeration tank 2
3. Outlet pipe from clarifier 1

(1 = 24 hour composite sample, 2 = grab sample)

The 24 hour composite inlet ES1 is taken once a month. Analysed for BOD, COD, Suspended Solids, PH, ammonia, Nitrate, Nirite, Total Oxidized Nitrogen, Ortho P and Total P.

Each month a grab sample ES2 is taken from the aeration tank in Ballinameen. The samples are analysed for PH and MLSS. The Caretaker also carries out cone tests.

The 24 hour composite oulet ES3 is taken once a month. The sample is analysed for BOD, COD, Suspended Solids, PH, Ammonia, Nitrate, Nitrite, Total Oxidized Nitrogen, Ortho P and Total P, Fluoride, Conductivity and Temperature.

The treated effluent is discharged into the tributary of Breedoge River (see Drawing 10 for monitoring locations). On a monthly basis, the Executive technician takes grab samples at a downstream

aSW1d station of the treatment plant. The grab samples are analysed for dissolved oxygen, temperature, PH, BOD, ammonia, nitrate, nitrite, total oxidized nitrogen, Ortho P, fluoride, sulphate, conductivity and hardness.

The samples are tested and results for the BOD, COD, Suspended Solids, ammonia and total phosphorous are noted. The plant is designed to achieve an effluent of BOD5 = 25 mg/l, and suspended solids = 35 mg/l after filtration, complying with the EC Directive No. 91/281/EEC.

A.6 Conclusion

The Wastewater Treatment Plant at Ballinameen provides treatment for the sewerage effluent generated by the agglomeration of Ballinameen Townland and Environs. The agglomeration also includes two secondary discharge points.

In 2002 the Ballinameen WWTP was upgraded to include inlet chamber, screening, pump sump, influent flow measurement, automatic composite sampler, package treatment plant with aeration and settlement processes, sand filter and backwash sump.

During the last 5 years two large housing estates have been built in Ballinameen townland, it is estimated that this has doubled the number of houses to a present population equivalent of 327. This would indicate that the WWTP is currently overloaded. However, based on existing treated effluent quality achieved and that emergency overflow discharges are rare (less that one per year), it appears that the present WWTP is not overloaded. The additional treatment processes at the WWTP have improved the standards of emissions to the aquatic environment and comply with the objectives of the Water Framework Directive.

ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX B

GENERAL

SECTION B: GENERAL.

SITE NOTICE

APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION

Applicant: Roscommon County Council,
Courthouse,
Roscommon.

The Ballinameen Waste Water Works comprises of the existing treatment plant at Ballinameen Td. and the associated collection network.

Roscommon County Council intends to apply to the Environmental Protection Agency for a Waste Water Discharge Certificate of Authorisation, in accordance with the Waste Water Discharge (Authorisation) Regulations 2007, for discharges from the Ballinameen Waste Water Works.
The treatment works is located in Ballinameen Td., Ballinameen, County Roscommon (National Grid Reference 180229E, 294376N).

The treatment plant includes preliminary, secondary and tertiary treatment units. The primary discharge from the works discharges treated effluent to the tributary of Breedoge River.

The discharges to be covered by this application are the primary discharge point from the treatment plant to the tributary of Breedoge River at 180259E, 294381N in the townland of Ballinameen and the secondary discharge point located in Ballinameen Td. (180244E, 294366N).

A copy of the application, information relating to the application and any further information relating to the application as may be furnished to the Agency will be available for inspection or purchase at the headquarters of the Agency and at Roscommon County Council, Courthouse, Roscommon, after the 22nd December 2009.

Submissions in relation to the application may be made to the Agency at its headquarters.

B.8 (i) Population Equivalent of Agglomeration Ballinameen Present Pollution Load 2009

Existing Population Equivalent

			Ballinameen			
Description	Typical Loading (g BOD/d)	Typical Loading (m3/d)	No. of	(m^3/d)	Kg BOD/d	PE
Residential						
Houses	178.7	0.67	97	64.99	17.33	289
Institutional						
Schools (no. pupils)	10.7	0.04	33	1.32	0.35	6
Nursing Homes (per bed)	112	0.42		0.00	0.00	0
Garda station	53.3	0.2		0.00	0.00	0
Commercial						
Shop (retail)	53.3	0.2	1	0.20	0.05	1
Shop (chemist)	53.3	0.2		0.00	0.00	0
Laundrette	1200	4.5		0.00	0.00	0
Library	133.3	0.5		0.00	0.00	0
Restaurant	800	3	1	3.00	0.80	13
Business (trade)	666.7	2.5		0.00	0.00	0
Butcher	186.7	0.7		0.00	0.00	0
Public House	880	3.3		0.00	0.00	0
Funeral Home	133.3	0.5		0.00	0.00	0
Hairdresser	746.7	2.8		0.00	0.00	0
Bank	373.3	1.4		0.00	0.00	0
Garage	666.7	2.5		0.00	0.00	0
Hotel (per bed)	112	0.42		0.00	0.00	0
B&B (per bed)	112	0.42	5	2.10	0.56	9
Church	186.7	0.7	1	0.70	0.19	3
Hall	213.3	0.8	1	0.80	0.21	4
Office	186.7	0.7		0.00	0.00	0
Health centre	133.3	0.5	1	0.50	0.13	2
Sports club	480	1.8		0.00	0.00	0
Total Existing PE						**327**

Notes:
1PE = 0.225 m3/day or 60gBOD/day.
A housing occupancy of 2.97 person per household was used in the calculations. This figure was taken from on-site survey by Roscommon County Council, September 2009.

Annex B: - General

Overall Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballinameen	327	0.6	1.8	3	0.6	369	467	591	369

Domestic Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballinameen	289	0.6	1.8	3	0.6	325	413	522	325

Commercial Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballinameen	32	0.6	1.8	3	0.6	37	46	59	37

Institutional Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballinameen	6	0.6	1.8	3	0.6	7	8	11	7

VSGR = Village Specific Growth Rate.

Annex B: - General

A

School

Ballinameen Wastewater Treatment Plant

Dispensary

Ballinameen

Presbytery

Church

Grave Yard

ACRES

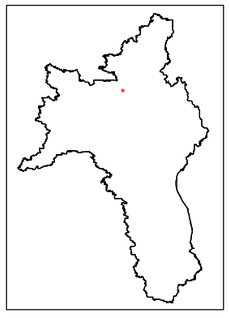
R370

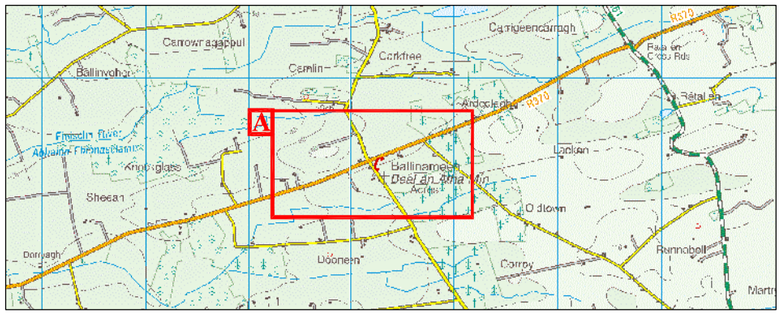
N

LEGEND

WWTP BOUNDARY

AGGLOMERATION BOUNDARY





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Agglomeration Served by
Ballinameen WWTP

DRAWN:	DRAWING No.
E. Meseth	01
SCALES: 1:5000	
DATE: 22nd Sep. 2009	CHECKED: P. Fleming
	APPROVED: V. Walsh

A

Ballinameen Wastewater Treatment Plant

180229E, 294376N

Power Kiosk

Air Blower

Sand Filter

Settlement Tank

Back Wash Sump

Aeration Tank

Pump Sump

Screen

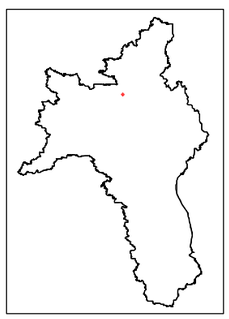
Inlet Chamber

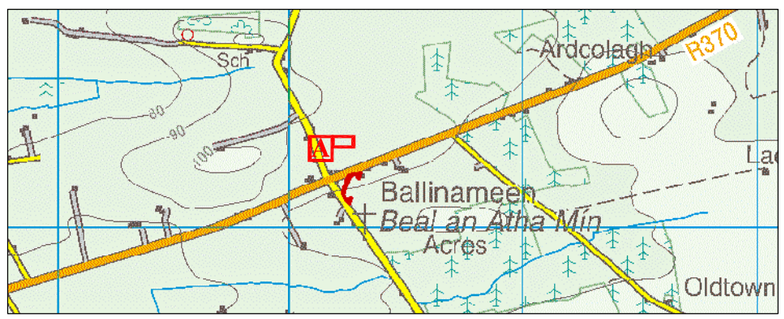
N

LEGEND

WWTP BOUNDARY

Location of WWTP





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

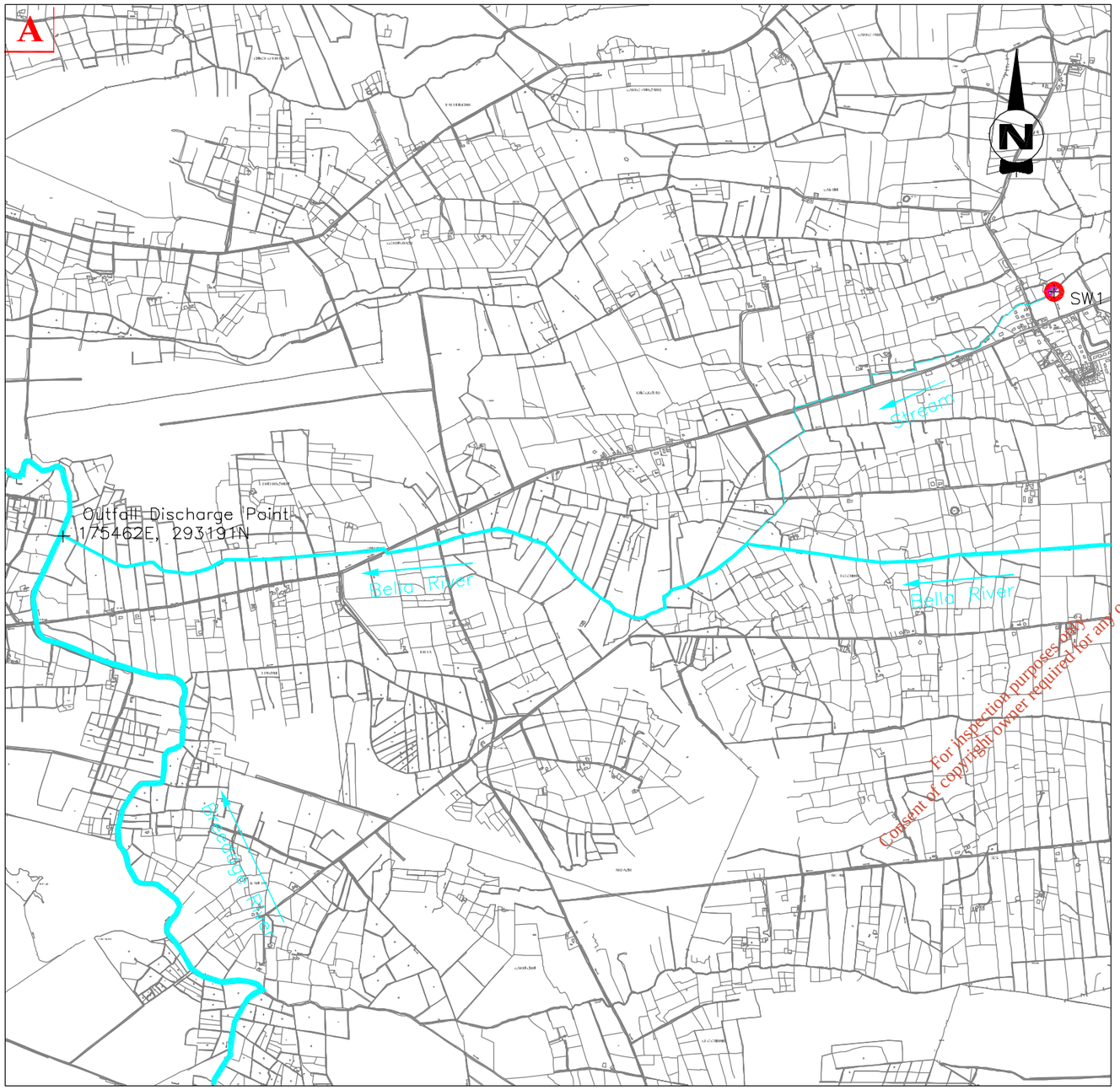
DRAWING TITLE.

Ballinameen WWTP Site
Plan & Boundary

DRAWN:	DRAWING No.
E. Mescth	02
SCALES: N.T.S.	

DATE:	CHECKED.	APPROVED:
11th Dec. 2009	P. Fleming	V. Walsh

A



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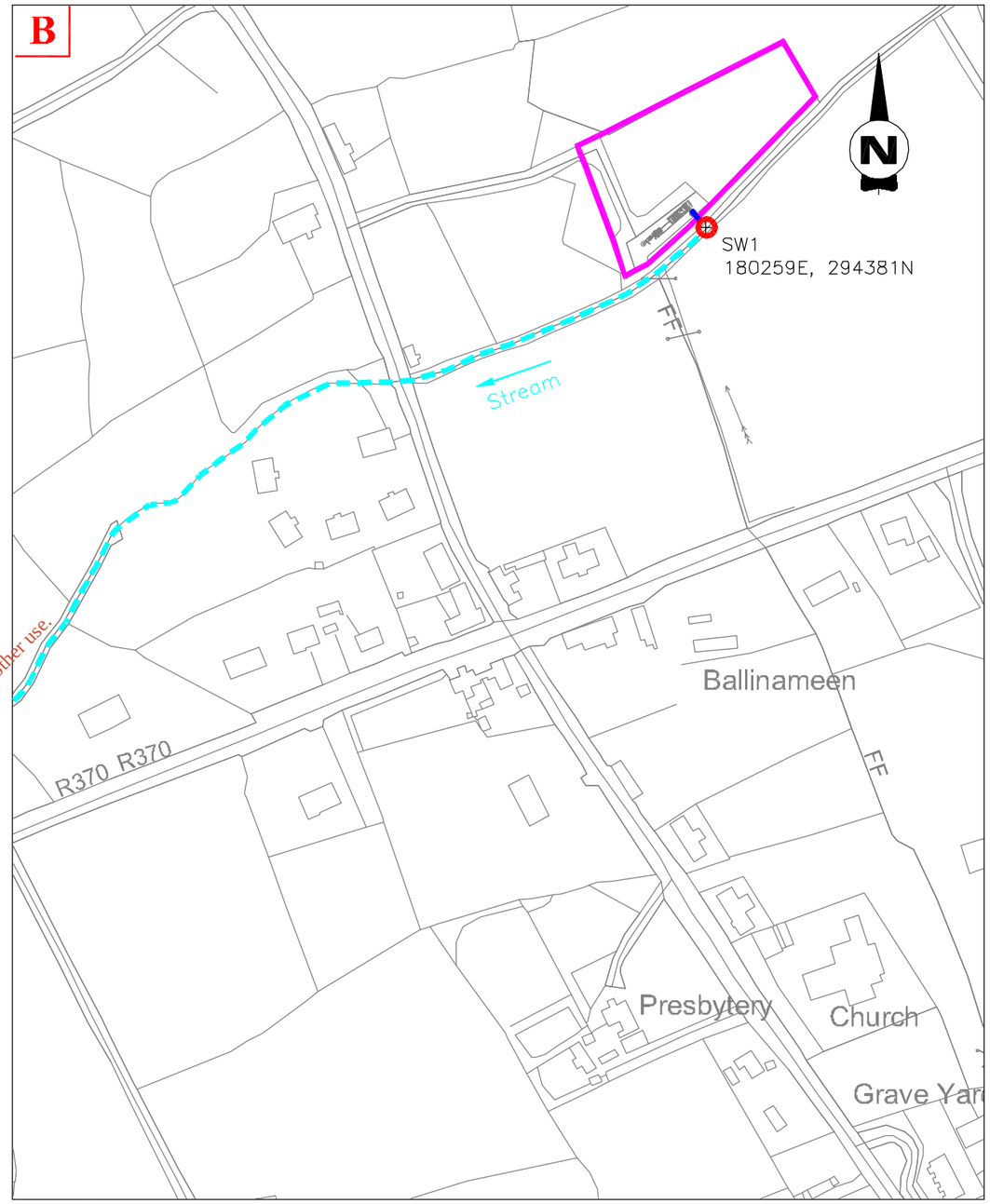

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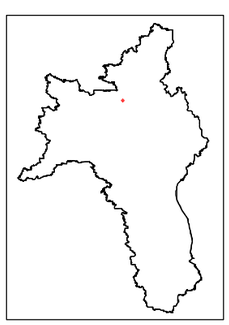
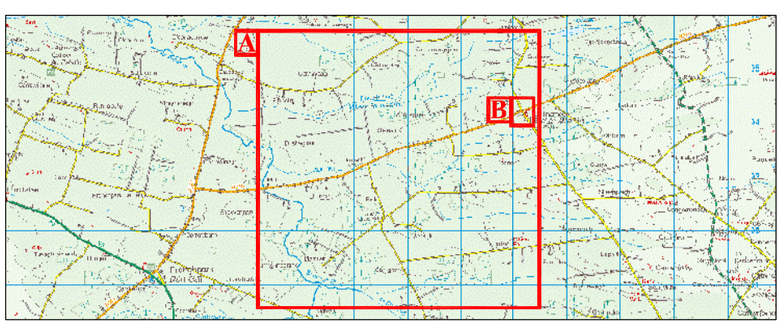
LEGEND

- WWTP BOUNDARY
- Primary Discharge Point SW1
- Final Effluent Pipe
- Flow path to river
- Outfall Discharge Point





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Location of Primary
Discharge Point - SW1

DRAWN:	DRAWING No.
E. Meseth	03
SCALES: Varies	
DATE: 11th Dec. 2009	CHECKED. P. Fleming
	APPROVED: V. Walsh

A

N

SW2

Outfall Discharge Point
175462E, 293191N

Bella River

Bella River

Bella River

Stream

1 : 25,000

B

N

SW2
180244E, 294366N

Stream

1 : 200

LEGEND

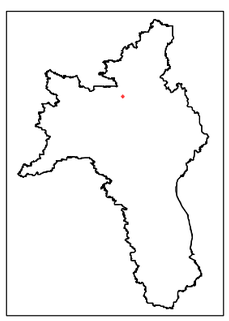
WWTP BOUNDARY

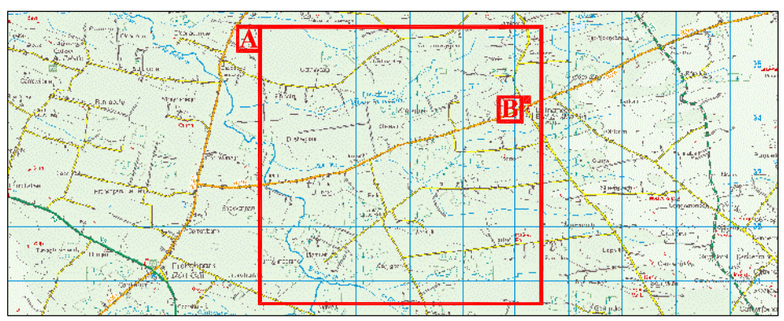
Secondary Discharge Point SW2

Emergency Overflow Pipe

Flow path to river

Outfall Discharge Point





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Location of Secondary Discharge Point - SW2

DRAWN: E. Meseth

DRAWING No. 04

SCALES: Varies

DATE: 11th Dec. 2009

CHECKED. P. Fleming

APPROVED: V. Walsh

A

School

Location of Site
Notice No.2

Location of Site
Notice No.1

Ballinameen Wastewater
Treatment Plant

Dispensary

Ballinameen

Presbytery

Church

Grave Yard

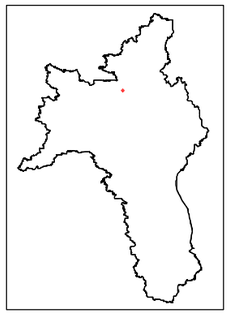
ACRES

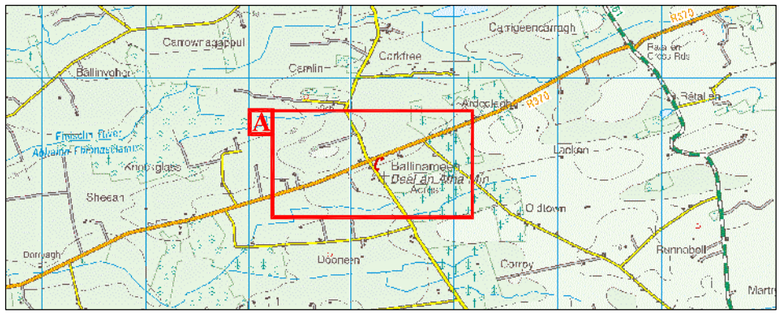
N

LEGEND

WWTP BOUNDARY

Location of Site Notice





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Location of Site Notices

DRAWN:	DRAWING No.
E. Meseth	05
SCALES: 1:5000	
DATE: 22nd Sep. 2009	CHECKED. P. Fleming
	APPROVED: V. Walsh

ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX C

INFRASTRUCTURE & OPERATION

SECTION C: OPERATIONAL INFORMATION REQUIREMENTS

Treatment Process Description

C.1.0 Design Criteria

The Ballinameen Wastewater Treatment Plant is a preliminary, secondary with phosphate removal and tertiary treatment. The plant is designed to produce a final standard effluent of 25mg/l BOD5 and 35mg/l suspended solids.

All effluent collected by the separate wastewater network in Ballinameen village is conveyed by gravity to the preliminary treatment units of Ballinameen WWTP. At this site, influent flows up to 3 DWF is pumped from the pump sump to the treatment units of the works. Screened flow in excess of this overflows from the pump chamber to the tributary of Breedoge River.

Allow for 60 grams/head/day of B.O.D. in a volume of 230 litres. The plant is design to treat a hydraulic load of 3DWF as set out in table C.1.0.

Volume m3/d	BOD kg/d	Population Equivalent
56.7	15	247

Table C.1.0 Ballinameen Treatment Plant Design Loading total

C.1.0.1 Preliminary Treatment and Flow Monitoring

The influent flows via gravity to the inlet chamber then it passes through a manually raked screen (20mm apertures). The screen is capable of passing the design flow. Floating solids, paper, plastic, etc are all removed. The removed solids, known as screenings are very unhygienic due to faecal matter. The screenings are manually removed from the flow, washed and compacted and deposited in a skip for removal off site.

After screening the influent flows to the pump sump. From here, wastewater is pumped directly into the aeration tank. There are two pumps (duty/standby) within the pump sump.

The treatment plant is designed for 3 DWF. Any flows above this overflow from the pump sump via gravity to the stream to the south of the WWTP, which is a tributary of Breedoge River.

Flow measurements are carried out on the rising main from the pump sump to the aeration tank via an electromagnetic flow meter. Influent samples are also collected from the pump sump via a 24-hour automatic composite sampler.

C.1.0.2 Biological, Secondary Treatment

Flow from the pump sump is pumped directly to the package wastewater treatment plant - aeration zone. The aeration system is fine bubble diffused aeration whereby air is induced into a steel aeration tank by an air blower and membrane disk diffusers. This ensures that adequate mixing is maintained in the tank. At the aeration tank, the influent is mixed with returned activated sludge from the settlement tank.

For a population equivalent of 247 at 60 grams B.O.D./head/day is based on the conventional criterion of 250 mg/litre for extended aeration. The total volume of the aeration tank is 51.52m^3. The basis on which the aeration tanks are designed is set out in table C.1.0.2.1

Population Equivalent (P.E.)	247
Incoming BOD5 Load	15 kg/day
Design B.O.D. loading	250 mg/litre volume
MLSS Concentration	150 kg
F/M Ratio	0.1kg BOD/kg MLSS
Tank volume provided	51.52 m^3

Table C.1.0.2.1 Aeration tanks Design Parameter

After aeration, the mixed liquor is forward through the internal wall slots into the settlement tank (clarifier) that has a hopper bottom configuration. The clarifier is sized to provide the required retention time based on an average twenty-four hour design flow. During the settling period, solids settle on the bottom of the clarifier. The supernatant liquid from these tanks is decanted off the top through the overflow weir and baffle plate. The sedimentation tank has an area of 6.9m^2 with a tank depth of 2.8m gives a total tank volume of 19.3m^3. The basis on which the sedimentation tank is designed is set out in table C.1.0.2.2

Population Equivalent (P.E.)	247
Design Basis (Sedimentation)	3 DWF upward velocity of 1.0$m^3/m^2/hr$
3 DWF	170 m^3/day or 7.1 m^3/hr

Surface Overflow Rate	25 $m^3/m^2/d$
Tank area	6.9m^2
Sidewall depth	2.8m
Retention time	3 hours
Return Sludge to Aeration	1DWF

Table C.1.0.1.2 Sedimentation tank Design Parameter

C.1.0.3 Tertiary Treatment

The supernatant liquid from the clarifier passes through the sand filter into the backwash sump. At the sand filter, suspended solids are removed from the effluent by a combination of straining action of the filter and the adhesion of particles onto the sand.

Filtered effluent is fed to a 6m^3 backwash sump. The discharge pipe is at the middle of the tank, so it overflows when the effluent reaches 3m^3, then it gravitates to the tributary of Breedoge River, adjacent to the south boundary of the WWTP. Effluent samples are collected from the outlet sump via a 24-hour automatic composite sampler.

Backwashing cycle: As the filter begins to blind with filtered material the flow going through the filter slows. This results in the effluent level within the filter rising. At a pre-determined level a pneumatic switch activates the backwash cycle. The pump in the backwash sump pumps water through the pipework at the filter base. As the upward velocity is high the filter media is fluidised and solids are removed from the bed. The backwash water is fed back to the pump sump of the WWTP.

C.1.0.4 Phosphorous Removal

There is no facility for the removal of phosphorus at this WWTP.

C.1.0.5 Sludge Treatment

There is no sludge treatment on-site. A portion of the sludge is returned to the aeration tank in order to maintain the activated sludge process. Sludge settles at the bottom of the wastewater package plant, especially at the clarifier. The sludge is withdrawn by tanker every two weeks. The Sludge Management Plan for County Roscommon designated Ballaghaderreen WWTP to dewater sludge produced at Ballinameen WWTP.

C.1.0.6 Sampling Data

The results from the last 12 month sampling indicates that the treatment plant is operating within its design standards.

C.1.1 Storm Water Overflow

There are no stormwater overflows on the wastewater network. The wastewater network in Ballinameen is a separate collection system.

C.1.2 Pumping Stations

Flow of wastewater through the treatment process is completely by gravity. However, there is an emergency overflow pipe in the Pump Sump at the inlet of the WWTP.

Unique Code #	Pump Station	Duty & Standby Pump	Storage Capacity (m^3)	Frequency and duration of activation of emergency overflow	Connect to PLC
SW2	WWTP Pump Sump	YES	Inlet chamber 2m dia x 2.1m deep = 6.6m^3. Pump sump 2.2m dia x 2.1m deep = 8m^3. Total Capacity = 14.6m^3.	No record of an overflow. (No record of power failure)	YES

Power Failure Procedure

The pump sump is inspected daily by the caretaker.

The inlet chamber and inlet screen are linked to the pump sump, providing additional retention capacity to the pump sump, thus there is adequate storage until the caretaker arrives. For long power failure, the tanks at the treatment plant will be emptied by tanker.

SW2 is linked to a Programmable Logic Controller (P.L.C.). The pump sump is equipped with a duty/stand-by pump arrangement. In the event of a mechanical failure, the stand-by pump comes into operation while the faulty pump is repaired. Should the inlet pumps both fail to operate, the liquid level in the pump sump will rise to the level of the emergency overflow pipe. SW2 has a storage capacity of 14.6m^3. It would be reasonable to assume that the majority of this wastewater is generated during 8am to 10pm. The storage capacity would be longer during non-peak times as less wastewater is produced. There is adequate storage in the pump sump to allow any problem to be rectified by the caretaker during a power failure. However, if the

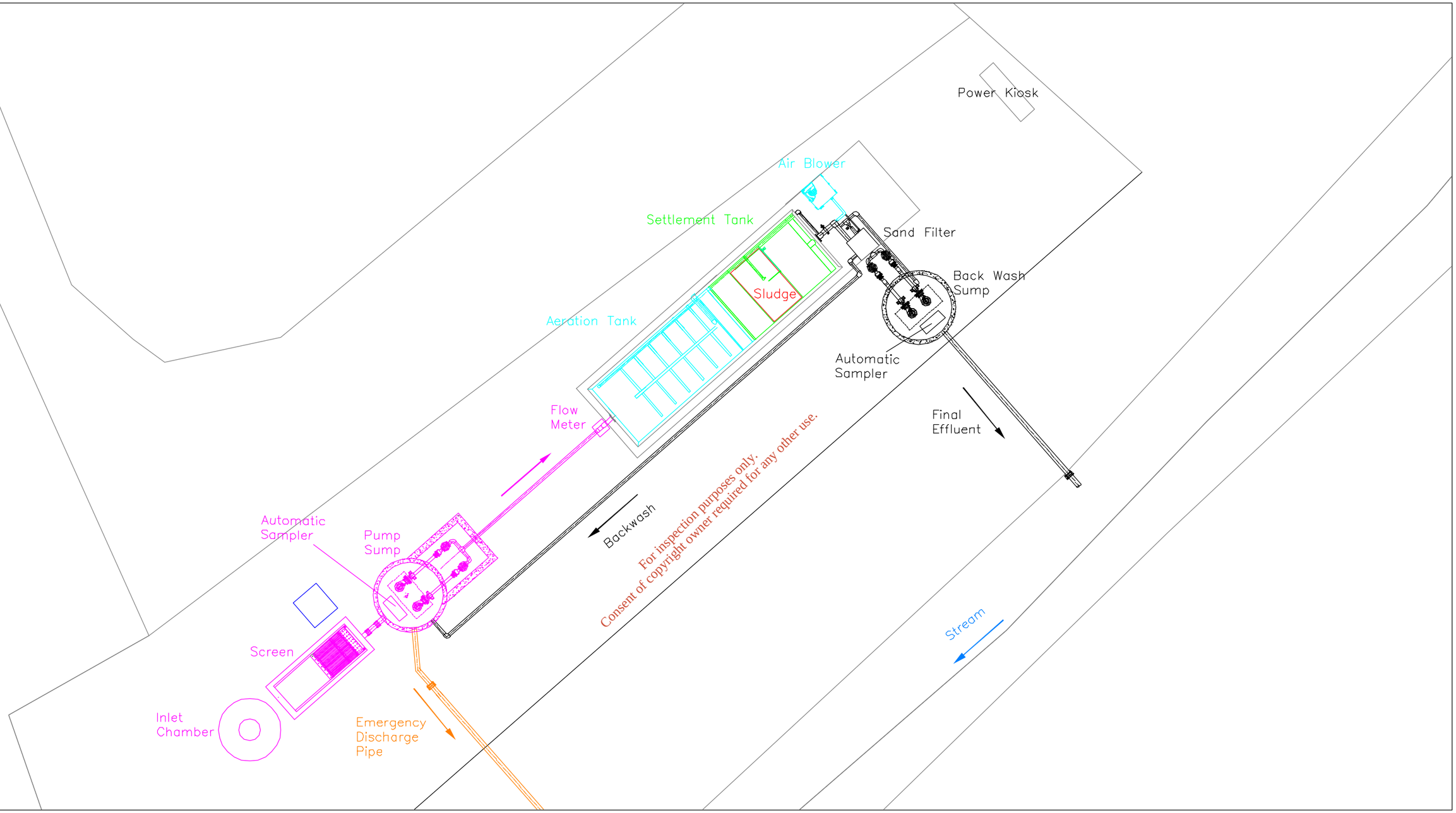
problem cannot be rectified within the timeframe, a tanker may be used to empty the pump sump and transport the effluent directly to the Waste Water Treatment Plant.

A contract is in place with a service provider to carry out maintenance on a regular basis. The contract is awarded through a tendering process. The contract includes rates for rapid response to emergency situations and call out rates for breakdowns.

C.2.0 Outfall Design and Construction

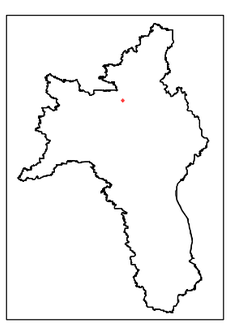
Final effluent from Ballinameen wastewater treatment works currently discharge to the tributary of the Breedoge River, via a gravity outfall pipeline. The primary discharge point SW1 at the south boundary of the treatment plant. Refer to Drawing 3 Attachment B.3.

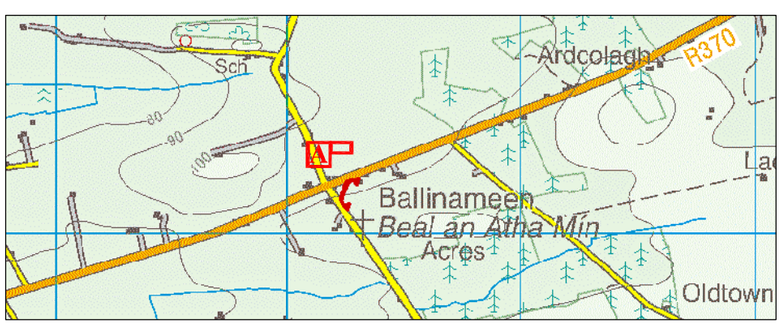
The secondary discharge point at Ballinameen WWTP inlet pump sump, Ballinameen Townland, (SW2) is a reinforced concrete structure. It includes a 150mm diameter PVC emergency overflow pipe (SW2) from the pump sump to the tributary of the Breedoge River, adjacent to the south boundary of the treatment plant. There is adequate capacity to deal with any malfunction. SW2 is connected to PLC unit. Refer to Drawing 4 & 8.



LEGEND

- RAW WASTEWATER
- EMERGENCY DISCHARGE
- DISPOSAL TO LANDFILL
- FLOW TO AERATION TANK
- FLOW TO SECONDARY TANK
- SLUDGE
- FINAL EFFLUENT





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

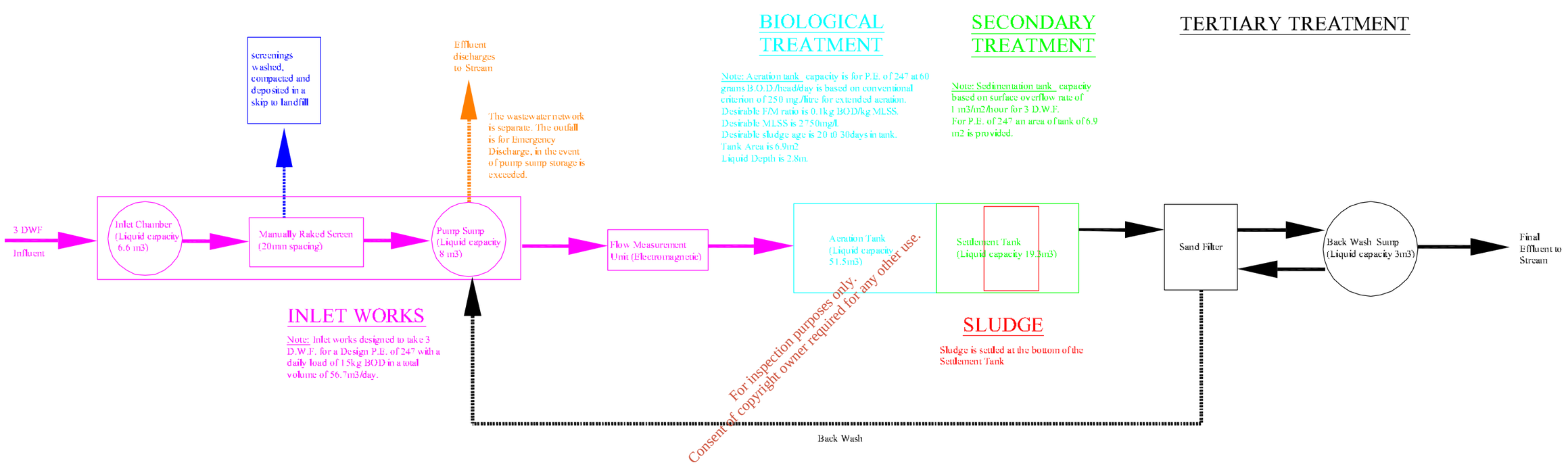
PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

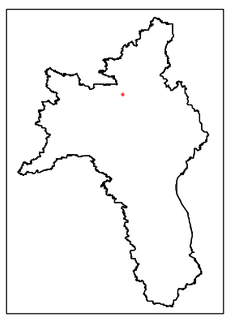
WWTP Detail Process Plan

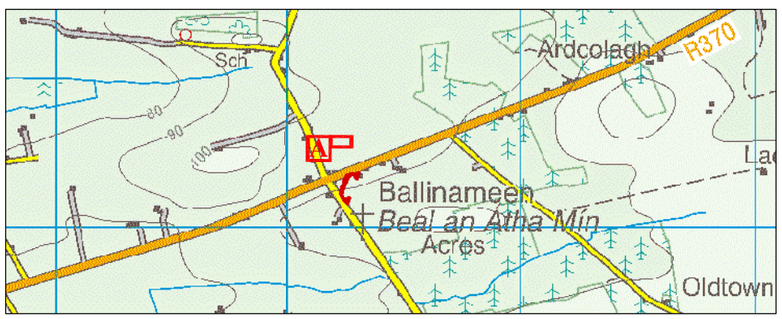
DRAWN:	DRAWING No.
E. Meseth	06
SCALES: N.T.S.	
DATE: 11th Dec. 2009	CHECKED: P. Fleming
	APPROVED: V. Walsh



LEGEND

- RAW WASTEWATER
- EMERGENCY DISCHARGE
- DISPOSAL TO LANDFILL
- FLOW TO AERATION TANK
- FLOW TO SECONDARY TANK
- SLUDGE
- FINAL EFFLUENT





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

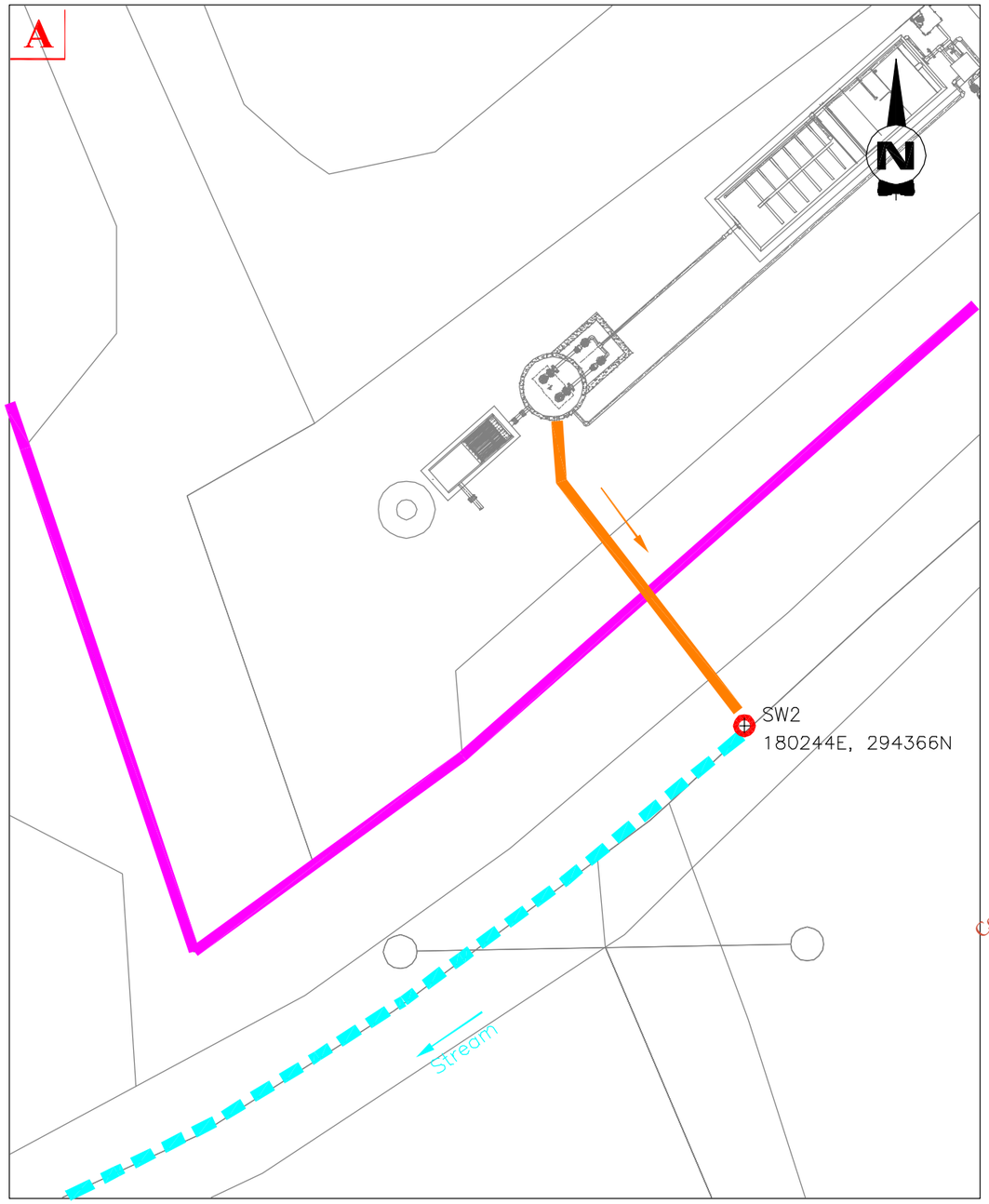
Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

WWTP Process Flow Diagram

DRAWN:	DRAWING No.
E. Mescth	07
SCALES: N.T.S.	

DATE:	CHECKED.	APPROVED:
11th Dec. 2009	P. Fleming	V. Walsh



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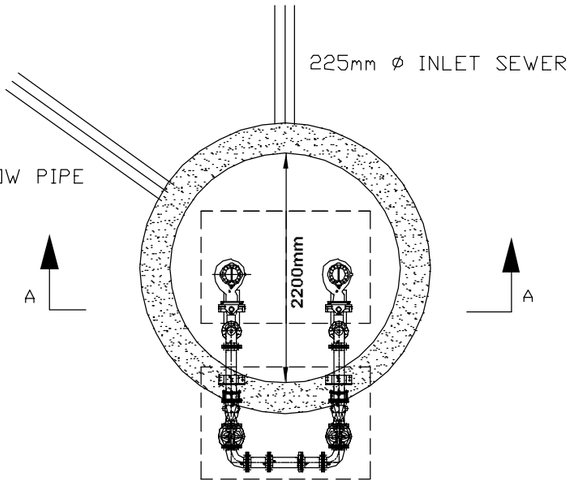
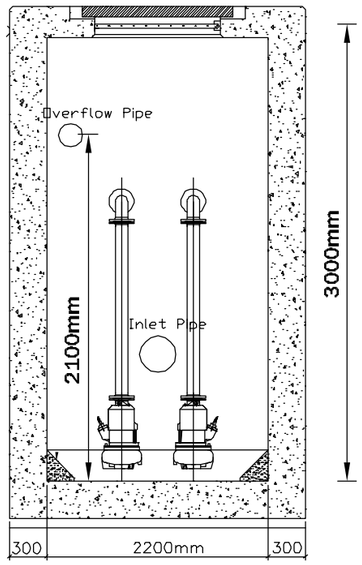


Layout Plan

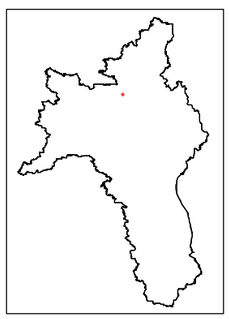


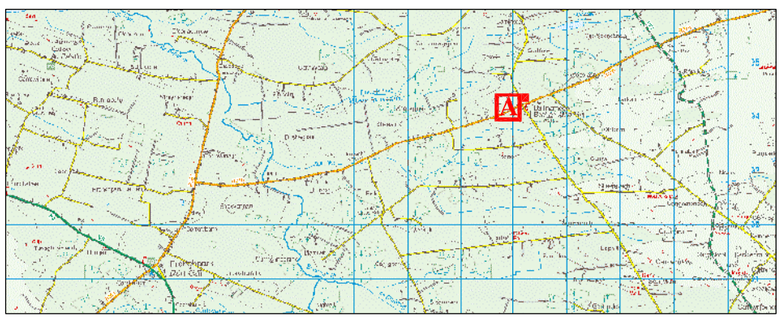
Section A-A

Not to Scale

LEGEND

- WWTP BOUNDARY
- Secondary Discharge Point SW2
- Emergency Overflow Pipe
- Flow path to river
- Outfall Discharge Point





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Secondary Discharge Point SW2
WWTP Inlet Pump Sump - Detail

DRAWN:	DRAWING No.
E. Meseth	08
SCALES: Varies	
DATE: 11th Dec. 2009	CHECKED. P. Fleming
	APPROVED: V. Walsh

ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER
CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX D

DISCHARGES TO AQUATIC ENVIRONMENT

A

Ballinameen Wastewater Treatment Plant

SW1
180259E, 294381N

SW2
180244E, 294366N

School

Dispensary

Ballinameen

Church

Grave Yard

ACRES

N

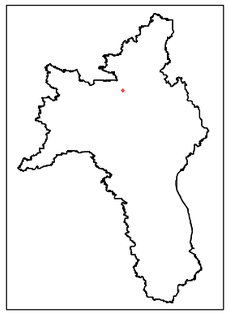
LEGEND

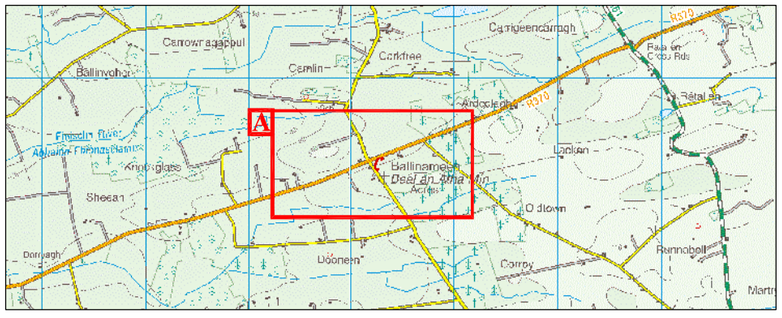
WWTP BOUNDARY

AGGLOMERATION BOUNDARY

Primary Discharge Point SW1

Secondary Discharge Point SW2





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Overview of Discharge Points

DRAWN:	DRAWING No.
E. Meseth	09
SCALES: 1:5000	
DATE: 22nd Sep. 2009	CHECKED: P. Fleming
	APPROVED: V. Walsh

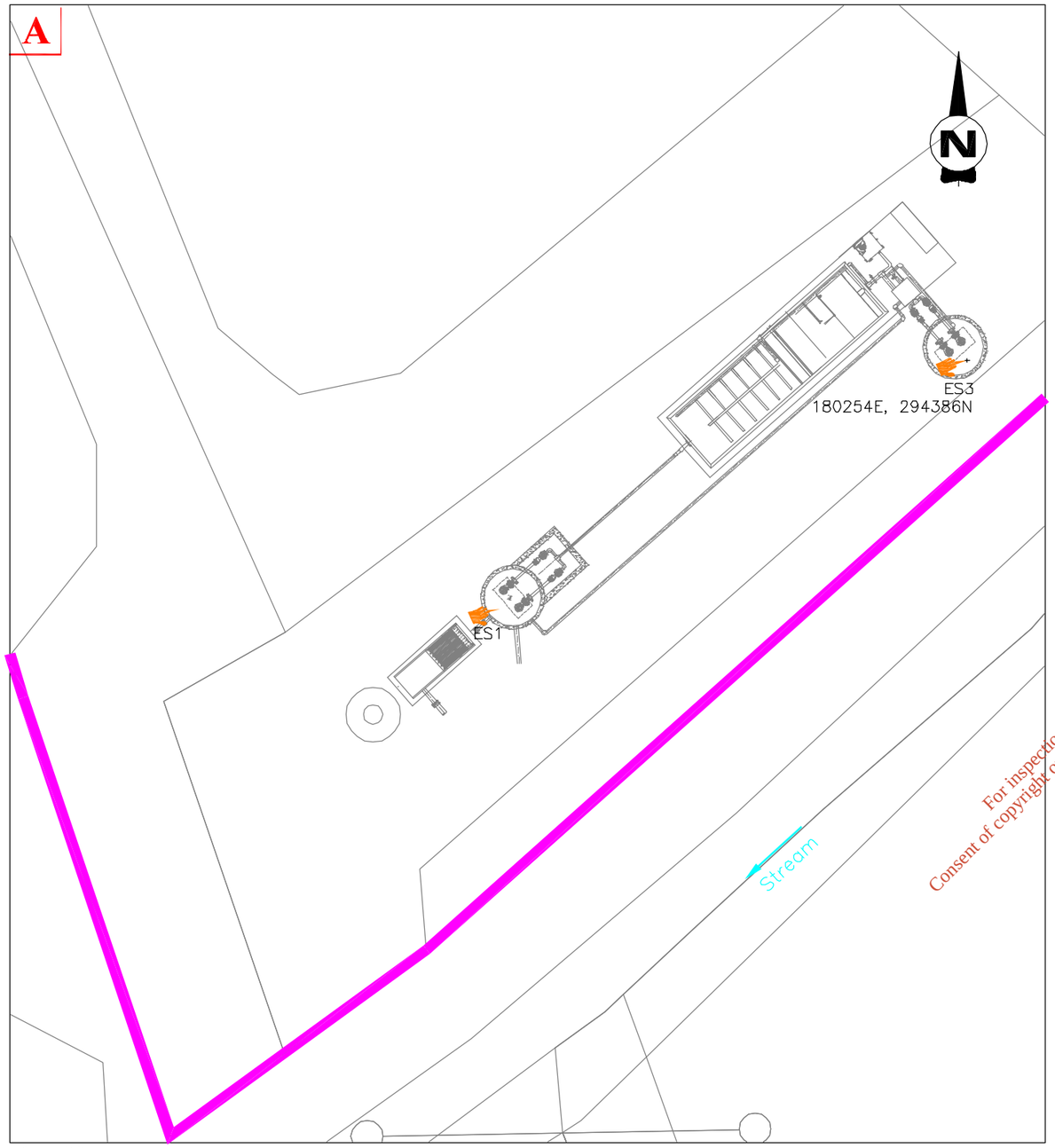
ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER
CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX E

MONITORING

A



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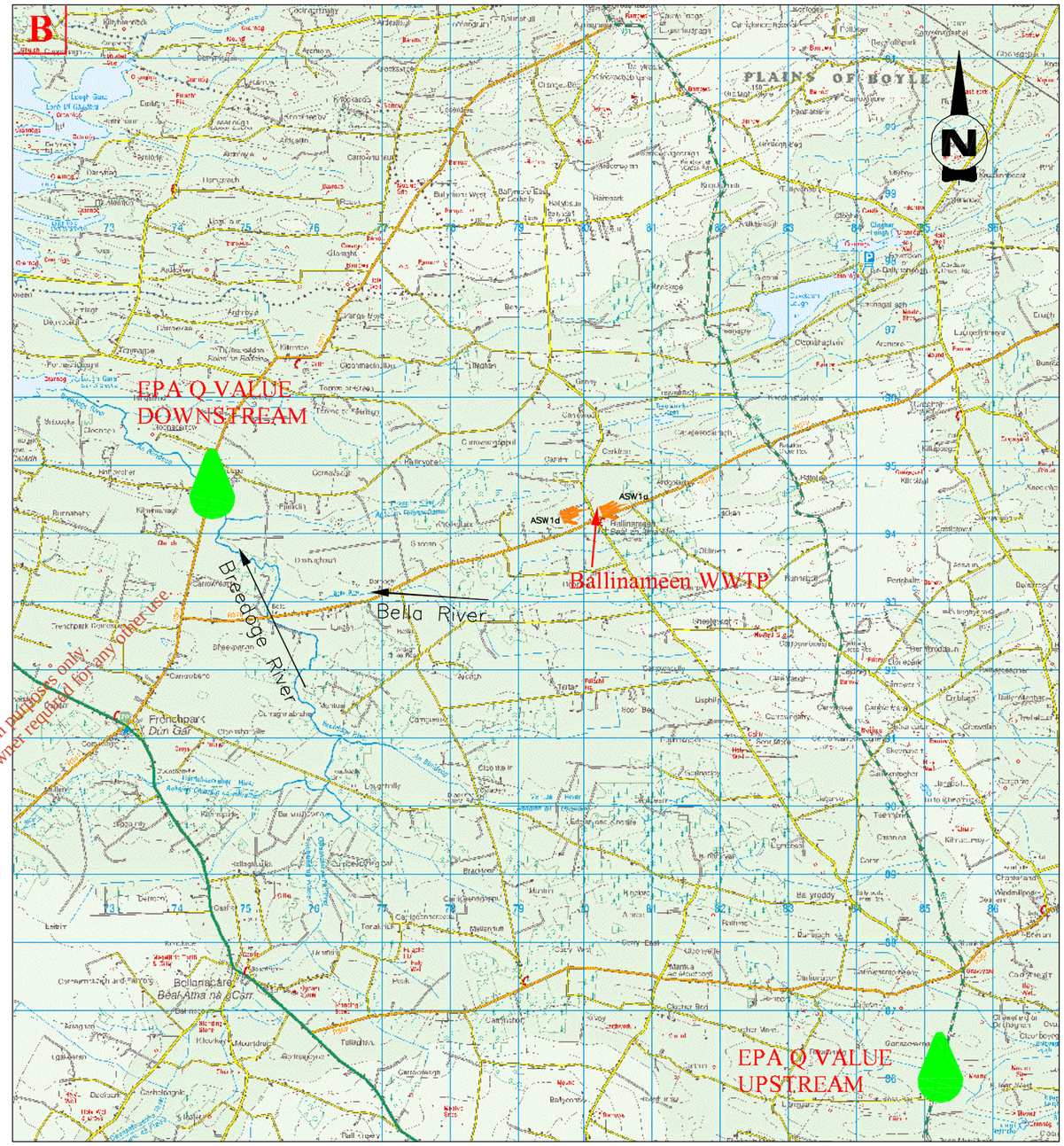
B



1 : 80,000

LEGEND

WWTP BOUNDARY

MONITORING LOCATIONS
(EPA River Water Quality Q-Values)

Q4-5, Q5-High Status

Q4-Good Status

Q3-4-Moderate Status

Q2-3, Q3-Poor Status

Q1, Q1-2, Q2-Bad Status

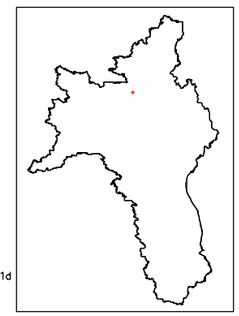
SAMPLING LOCATIONS

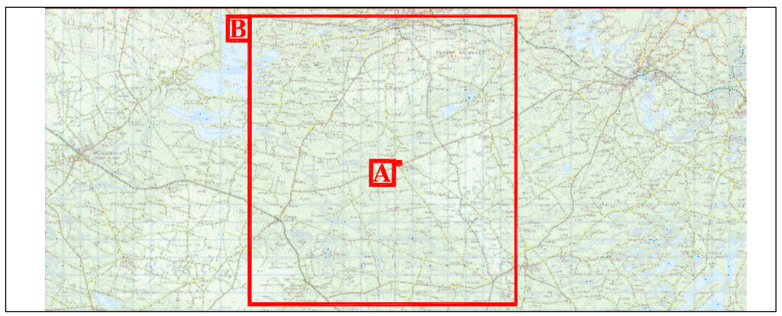
Grab Sample
(Upstream and Downstream of WWTP)

ES=Effluent Sampling
Influent/Effulent Sample

ASW1u/ASW1d

ES1/ES3





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Location of Sampling & Monitoring Points

DRAWN:	DRAWING No.
E. Meseth	10
SCALES: Varies	
DATE: 11th Dec. 2009	CHECKED. P. Fleming
	APPROVED: V. Walsh

ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX F

EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGES

F.1. Assessment of Impact on Receiving Surface or Ground Water

An Assessment of the Impact on the Receiving Surface Water – Breedoge River.

The primary outfall (SW1) from the Ballinameen Waste Water Treatment works discharges to the tributary of the Breedoge River. There is one secondary discharge point with an emergency overflow on the Ballinameen waste water network.

The Breedoge River is not designated Salmonid water (under the European Communities (Quality of Salmonid Waters) Regulations, 1998 nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. The Breedoge River is not designated a conservation Area.

The Development Applications Unit of the Department of the Environment, Heritage and Local Government commented that Roscommon County Council follows the guidance in DoEHLG Circular L8/08. There is no impact on any nature conservations.

Ballinameen Townland obtains its drinking water from the Grangemore Regional Water Supply Scheme. The source is Cavetown Lough, 182651E, 297478N and is located upstream of the discharge points from Ballinameen WWTP.

The Dry Weather Flow of the Breedoge River, at Bella Bridge, is recorded as 0.0250 m^3/sec. The normal daily flow from the plant is in the region of 75.21m^3/day or 0.00087m^3/sec. Therefore, on a normal day, the flow in the river is 29 times that being discharged from the plant to its tributary, thus there is satisfactory dilution of the effluent stream in the river. Refer to Annex D Attachment D.1 for further detail.

Biological surveys are carried out by the EPA in the summer-autumn period (June-September) when flows are likely to be relatively low and water temperatures highest. Surveys during this period are likely; therefore, to coincide with the worst conditions to be expected in those reaches affected by waste inputs. Material for examination is obtained by a “kick” sampling technique in the faster-flowing areas of the river and examination and assessment of water quality is made on site. Measurements of DO saturation and water temperature, as well as observations on macrophyte and algal abundance, substratum type, water appearance and other biological and physical features are also

recorded. The EPA has a "biological" monitoring site upstream of SW1 outfall at station number 0080 "Bridge S.W. of Cherryfield" in the Mantua Stream and a station number 0300 "Bridge just S. of Breedoge" is downstream of SW1, at the Breedoge River.

Biological Quality Rating (Q Values)										
Mantua Stream	Code 26/M/13. Tributary of Owenur River									
Station No.						1987	1992	1996	1999	2002
0080						4	3	2-3	3-4	4

Biological Quality Rating (Q Values)										
Breedoge River	Code 26/B/09. Tributary of Lough Gara									
Station No.				1981	1983	1987	1992	1996	1999	2002
0300				5	4	4	4	4-5	4	4

Roscommon County Council monitors upstream and downstream points of the discharge from the Waste Water Works. These locations are shown on drawing 10 of attachment E3. Samples are collected every month and analyzes for suite of parameters as outlined table D.1(i)(b).

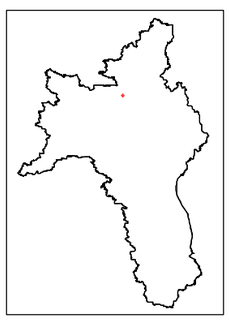
In summary, there is significant dilution capacity within the receiving water, even at low flows, to assimilate discharges from the Waste Water Works. Physiochemical water quality monitoring in the Breedoge River downstream of the primary and secondary discharges from the Waste Water works indicates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

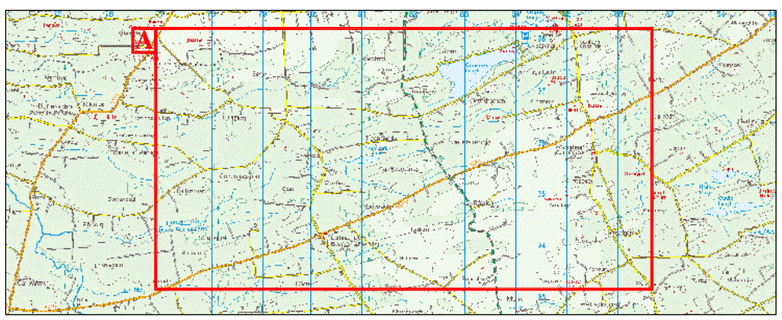
Barrow
Leam
Knockroe
Glooria
Grangemore RWSS
182651E, 297478N
Crannógs
Well
Cavetown
or
Ballynahoogh
98
Cavetown
Cross Rds
Faws
Behy
Cavetown
Lough
Farranagalliagh
Moaled
Sites
97
Treanagry
Cloonshaghan
Ardmore
Lugnashammer
Barrow
Mound
Barrow
Tullaghan
Granny
Treanamarly
Knocknafushoga
96
Croghan
Cruachán
Treanamarly
Lough
Carrowkeel
N61
R370
Carrigeencarragh
Graveyard
Carrownagappul
Carkfree
Ratallen
Cross Rds
Killappoge
Ballinvoher
Camlin
95
Graveyard
Kilcolagh
Ardcolagh
Rátallen
Finisclin River
Abhainn Fhionaseláinn
Ballinameen WWTP
180229E, 294376N
Lackan
Carrowmore
Knockglass
Ballinameen
Beal an Átha Mín
Castletown
94
Sheean
Acres
Oldtown
Assaun
Portobello
Barrow
Dooneen
Corroy
Runnaboll

LEGEND

Water Abstraction Point

Ballinameen WWTP





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballinameen Waste Water Discharge
Certificate of Authorisation

DRAWING TITLE.

Water Abstraction Point
Ballinameen WWTP

DRAWN:	DRAWING No.
E. Meseth	11
SCALES: 1:25000	
DATE: 22nd Sep. 2009	CHECKED. P. Fleming
APPROVED: V. Walsh	

ROSCOMMON COUNTY COUNCIL

BALLINAMEEN WASTE WATER DISCHARGE CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX G

PROGRAMME OF IMPROVEMENTS

SECTION G: PROGRAMMES OF IMPROVEMENTS

G.1. Compliance with Council Directives

Programme of Improvements

The Ballinameen Waste Water treatment Plant is designed in such a way so that the emissions from the agglomeration would comply with/not result in the contravention of all relevant Council directives at that time.

All upgrades, expansion and improvements to the Ballinameen Waste Water Treatment Plant and agglomeration in the future will ensure that the emissions from the agglomeration would comply with/not result in the contravention of; the Dangerous substances Directive 2006/11/EC, the Water Framework Directive 2000/60/EC, the Birds Directive 79/409/EEC, the Groundwater Directives 80/68/EEC & 2006/118/EC, the Drinking Water Directives 80/778/EEC, the Urban Waste Water Treatment Directive 91/271/EEC, the Habitats Directive 92/43/EEC, the Environmental Liabilities Directive 2004/35/EC and the Bathing Directive 76/160/EEC.

Urban Waste Water Treatment Directive

The Urban Waste Water Treatment Regulations, 2001 give effect to the EC Directive 91/271/EEC concerning waste water treatment. The regulations set out the requirements of a sanitary authority to provide treatment plants and the effluent quality required. The plant is design capacity PE of 247 and complies with the Urban Wastewater Treatment Directive.

Water Framework Directive (WFD)

The WFD sets a framework for comprehensive management of water resources in the European Community, within a common approach and with common objectives, principles and basic measures. It addresses inland surface waters, estuarine and coastal waters and groundwater. The fundamental objective of the Water Framework Directive aims at maintaining “high status” of waters where it exists, preventing any deterioration in the existing status of waters and achieving at least “good status” in relation to all waters by 2015. The proposed outfall pipeline is within the Shannon River Basin District. Whilst the WFD do not set effluent standards for discharges to the river basin district, the proposed discharge must be sustainable in allowing the River Shannon to achieve/maintain “high status” under the WFD.

Current discharge levels are having negligible impacts on the receiving waters.

Habitats Directive 92/43/EEC and Birds Directive 79/409/EEC

The receiving water tributary of Breedoge River is not designated under the Habitats Directive 92/43/EEC and Birds Directive 79/409/EEC.

Also attached is the letter to the Development Application Unit in relation to habitat sites and Birds Directive.

SITE SYNOPSIS

SITE NAME: Tullaghan Bog (NHA)
SITE CODE: 001652

Tullaghan Bog NHA is located approximately 4.5 km north-east of Frenchpark, mainly in the townlands of Carrownagappul, Granny, Tonroe (also known as Creen) and Tullaghan in Co. Roscommon. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded in the south by the local road between Breedoge and Ballybaun cross roads.

This site is the remnant of a larger bog that has now been cutover and reclaimed for agriculture. The site was formerly linked with Bella Bridge Bog NHA (591) and Cornaveagh Bog NHA (603) but both are now separated by approximately 1 km of cutover. Mineral ridges are found in the west and north-east of the site and mineral ridges border most of the site. There are small hummocks on the bog and only tear pools are present. A small flush has been recorded in the east of the site. Cutover is found mostly in the south and north-west of the site.

This is a North-Western Raised Bog, but due to extensive fire damage when it was last surveyed the bog did not have the vegetation typical of this type of raised bog. However, it is hoped that the bog has recovered from the fire damage in recent years. Deergrass (*Scirpus cespitosus*) and Carnation Sedge (*Carex panicea*) are very common on the high bog. Of the hummock-forming bog mosses *Sphagnum capillifolium* and *S. papillosum* have been recorded on the site, as have the more scarce *S. imbricatum* and *S. fuscum.* Only tear pools are still present on the bog but the aquatic bog moss *Sphagnum cuspidatum* has been recorded on the site. A small flush occurs on the eastern edge of the bog and the bog moss *S. recurvum* is found here. Three sections of old cutover in the west, south and south-east support areas of scrub woodland.

Current landuses on the site include peat-cutting and agriculture. Mechanised peatcutting is taking place mostly in the north-west and south-east of the site. Areas of cutover all around the site have been reclaimed for agriculture. Most of the fields within the site that contain improved grassland are on mineral soil. Damaging activities associated with these landuses include drainage throughout the site and burning of the high bog. There has been extensive burning on the site in the 1980s and 1990s that has damaged the bog. All these activities have resulted in the loss of habitat, damage to the hydrological status of the site, and pose a continuing threat to its viability.

Tullaghan Bog NHA is a site of considerable conservation significance comprising as it does a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. This site supports a good diversity of raised bog microhabitats, including hummocks and a flush and is at the north-western extreme of the range for this habitat in the country. Ireland has a high proportion of the total E.U. resource of this habitat type (over 50%) and so has a special responsibility for its conservation at an international level.

SITE SYNOPSIS

SITE NAME: Bella Bridge Bog (NHA)
SITE CODE: 000591

Bella Bridge Bog NHA is located approximately 2.5 km north-east of Frenchpark, mainly in the townlands of Drishaghaun and Finisclin, Co. Roscommon. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded in the west by the Breedoge River.

This site is the remnant of a larger bog that has now been cutover and reclaimed for agriculture. The site was formerly linked to Cornaveagh Bog NHA (603) but an area of cutover now separate the two. Two mineral ridges are found in the east and south of the site. There are areas of hummocks and a few pools, mostly in the south of the bog, but there is no longer a system of pools. A flush occurs in the north-west of the site. Cutover is found mostly in the northern half of the site.

Much of the high bog has vegetation typical of a North-Western Raised Bog, consisting of Ling Heather (*Calluna vulgaris*), cottongrass (*Eriophorum* sp.), Crossleaved Heath (*Erica tetralix*), Deergrass (*Scirpus cespitosus*), Carnation Sedge (*Carex panicea*) and the moss *Racomitrium lanuginosum*. A disused track runs across the site and south of this the bog surface is wet and there is a deep carpet of bog mosses (*Sphagnum* spp.) present. Bog Asphodel (*Narthecium ossifragum*) and lichens (*Cladonia* spp.) are common in this area and Crowberry (*Empetrum nigrum*) has also been recorded. The hummock-forming bog mosses *Sphagnum capillifolium* and *S. papillosum* have been recorded on the site, as have the relatively scarce *S. imbricatum* and *S. fuscum*. Although there is no longer a system of pools there are a few pools remaining in the south of the site which support the aquatic bog moss *S. cuspidatum*. There is a flush in the north-west of the bog with Common Reed (*Phragmites australis*) and Purple Moor-grass (*Molinia caerulea*). Old cutover in the south and east of the site has been recolonised by Ling Heather, Tormentil (*Potentilla erecta*) and cottongrass. Along the southern boundary of the site areas of cutover have been colonised by Soft Rush (*Juncus effusus*) and Purple Moor-grass.

Current landuses on the site include peat-cutting and agriculture. Mechanised peatcutting is taking place mostly in the north-east and west of the site. Areas of cutover all around the bog have been reclaimed for agriculture but there are only a few fields of improved grassland within the site. Damaging activities associated with these landuses include drainage throughout the site and burning of the high bog. All these activities have resulted in the loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability. Dumping of domestic waste and old cars takes place along the tracks on this site.

Bella Bridge Bog NHA is a site of considerable conservation significance, comprising as it does, a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. The site supports a good diversity of raised bog microhabitats, including hummocks, pools and a flush. The site is also at

the north-western extreme for raised bogs in Ireland. Ireland has a high proportion of the total E.U. resource of raised bog (over 50%) and so has a special responsibility for its conservation at an international level.

SITE SYNOPSIS

SITE NAME: Cornaveagh Bog (NHA)
SITE CODE: 000603

Cornaveagh Bog NHA is located approximately 4 km north-north-east of Frenchpark, mainly in the townlands of Cornaveagh, Tonroe (also known as Feenagh) and Finisclin in Co. Roscommon. The site comprises a raised bog that includes both areas of high bog and cutover bog. The site is bounded in the south by the road between Breedoge and Ballybaun crossroads.

This site is the remnant of a larger bog that that has now been cutover and reclaimed for agriculture. The site was formerly linked with Bella Bridge Bog NHA (591) but is now separated by an area of cutover. A mineral ridge is found in the east of the site. The hummocks on the bog are quite small as are the pools. A hollow in the east side of the bog contains a flush. Cutover is found mostly in the northern half of the site.

Much of the high bog has vegetation typical of a North-Western Raised bog, consisting of Ling Heather (*Calluna vulgaris*), cottongrass (*Eriophorum* sp.), Deergrass (*Scirpus cespitosus*), Carnation Sedge (*Carex panicea*), and the moss *Racomitrium lanuginosum*. There is good bog moss (*Sphagnum* spp.) cover on the bog. The hummock-forming bog mosses *Sphagnum capillifolium* and *S. papillosum* have been recorded on the site as have the relatively scarce *S. imbricatum* and *S. fuscum.* Only small pools are still present on the bog and they contain the aquatic bog moss *Sphagnum cuspidatum* and Bogbean (*Menyanthes trifoliata*). There is a flush containing Purple Moor-grass (*Molinia caerulea)* and Bog-myrtle (*Myrica gale*) in a hollow on the east side of the bog. Bog-myrtle is also found scattered throughout the rest of the bog. A section of old cutover in the south of the site has a dense area of scrub.

Current landuses on the site include peat-cutting and agriculture. Mechanised peatcutting is taking place mostly in the east and south-west of the site. Areas of cutover all around the bog have been reclaimed for agriculture but there are only a few fields of improved grassland within the site. Damaging activities associated with these landuses include drainage throughout the site and burning of the high bog. All these activities have resulted in the loss of habitat and damage to the hydrological status of the site, and pose a continuing threat to its viability.

Cornaveagh Bog NHA is a site of considerable conservation significance, comprising as it does, a raised bog, a rare habitat in the E.U. and one that is becoming increasingly scarce and under threat in Ireland. The site supports a good diversity of raised bog microhabitats, including hummocks, pools and a flush. The site is also at the northern extreme for a western raised bog. Ireland has a high proportion of the total E.U. resource of raised bog (over 50%) and so has a special responsibility for its conservation at an international level.

SITE SYNOPSIS

SITE NAME: Sheheree (Ardagh) Bog (pNHA)

SITE CODE: 000382

Sheheree Bog lies 2 km south-east of Killarney in a depression within a high ridge (103 m). It has developed by succession from a small lake to a ridge basin bog with similarities to a raised bog.

The vegetation is dominated by Heather (*Calluna vulgaris*) up to 0.5m high with frequent Autumn Gorse (*Ulex gallii*) and Bog Myrtle (*Myrica gale*) while Purple Moor-grass (*Molinia caerulea*), Bog Cottons (*Eriophorum* spp.) and Cross-leaved Heath (*Erica tetralix*) are also found, and to a lesser extent Bog Asphodel (*Narthecium ossifragum*), Deergrass (*Scirpus cespitosus*) and Round-leaved Sundew (*Drosera rotundifolia*). A range of *Sphagnum* species are found, forming thick, cushiony carpets in places, while occasional hummocks of the moss *Leucobryum glaucum* also occur.

A concentration of Downy Birch (*Betula pubescens*) and Scots Pine (*Pinus sylvestris*) trees grow towards the north-east of the site beneath which abundant *Sphagnum* grows. The open bog adjacent to this is quite wet and Cranberry (*Vaccinium oxycoccos*) grows abundantly here. Surrounding the bog is a wet lagg area. Here more base-demanding species occur, such as Bogbean (*Menyanthes trifoliata*), Marsh Cinquefoil (*Potentilla palustris*), Marsh-marigold (*Caltha palustris*), Water Horsetail (*Equistum fluviatile*), Marsh Pennywort (*Hydrocotyle vulgaris*), Yellow Iris (*Iris pseudacorus*), Bulrush (*Typha latifolia*), Bulbous Rush (*Juncus bulbosus*), Bottle Sedge (*Carex rostrata*) and Cuckooflower (*Cardamine pratensis*). To the north and north-west, the lagg is vegetated by a wet woodland of Alder (*Alnus glutinosa*) and Willow (*Salix* sp.) with some Hawthorn (*Crataegus monogyna*), Hazel (*Corylus avellana*), Ash (*Fraxinus excelsior*) and Holly (*Ilex aquifolium*) in the drier outer margins. The site also includes dry grassland fields which slope down to, and adjoin, the bog.

The Rare and legally protected Slender Cottongrass (*Eriophorum gracile*) occurs at this site, while a rare invertebrate has also been noted.

The bog itself is not substantially used, owing to its wetness and the wetness of the surrounding lagg. The high bog is being invaded by Rhododendron (*Rhododendron ponticum*) and Scots Pine, which may indicate drying of the mire. The abundance of *Cladonia* lichen in places may be a result of burning in previous years. Adjoining fields are grazed by cattle and sheep and fertilised to varying degrees. Landuse practices here would impact on the bog habitat.

Sheheree Bog is a statutory Nature Reserve and is internationally important as a substantially intact example of a bog type uncommon in the region. The site hosts the Rare Slender Cottongrass while the abundance of Cranberry in places is exceptional. Additionally the presence of Alder and Downy Birch woodland and a well-developed lagg are of interest.

SITE SYNOPSIS

SITE NAME: Cloonshanville Bog (pNHA, SAC)

SITE CODE: 000614

Cloonshanville Bog is located approximately 2 km east of Frenchpark. The eastern boundary of the site is the Breedoge River, the southern the Frenchpark/Elphin road.

It is underlain by low-permeability, clayey limestones. The bog developed in a shallow basin in a groundwater discharge zone. The regional watertable has been lowered, but evidence of groundwater inputs are seen on and around the high bog.

Cloonshanville Bog is a large raised bog, a priority habitat listed on Annex I of the EU Habitat Directive. The bog is largely dominated by Heather (*Calluna vulgaris*), with Deergrass (*Scirpus cespitosus*) and Common Cottongrass (*Eriophorum angustifolium*) occurring frequently. Cranberry (*Vaccinium oxycoccos*) is found in some sections of the bog. In the wettest areas hummock/pool systems have developed. The cover of lichens and Bog Mosses (*Sphagnum* spp.) is generally good and the scarce species, *S. imbricatum, S. fuscum* and *S. pulchrum* occur.

A large flush area occurs in the centre of the bog dome. The main body of the flush supports an extensive area of bog woodland. This habitat is also listed as a priority Annex I habitat under the EU Habitats Directive and is an extremely rare Irish woodland type. The woodland is well-developed structurally and contains a diverse range of plant species. It is dominated by Birch (*Betula* sp.) with some Willow (*Salix* sp.) occurring, and with an understorey of tussocky Purple Moor-grass (*Molinia caerulea*). Bog Myrtle (*Myrica gale*) occurs in places. Three areas of coniferous plantation have been included within the site for hydrological reasons.

The Breedoge River, which marks the eastern boundary of the site, adds habitat diversity and is important for wildfowl, including Mallard and Snipe.

SITE SYNOPSIS

SITE NAME: Lough Gara (pNHA, SPA)

SITE CODE: 004048

Lough Gara is a shallow (maximum depth 16 m), medium-sized lake which overlies Carboniferous limestones and shales and Devonian sandstone. The main inflowing river is the River Lung while the main outflow is the Boyle River. There are two main sections to the lake, a larger northern basin and a smaller southern basin, joined by a narrow channel. The lake is classified as a mesotrophic system, with reduced planktonic algal growth noted in a recent sampling period (1998-2000). The shoreline is convoluted and has receded substantially from its original level due to various drainage schemes since the mid-19th century. The site includes several low-lying islands.

The shallow lake margins have extensive swamps dominated by Common Reed (*Phragmites australis*) and Bottle Sedge (*Carex rostrata*), with occasional Bulrush (*Typha latifolia*). In the southernmost part of the lake, clumps of Common Club-rush (*Scirpus lacustris*) are particularly abundant. The old lakeshore is mostly clearly visible, below which a sedge-rich marsh occurs – this includes such species as Black Bog-rush (*Schoenus nigricans*), Devil's-bit Scabious (*Succisa pratensis*), Creeping Bent (*Agrostis stolonifera*) and Wild Angelica (*Angelica sylvestris*), with willows (*Salix* spp.) colonising some areas. The upper part of the shore is frequently colonised by scrub, which includes willows, Alder (*Alnus glutinosa*) and Hawthorn (*Crataegus monogyna*). Raised bog occurs outside of the site to its south and south-west.

Lough Gara is a regularly used site by an internationally important Greenland Whitefronted Goose population (average flock size of 510 individuals over the five winters 1994/95 to 1998/990). The geese feed mainly on intensively-managed grasslands bordering the lake. When disturbed the geese use an island in the site or the

lough itself. An important Whooper Swan population also uses the site (average mean peak of 382 for two of the winters in the 1995/96 to 1999/00 period), with numbers of international importance being present in the winter of 1996/97 (peak of 654). A range of other species occurs, though all in relatively low numbers; species present include Great Crested Grebe (32), Mute Swan (38), Wigeon (593), Teal (44), Mallard (157), Shoveler (18), Pochard (41), Tufted Duck (49), Goldeneye (20) and Golden Plover (270) - figures are average peaks for two of the winters in the period 1995/96-1999/00.

There are currently no activities taking place within the site which significantly affect the birds. Part of the site is a Wildfowl Sanctuary.

Lough Gara SPA is of high ornithological importance principally on account of the internationally important Greenland White-fronted Goose population that is associated with the lake and also the high numbers of Whooper Swan. The occurrence of these species, along with Golden Plover, is of particular note as they are listed on Annex I of the E.U. Birds Directive.

SITE SYNOPSIS

SITE NAME: Bellanagare Bog (SAC, SPA)

SITE CODE: 000592

Bellanagare Bog is a large bog situated 6 km north-north-east of Castlerea in Co. Roscommon. It is classified as a western, or intermediate, raised bog, showing as it does features of both raised bog and blanket bog. The bog is underlain by muddy Carboniferous limestone with a low permeability. The sub-soil is predominantly of clayey limestone till. The site lies in an upland area at the top of a surface catchment divide. The surface of the bog is undulating and the peat is concentrated on ridges, with flushes occurring in between. A number of streams, including the Frances River, rise on the site. The bog is traversed by several tracks. A large section of the site is in state ownership.

The vegetation of the high bog is characterised by an abundance of Deergrass (*Scirpus cespitosus*), Bog Asphodel (*Narthecium ossifragum*) and Carnation Sedge (*Carex panicea*), with varying dominances. The cover of bog mosses (*Sphagnum* spp.) is generally low, but there are some localised wetter areas with pools. Well-developed hummocks and several quaking areas occur in some sections of the site.

In the past, the bog was used by wintering Greenland White-fronted Geese from the population that is centred on Lough Gara. However, the geese now feed mainly on intensively managed grassland and seldom use the bogs in the area. The bog may have been used by nesting Golden Plover in the past and is occasionally used by small numbers of wintering birds. There is a good population of Red Grouse at the site. Other typical bog fauna present includes the Common Frog and the Irish Hare - both of these species are listed in the Irish Red Data Book.

While Bellanagare Bog SPA appears to have been abandoned by wintering Greenland White-fronted Geese, it is still of some ornithological importance as it supports a population of Red Grouse, a scarce and declining species in Ireland that is Red listed.

Water Services Investment and Rural Water Programmes –
Protection of Natural Heritage and National Monuments

1. The purpose of this Circular is to provide local authorities with basic guidance on identifying potential issues relating to protection of natural heritage (including sites, habitats and species) and archaeological heritage in order to prevent avoidable delays in the planning and implementation of individual schemes under the Water Services Investment and Rural Water Programmes. Where necessary, local authorities may secure professional ecological or archaeological advice and related costs may be charged to the individual scheme involved.

2. Ireland's natural heritage is afforded legal protection through the network of NATURA 2000 or European sites, Special Areas of Conservation (SACs), Special Protection Areas (SPAs), Natural Heritage Areas (NHAs) and through the protection of species and their habitats, including those listed in Annexes to the Habitats and Birds Directives, in Schedules to the Wildlife Acts, 1976-2000, and in the Flora Protection Order 1999.

3. The Department advocates a general policy of not building treatment plants in active floodplains. It is also inadvisable to build such plants in former floodplains because of possible future needs to re-activate same.

4. Ireland's archaeological heritage is protected through the National Monuments Acts, 1930 – 2004, and through the various Planning and Development Acts. The policy of the Department in relation to the protection of archaeological heritage is set out in *Framework and Principles for the Protection of the Archaeological Heritage* (published by the former Department of Arts, Heritage, Gaeltacht and the Islands in 1999). The Department's policy with regard to excavation is outlined in *Policy and Guidelines on Archaeological Excavation* (D.A.H.G.I., 1999). Both documents may be downloaded from the Departmental Website

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www.archaeology.ie.

5. In order to identify potential ecological or archaeological constraints, all water services projects, including pipework proposals, should be subjected to initial screening in accordance with:
   - the checklist in Appendix 1 for natural heritage, and
   - the checklist in Appendix 2 for archaeological heritage.

   Where initial screening reveals, or cannot exclude with certainty, a likely significant ecological or archaeological impact, an assessment of impacts will need to be undertaken. For natural heritage in general, this will involve an ecological impact assessment. In the case of potential impacts on Natura 2000 or European sites (SACs and SPAs, including any candidate sites), AA (appropriate assessment) is required under Article 6(3) of the Habitats Directive. Consideration should also be given to alternative sites at an early stage.

6. AA will entail preparing a full assessment and statement of the potential direct, indirect and cumulative impacts on any Natura 2000 site and its conservation objectives - it must include measures to avoid or mitigate the impact. In addition to professional ecological expertise, which will be necessary in this context, other expertise may also be required (e.g. hydrological or hydrogeological).

   In the event that the potential effect of such an impact on a Natura 2000 site cannot be avoided or fully mitigated, a further process may apply under Article 6.4 of the Habitats Directive and would include examining all available alternatives, communication with the EU Commission and preparation of compensatory measures. Such measures will inevitably result in significant delay. Early identification and avoidance of potential impacts is, therefore, the best option. Useful guidance is available from the EU Commission's website:
   http://ec.europa.eu/environment/nature/natura2000/management/docs/art6/guidance_art6_4_en.pdf

   To avoid as far as possible further delays where the impacts of a selected site cannot be avoided or fully mitigated, alternative sites/options need to be examined so there can be confidence the site selected has the least environmental impacts. A cost and design analysis of the alternative sites and their environmental impacts should be undertaken.

7. In the case of archaeology, assessment will entail preparing a full statement of the potential impact on known and previously

unrecorded archaeological material. Firstly recommendations should be made on how to avoid impacts on the archaeological resource. If it is not possible to re-align or redesign to avoid impacting on archaeological material, proposed mitigation measures, including geophysical analysis, test excavation, preservation-by record, post-excavation and publication of the results of excavation, should be detailed. Professional archaeological expertise would be necessary in this context.

Known monuments can be identified from the record of monument and places for each county and from the website *www.archaeology.ie*. National monuments that are in State ownership or guardianship, and monuments subject to preservation orders or temporary preservation orders, should be identified and zones of visual amenity defined for them. It should be noted that indirect and direct impact on national monuments in State or local authority care, or subject to a preservation order, will require the consent of the Minister for the Environment, Heritage and Local Government under section 14 of the National Monuments Act, 1930, as amended by Section 5 of the National Monuments (Amendment) Act, 2004.

Areas of previously unrecorded archaeological potential, i.e. within or adjacent to constraint areas for known monuments, wetland locations, areas with a distinctive topography indicative of high archaeological potential, should be identified.

The primary aim of all recommendations for mitigation should be to minimise further archaeological excavation while preserving archaeological material.

8. Following initial assessment in accordance with Appendix 1 or 2, as appropriate, any proposal likely to have an impact on protected habitats or species or on a national monument should immediately be notified to:

   Development Applications Unit
   Department of the Environment, Heritage and Local Government
   Dún Scéine
   Harcourt Lane
   Dublin 2

   and copied to the Department's Water Services Section.

   DAU will endeavour to make a co-ordinated response to the Planning Authority within a period five weeks from date of receipt of the proposal.

9. More detailed procedural guidance is

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being prepared and will be notified to local authorities as soon as possible. In the meantime, enquiries in relation to this Circular may be addressed, as appropriate, to:

- Tom Walsh, Water Services Section, Tel 01-8882168, e-mail *tom.walsh@environ.ie*

or

- Dr Elizabeth Sides, NPWS Conservation Systems & Marine Tel 01-8883288, e-mail *elizabeth.sides@environ.ie*

Terry Allen
Principal Officer
Water Services Section
Bl. 1 Fl. 2
Irish Life Centre
Lr. Abbey St.
Dublin 1

To: Directors of Services (Water Services)

APPENDIX 1

Water Services Schemes - Natural Heritage Checklist for Local Authorities

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

Water Services infrastructure projects relate to the provision, operation and management of drinking water and wastewater services. These projects hold a high health and safety value for the public as well as being of benefit for biodiversity - it is therefore essential that such projects are screened at the earliest stage to avoid situations where nature conservation and human health and safety are pitched as competing interests.

This screening methodology will be reviewed regularly to ensure it remains consistent with the programmes of measures and River Basin Management Plans (RBMPs) currently being developed under the Water Framework Directive (WFD).

What projects must be screened?
For new projects and significant changes to any existing operations, if the answer is 'yes' to any of the following, the project (i.e. construction, operation and maintenance) must be screened for its impacts:

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[1] or immediately downstream of a nature conservation site with water dependant qualifying habitats/species[2]?
4. Is the development a groundwater discharge or abstraction in the ground water catchment[1] or within 5 km of a nature conservation site with water-dependant qualifying habitats/species[2]?
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[3] 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?

NB Please use the Diagram below to work through the screening requirements.

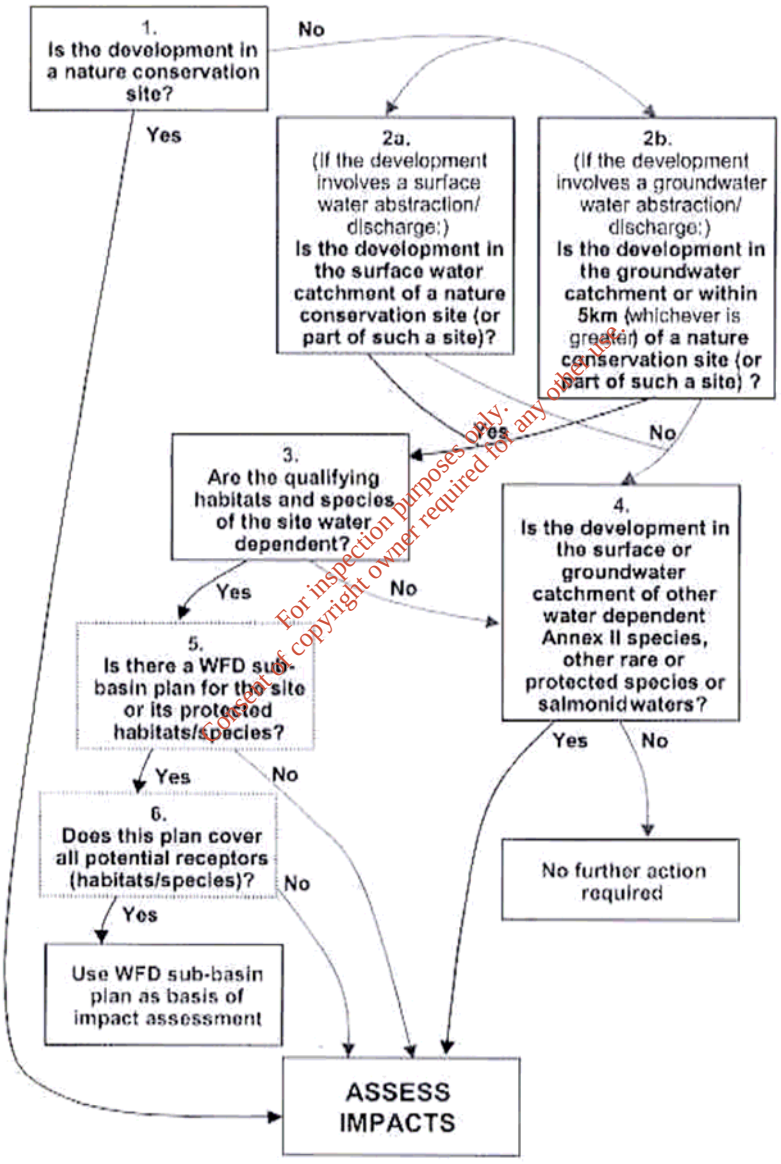
Note [1]. If there is a WFD sub basin plan for the sites or its protected habitats and the plan covers all potential receptors, i.e. habitats and species, this plan can be used as the basis for screening and impact assessment.

Note [2]. Estuaries are considered part of a catchment.

Note [3]. Any marine area including estuaries

Below is a flow diagram for screening water services infrastructure projects, followed by explanatory notes on the diagram and other points of information. If the conclusion of the screening outlined in this **Natura 2000 Screening Protocol** is to **"ASSESS IMPACTS"**, then the plan or project must be referred to the Department of the Environment, Heritage and Local Government's Development Applications Unit.

NB **Catchments of habitats and species of conservation value are addressed here as it is only through examining catchment-wide pressures that hydrological, water pollution and cumulative impacts can be properly assessed.**



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Notes on flow diagram (Numbers correspond to question numbers in the Figure 1):

1. This question relates to direct impacts only and, therefore, all habitats and species of nature conservation value must be considered. If the development is within a Natura 2000 site, there is potential for direct loss of habitats and/or species of conservation value within the footprint of the development. The footprint includes all temporary and permanent access roads, trenching etc. The standard guidelines for the referral of all development applications that are adjacent to SACs to NPWS (i.e. within 500m), should also be followed here.

2. This and subsequent questions relate to indirect impacts, which are transmitted through water and, therefore, only have the potential to impact upon water dependent species. All projects in the catchments of conservation sites (i.e. both within and upstream of the site) have the potential to impact on the site and to contribute to the cumulative impacts on the site. The 5km stipulation is placed in Question 2b as it was used in the groundwater risk assessments for groundwater dependent conservation sites. Groundwater catchments are the zones of a groundwater body that contribute water to a receptor such as a conservation site. These catchments can be altered, however, through very large abstractions in certain aquifer types. Because these groundwater divides can change, the extra protection of 5km was included.

3. Habitats Directive Annex I habitats and Annex II species have been divided into water dependent (see tables 1 and 2 below) and non-water dependent for the purposes of the WFD. The list of water dependent birds will be finalised shortly. Within most conservation sites, particularly the large SAC-complexes, some areas will contain water dependent habitats/species and others will not. This means that the SAC boundary cannot be taken as indicative of the location of the relevant habitat or species. As a result, the local authority will require the specific locations of the habitats and species in order to screen these projects. These data will need to be collected through surveys where the information is not available from NPWS or other sources. NPWS do not generally have the locations of habitats and species on a single GIS, or other readily available formats. Useful information will be available through NPWS monitoring programmes and databases, such as the rare flora database, as well as through NPWS management plans. NPWS has a public mapviewer tool in place at *http://www.npws.ie/en/MapsData* and is planning the development of a GIS that will be accessible to local authorities.

4. The data for Annex II species in the wider countryside and other protected/rare species (outside designated sites) is less complete and requires further field surveys and data collection. Furthermore, as these species could extend even further downstream than the nature conservation sites, the downstream area that would need to be assessed for potential impacts could be significantly extended by this question.

5. No WFD sub-basin plans have yet been developed. However, 27 *Margaritifera* sub-basin plans wil be drafted before the end of 2008. Further such catchment plans will be developed for other species and habitats in SACs. These will set specific nature conservation and water quality/quantity targets for the sites and will prescribe the management measures than need to be undertaken within their catchments.

6. These sub-basin plans are likely to be species/habitat specific so that, even when such plans exist, all potential receptors may not be assessed and further assessments may be required for water services projects. Where sub-basin plans exist, it is likely that these can be used in combination with further impact assessments.

Many water services projects are likely to require assessment. This is particularly the case because of the occurrence of Annex II species (EU Habitats Directive 1992) in the wider countryside, other rare/protected species (Wildlife Acts) and salmonid waters.

Annex G: - PROGRAMME OF IMPROVEMENTS

APPENDIX 2

Water Services Schemes – Archaeological Heritage Checklist for Local Authorities

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

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

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

Any scheme that may be unduly close to archaeological complexes

Any scheme that will impact on rivers, lakes, the inter-tidal zone, the foreshore or any underwater area where historic shipwrecks or other other underwater archaeological objects e.g. ships' timbers, may be located

Any scheme that requires an Environmental Impact Statement

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 a local authority or any national monument that is subject to a preservation order

9

An EIS is not required as Ballinameen WWTP is below 10,000 PE. An Impact Assessment is not required as per Circular L8/08 flow diagram as the impact from WWTP comply with 2a & 4 for no further action required.

- Ballinameen WWTP is not located within a nature conservation site.

The following nature conservation sites are located within a 10km radius of Ballinameen WWTP. The receiving water from Ballinameen WWTP is a tributary of Bella River, discharging into Breedoge River. The habitats and species do not depend on the hydrology of the Breedoge River. This river is not designated salmonid water (under the Statutory Instruments S.I. No. 293/1998 European Communities (Quality of Salmonid Waters) Regulations, 1998 nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. There is no Annex II species, other rare or protected species located within the surface or groundwater catchments around the WWTP.

- Natural Heritage Areas:
  Tullaghan Bog is located approximately 1.7km northwest of the WWTP – downstream of Breedoge River.
  Bella Bridge Bog is located approximately 3km west of the WWTP - downstream of Breedoge River.
  Cornaveagh Bog is located approximately 3.8km west of the WWTP - downstream of Breedoge River.

- Proposed Natural Heritage Areas:
  Ardagh Bog is located approximately 3.6km southwest of the WWTP - upstream of Breedoge River.
  Cloonshanville Bog is located approximately 5km southwest of the WWTP - upstream of Breedoge River.
  Lough Gara is located approximately 7.7km northwest of the WWTP - downstream of Breedoge River.
  Bellanagare Bog is located approximately 9.1km southwest of the WWTP - upstream of Breedoge River.

- Special Areas of Conservation:
  Cloonshanville Bog is located approximately 5km southwest of the WWTP - upstream of Breedoge River.
  Bellanagare Bog is located approximately 9.1km southwest of the WWTP - upstream of Breedoge River.

- Special Protection Areas:
  Lough Gara is located approximately 7.7km northwest of the WWTP - downstream of Breedoge River.

Bellanagare Bog is located approximately 9.1km southwest of the WWTP - upstream of Breedoge River.

The discharge from Ballinameen WWTP complies with EU wastewater standards and there is a significant dilution of the effluent stream in Bella and Breedoge rivers.

Dangerous Substances Directive 2006/11/EC

This directive sets out the lists of dangerous substances.
The Dangerous Substances Regulations 2001, prescribe water quality standards in relation to certain substances in surface waters, e.g., rivers, lakes and tidal waters. The substances include certain pesticides (atrazine, simazine, tributyltin), solvents (dichloromethane, toluene, xylene), metals (arsenic, chromium, copper, lead, nickel, zinc) and certain other compounds (cyanide and fluoride). The Regulations give further effect to the EU Dangerous Substances Directive (76/464/EC) and give effect to certain provisions of the EU Water Framework Directive (2000/60/EC).

Sampling of these compounds has not been traditionally recorded, however as part of this application Roscommon County Council have tested for dangerous substances listed in Table D.1(i)(c).

Bathing Water Directive 76/160/EEC and The Groundwater Directive 80/68/EEC, 2006/118/EC

Not Applicable.

G.2. Compliance with Water Quality Standards for Phosphorous Regulations (S.I. No. 258 of 1998).

Phosphorus Regulations

The Ballinameen Waste Water treatment Plant and Agglomeration currently has no phosphorus treatment process. However, the DoEHLG have approved the Design Build Operate contract for the upgrade of Ballinameen. The WWTP is to be designed in such a way that the emissions from the agglomeration would comply with/not result in the contravention of the Water Quality Standards for Phosphorous Regulations (S.I. No.258 of 1998).

All upgrades, expansion and improvements to the Ballinameen Waste Water Treatment Plant and agglomeration in the future will ensure that the emissions from the agglomeration would comply with/not result in the contravention of the Water Quality Standards for Phosphorous Regulations (S.I. No.258 of 1998).

We attach a copy in this attachment, G2 of the Phosphorus Implementation Report for Roscommon County Council, which is prepared to show compliance with the Government's interim policy targets adopted by regulation in July 1998 (S.I. No.258 of 1998, Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorus) Regulations, 1998). The Regulations impose a statutory obligation on Local Authorities to take measures necessary to secure compliance with the established standards to be achieved by the year 2007.

Implementation Report for County Roscommon (July 2006)

Local Government (Water Pollution) Act, 1977 (Water Quality Standards for Phosphorous) Regulations, 1998

Annex G: - PROGRAMME OF IMPROVEMENTS

SECTION 1

SECTION 1 – WATER QUALITY IN FUNCTIONAL AREA

1.1 WATER QUALITY IN FUNCTIONAL AREA

This report has been prepared in accordance with the requirements of Article 4 (3) of the (Water Quality Standards for Phosphorus) Regulations, 1998. It outlines the specific measures proposed by Roscommon County Council to improve and maintain water quality and the progress made to date in implementing the Phosphorus Regulations. Table 1.1 presents a summary of river water quality standards to be achieved by 2007 for the rivers in the county. The water quality data for July 2004 - June 2006 accompanies the report on CD.

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ANNEX 3: TABLES / ATTACHMENTS

TABLE 1.1: RIVER WATER QUALITY STANDARDS TO BE ACHIEVED BY 2007

Roscommon		2006														
River Name	River Code	Biological Monitoring Station	Station Location Name	Grid Reference	Baseline Q-value	Baseline MRP Value ug/l P	Is Baseline Quality Satisfactory? Yes/No	Current Q-Value	Current MRP Value ug/l P	Standard to be Achieved by 2007 Q Value	Standard to be Achieved by 2007 MRP Value	Has Either Standard Been Achieved?	Does an Article 3(9) Extension Apply?	If Yes, What is the revised compliance date	Where Quality is Unsatisfactory What is the Principal Source of Pollution	If there is an identifiable source, please enter details
BREEDOGE	26B09	0100	Br 2 km E.S.E. of Ballinameen	176200 / 290500	3,4		No	4	22	4	30	Yes				
BREEDOGE	26B09	0300	Bridge just S. of Breedoge	174500 / 294700	4,5		Yes	4	18	4,5	20	Yes				
MANTUA STREAM	26M13	0060	Second Br S. of Rossmore Ho.	183410 / 287130	2,3		No	2,3	25	3	70	Yes				
MANTUA STREAM	26M13	0080	Bridge S.W. of Cherryfield	185421 / 285636	2,3		No	4	23	3	70	Yes				

Annex G: - PROGRAMME OF IMPROVEMENTS

SECTION 2:

2.1 IMPLEMENTATION OF MEASURES

Table 2.1 outlines the measures being undertaken in Co. Roscommon to improve and maintain water quality in the county and the progress made on each one. The measures specified for individual rivers and the progress made to date are presented in Table 2.2.

Article I. Table 2.1: Implementation Programme Summary Table For County Roscommon

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action completed within timeframe? (Y/N)	If not, state revised timeframe
i) NAME OF COUNTY: ROSCOMMON									
To improve unsatisfactory water quality and to maintain satisfactory water quality in County Roscommon	Involvement in water quality management planning	Manage water quality using a catchment based approach	Involved in Shannon River Basin District Study. Lab in Rosc CoCo. RBD monitoring program commencing Dec 06	Ongoing	SEO Environment Chief Technician	Involved in Study since Jan 04		To improve unsatisfactory water quality and to maintain satisfactory water quality in County Roscommon	Involvement in water quality management planning
	Preparation of Groundwater Protection Plan	To protect groundwaters by identifying vulnerable areas	Preparation of Groundwater Protection Plan by the Geological Survey of Ireland Specific source protection plans will be considered	Prepared in Dec 2001 Ongoing	SEE SEE	Draft accepted by elected members		Y	

Annex G: - PROGRAMME OF IMPROVEMENTS

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action completed within timeframe? (Y/N)	If not, state revised timeframe
	Preparation of Sludge Management Plan	Effective control of all sludge in the county	Sludge Management Plan prepared		SEE Environment Sanitary Services	Consultants looking at proposed sludge treatment plant. EIS to be advertised before end of 06			2006
	Strengthening liason between Environment and Planning Departments	Control all developments with a potential env impact	More contact between staff	Ongoing	Environment Planning	Increased no of Planning files with an env impact, except domestic dwellings are checked.			

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Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action completed within timeframe? (Y/N)	If not, state revised timeframe
	Wastewater Treatment Plants	Reduce P inputs from WWTP's	Construction/ Upgrading of WWTP's P removal to be in place in all STWs	Ongoing	Water Services	13 village sewage schemes progressing through contract document stage and some will commence in Dec06. 1 village scheme being progressed through Serviced Land Initative. Castlerea STW completed in Dec 05.			

Annex G: - PROGRAMME OF IMPROVEMENTS

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action completed within timeframe? (Y/N)	If not, state revised timeframe
	Septic Tanks	Reduce P inputs from septic tanks	Control through the planning system and surveys	Ongoing	Planning Environment Laboratory	Direct Discharges dealt with under WPA	Appoint additional staff	NA	
	Farm Surveys	Assess farm management to reduce P inputs from agricultural sources	Farm Surveys in localised risk areas	Ongoing	Laboratory SEE	403 surveys complete to date.			
	Reed Beds	Reduce P inputs from small scale urban agglomerations	Construction of reed bed treatment facilities		SEE Sanitary Services	Four reed beds complete			

Annex G: - PROGRAMME OF IMPROVEMENTS

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action completed within timeframe? (Y/N)	If not, state revised timeframe
	County Development Plan	Long term control of env issues	Incorporation of County Plans	Ongoing	SEE, Sanitary Services, Environment, County Manager	Regard being taken for Replacement Connaught waste Management Plan, Groundwater Protection Plan, Sludge Management Plan.			

Annex G: - PROGRAMME OF IMPROVEMENTS

Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action completed within timeframe ? (Y/N)	If not, state revised timeframe
	Quality Control programme in laboratory	To assure accuracy of results	Receive accreditation for laboratory procedures	Ongoing	Laboratory SEE	In-house methods and quality checks in place	Constant level of staff required		
	Studies in specific areas with high P	Reduce P	Farm surveys	Ongoing	Laboratory SEE	Farm surveys ongoing in targeted areas			
	Catchment management consultations	Improve water quality within catchments	Liaisons with all involved parties	Ongoing	SEE Environment Sanitary Services County Manager	Involved in SRBD. Liason with EPA, Local authorities etc			
	Public Education campaigns	Heighten awareness of water quality	Pubic talks	Suspended	Environment	Talks at REPS conferences	May continue depending on resources		

Annex G: - PROGRAMME OF IMPROVEMENTS

TABLE 2.2 IMPLEMENTATION PROGRAMME SUMMARY TABLE FOR RIVERS IN LOCAL AUTHORITY AREA											
Roscommon		2006									
River	Reach of River	Standard	Measures	Targets	Actions	Timeframe	Responsible for Implementation	Progress to Date	Corrective Actions	Action Completed Within Timeframe Yes/No	If No, State Revised Timeframe
BREEDOGE	Br 2 km E.S.E. of Ballinameen	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				
BREEDOGE	Bridge just S. of Breedoge	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				
MANTUA STREAM	Second Br S. of Rossmore Ho.	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				
MANTUA STREAM	Bridge S.W. of Cherryfield	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				

Annex G: - PROGRAMME OF IMPROVEMENTS

Article II. SECTION 3: PROGRESS TO DATE

Each of the measures being implemented in Co Roscommon is examined in this section under the following headings;
Progress during reporting period

(a) Problems Encountered
Future Plans/New Direction

3.1 Planning Control and Enforcement Measures

1. Water Quality Management Planning

(a) Progress during reporting period

Roscommon County Council are involved in water quality management planning by taking an active role in the Shannon River Basin District. The laboratory set up in Roscommon County Council carries out the sampling and analysis of surface waters for local authorities. The data is then submitted to the Local Authorities. The SRBD Characterisation and Analysis Report was completed in 2006 and the Monitoring Programme is to commence by end of 2006.

(b) Problems Encountered

A delay in continuation between the Lough Derg / Ree Catchment Management and Monitoring System and the Shannon River Basin District.

(c) Future Plans/New Directions

Fully implement the sampling programme in place from Dec 2006.

2. Groundwater Protection Plan

(a) Progress during reporting period

Roscommon County Council engaged the Geological Survey of Ireland to prepare a countywide Groundwater Protection Plan. A draft of this plan was completed and submitted to the County Council. The elected members accepted it. The Plan has been included in the County Development Plan.
Farm surveys have commenced in target areas as identified in the Plan

(b) Problems Encountered

(c) Future Plans/New Directions

The Groundwater Protection Plan for the county will be used as part of the planning control process to protect vulnerable aquifers from development, which might be a source of pollution. The plan will also be a guide in identifying works, which should be carried out to protect groundwater sources. Farm surveys will continue to be carried out in targeted areas. Specific plans dealing with source protection areas are being considered.

3. Waste Management Plan

(a) Progress during reporting period

The Connaught Local authorities reviewed and prepared a Replacement Waste Management Plan in 2006 for the region in accordance with Section 22 of the Waste Management Act 1996. The main provisions of the Plan are being put in place. Three out of the five Recycling Centres (Roscommon, Boyle and Ballaghadereen), outlined in the Plan for Co. Roscommon have been put in place. The recycling centre in Castlerea is due to be in place by the end of 2006. One landfill is operating at the moment as outlined in the Plan.

(b) Problems Encountered

Problems are anticipated with regard to the cost of implementing all of the provisions outlined in the Plan and securing DOE approval. Public opposition to aspects of the plan is also expected to be a problem.

(c) Future Plans/New Directions

Bring banks have been placed at 38 locations in the county for the collection of household recyclables. This will be extended to a larger number of locations. A kerbside collection is in place in Roscommon town and two more are proposed.
Ballaghadereen landfill is the only remaining landfill in Roscommon catering for the county and a portion of the waste arising in Sligo and Leitrim. The County Council have been issued with a licence to extend the present landfill. The new extension is hoped to have capacity for 4-5 years providing a short-term landfill solution. The development of the new cell is to be completed by Oct 2006.
The County Council in the preparation of the County Development Plan is taking regard of the Replacement Connaught Waste Management Plan.

4. Sludge Management Plan

(a) Progress during reporting period

A Sludge Management Plan for County Roscommon was prepared in 2001. The plan assesses current sources, rates of production and final destinations for sludge in the county. At present consultants are appointed to look at a proposed sludge treatment plant. The required EIS will be advertised before the end of 2006.

(b) Problems Encountered

(c) Awaiting DOE approval

(d) Future Plans/New Directions

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The Plan proposes sludge reception centres at Monksland, Boyle, Castlerea, Roscommon and Ballaghadereen. The centre at Roscommon will also form a hub treatment centre.

5. Strengthening liaison between Environment and Planning Departments

(a) Progress during reporting period

There has been an increase in the number of planning applications with a potential environmental impact being checked by the environmental personnel.

(b) Problems Encountered

Insufficient staff to check every planning application with an environmental impact.

(c) Future Plans/New Directions

Additional staff are presently being recruited. It is hoped that planning applications for septic tanks in sensitive areas will be given priority from an environmental point of view with eventually every septic tank application being checked.

6. Review Discharge Licences

(a) Progress during reporting period

One licence has undergone a review and eleven new licences have been issued.

(b) Problems Encountered

Insufficient staff to carry out licence reviews and to follow up on full implementation of the licences.

(c) Future Plans/New Directions

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The review and issuing of licences is an ongoing process in the environment section of the County Council

7. Wastewater Treatment Plants

(a) Progress during reporting period

The following is a summary of the works carried out on a number of treatment plants during the reporting period and any further works planned.

Roscommon:

A brief for consultants is currently being approved for further upgrading of the existing plant.

Monksland:

Due to an increase in the amount of industrial and domestic wastewater in the Monksland area an extension of the treatment plant has been planned over the coming years

Tarmonbarry:

Treatment plant is in the process of being upgraded

Cloonfad:

Further improvement planned for 2007

Castlerea:

Installation of treatment plant, extension of pipe network and separation of storm water completed in Dec 2005

Ballyfarnan:

Provision of constructed wetlands and extension of collection system by 2008.

Rooskey:

Upgrading of treatment plant being undertaken by Leitrim Co Co. Contract documents being prepared for the plant upgrade.

Lecarrow:

New treatment plant is under construction.

Cortober:

Upgrading of treatment plant being undertaken by Leitrim Co Co. Contract documents awaiting approval from DEHLG.

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Athleague:

Upgrade of plant and diversion of surface water complete.

Ballinameen:

New treatment plant and collection system complete.

Cloontuskert:

New plant in place, effluent pumped to Ballinameen STW.

The following 13 schemes are progressing through the contract document stage of the Water Services Investment Programme and some are due to commence before the end of 2006.

Arigna:	Provision of constructed wetlands
Ballinlough:	Upgrading of treatment plant
Ballinameen:	Upgrading of treatment plant and collection system.
Cootehall:	Provision of new sewerage scheme
Creagh:	Provision of new sewerage scheme
Ballinameen:	Upgrading of treatment plant
Ballinameen:	Network extension, safety measures
Hodson Bay:	Provision of new sewerage scheme
Knockcroghery:	Upgrading of treatment plant and collection system
Lisacul:	Provision of new sewerage scheme
Loughglynn:	Upgrading of treatment plant and collection system
Ballinameen:	Upgrading of treatment plant and collection system

(b) Tulsk: Provision of new sewerage scheme

Serviced Land Initiative:

Brideswell village scheme is being progressed through the Serviced Land Initiative.

(c) Problems Encountered

Infiltration still remains a problem at some sites. Low BOD levels evident in influent samples.

(d) Future Plans/New Directions

Roscommon County Council has prepared an assessment of needs and a prioritised list of capital projects for water wastewater infrastructure. The main purpose of the assessment is to develop an overall strategic investment plan for the county for the medium (2007-2009) to long term (2010-2014) and to set out a programme of works to meet the identified water services needs.

The following schemes have been included in the assessment of needs for the future:

Castlecoote:	Provision of new sewerage scheme (may be in connection with private development)
Granlahan:	Provision of new sewerage scheme (may be in connection with private development)
Taughmaconnell:	Provision of new sewerage scheme
Dysart:	Provision of new sewerage scheme
Moore:	Provision of new sewerage scheme
Drum:	Provision of new sewerage scheme
Kilmore:	Provision of new sewerage scheme
Hillstreet:	Provision of new sewerage scheme
Four Roads:	Provision of new sewerage scheme
Knockvicar:	Provision of new sewerage scheme
Portrunny:	Local Area Plan and feasibility study complete which will incorporate proposals for treatment plant.
Croghan:	Provision of new sewerage scheme (may be in connection with private development)

8. Septic Tanks

(a) Progress to date

Septic tank discharges are controlled by the Planning system. Direct discharges to watercourses are dealt with under the Water Pollution Acts.

(b) Problems Encountered

Inadequate staffing levels to check all planning applications for septic tanks. The timings outlined in the EPA's "Wastewater Treatment Manuals-Treatment Systems for Single Houses" for carrying out percolation tests will limit staff to only achieve one test per day.

(c) Future Plans/New Directions

New staff are currently being recruited and it is hoped that initially all planning applications for septic tanks in sensitive areas will be checked for environmental impact and eventually all septic tanks will be controlled.

9. Farm Surveys

(a) Progress to date

237 Farm surveys have been completed in risk areas during the reporting period.

(b) Problems Encountered

Inadequate staffing levels to carry out the surveys.
Lack of co-operation from a number of landowners

(c) Future Plans/New Directions

Roscommon County Council intends to continue survey work in targeted areas and to extend the studies throughout the county.

10. Reed Beds

(a) Progress to date

Reed beds have been provided in Arigna, Keadue, Cloonfad and Ballyfarnan.

(b) Problems Encountered

Replanting of reeds was necessary at one of the locations. Further replanting is under review.

(c) Future Plans/New Directions

The County Council will consider the use of reed bed technology for small scale sewerage treatment plants based on the success of those already in place.

3.2 Monitoring Measures

1. Monitoring Points

(a) Progress to date

Roscommon County Councils laboratory and the SRBD laboratory are carrying out river water sampling.

(b) Problems Encountered

Some overlap of sampling points.

(c) Future Plans/New Directions

It is intended to implement the Sampling Programme for the SRBD, which comes into force in Dec 2006, and also to continue the Councils own sampling Programme.

2. Quality Control Programme

(a) Progress to date

The environmental laboratory in Roscommon County Council is actively involved in the intercalibration programme run by the EPA, and the Aquacheck and PHLS proficiency schemes. Standard Operating Procedures and Quality Control Procedures and Checks are also in use.

(b) Problems Encountered

Inadequate staffing levels to fully implement Quality Control Procedures. A constant level of staff is required to attain ILAB accreditation.

(c) Future Plans/New Directions

ILAB accreditation for all core parameters has been suspended due to an inconsistent number of staff.

3. Studies in specific areas

(a) Progress to date

Farm surveys have been completed in the localised risk areas as identified by the Lough Derg/Ree Management Team.

(b) Problems Encountered

Inadequate staff to carry out farm visits
Lack of co-operation from some landowners

(c) Future Plans/New Directions

Technical staff will extend survey work to all targeted areas in the county i.e. catchments areas for drinking water sources and identified risk areas.

3.3 Consultative and Co-operative Measures

1. Catchment Management consultations

(a) Progress to date

Roscommon County Council are involved in water quality management planning by taking an active role in the SRBD and the Western Rivers Programme.
Liaison with the EPA, other Local Authorities and all interested bodies is ongoing.

(b) Problems Encountered

(c) Future Plans/New Directions

The County Council is committed to ongoing liaison with departments and parties interested in water quality

3.4 Public Education and Advisory Measures

1. Public Education Campaigns

(a) Progress to date

The Environmental Educational Officer also meets with sectoral groups to emphasise the importance of environmental issues including water quality. This work includes measures such as leaflet drops, evening lectures and articles in the local paper.

(b) Problems Encountered

Annex G: - PROGRAMME OF IMPROVEMENTS

(c) Future Plans/New Directions

It is planned to continue to concentrate the efforts of the Environmental Education Officer on informing the public about environmental difficulties.

2. Environmental Education Officer

(a) Progress to date

An Environmental Education Officer was recruited In August 2004. Part of the officer's duties is to provide information to the general public on all areas of the environment.

(b) Problems Encountered

(c) Future Plans/New Directions

It is planned to concentrate the efforts of the Environmental Education Officer on informing the public about environmental difficulties. This will include measures such as leaflet drops, evening lectures and articles in the local paper.

3. Appointment of Staff

(a) Progress to date

At present Roscommon County Council has one member of staff assigned to duties linked to the Phosphorus Regulations with a number of others involved on a part time basis.

(b) Problems Encountered

Inadequate staffing levels.

(c) Future Plans/New Directions

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Continue to request adequate staffing levels.

G.3. Impact Mitigation

The Ballinameen WWTP and agglomeration were designed in such a way, that discharges from the agglomeration would not result in significant environmental pollution.

All upgrades, expansions and improvements to the Ballinameen WWTP and agglomeration in the future will ensure that any further emissions from the agglomeration would continue to not result in significant environmental pollution.