Roscommon County Council

TEACH NA CÚIRTE
ROS COMÁIN
Teil: 090-6632500 Faics: 090-6637108

COURTHOUSE
ROSCOMMON
Tel: 090-6632500 Fax: 090-6637108

Roscommon County Council
Courthouse
Roscommon

Comhairle Contae
Ros Comáin
Teach na Cúirte
Ros Comáin

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E-mail:
secretar@roscommoncoco.ie

Website:
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Direct Phone Nos:

Prefix:	090
Reception	6632500
Arts Centre	6625824
Arts Officer	6637285
Community & Enterprise	6637325
Civil Defence	6637206
Corporate Services	6637140
Environment	6637260
Finance	6637187
Fire Services	6634823
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

EXCELLENCE THROUGH PEOPLE
STANDARD

22nd December 2009.
Water Services,
Roscommon County Council,
Ref.: BALLYFORAN-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: Ballyforan and Environs Waste Water Certificate of Authorisation Application.

A Chara

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

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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

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ROSCOMMON COUNTY COUNCIL

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BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION APPLICATION

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

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This is a draft document and is subject to revision.

Waste Water Discharge Certificate of Authorisation Application Form

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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.ie Email: info@epa.ie

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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.

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Environmental Protection Agency

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

CONTENTS

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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/.

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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.

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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.

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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. <u>The abbreviation "N/A" should not be used</u>.

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).

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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.

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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. Ballyforan WWTP Non-Technical Summary.

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SECTION B: GENERAL

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

B.1 Agglomeration Details

Name of Agglomeration:	Ballyforan and Environs

Refer to Drawing 1 Attachment B.1:- Agglomeration served by Ballyforan 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.

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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.

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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*:	Joe Grady
Address:	Ballyforan Wastewater Treatment Works
	Ballyforan Townland,
	Ballyforan,
	County Roscommon
Grid ref (6E, 6N)	182343E, 246631N
Level of Treatment	Secondary treatment.

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

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

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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 River Suck
Type of Discharge	Open Discharge to watercourse
Unique Point Code	SW 1
Location	Ballyforan WWTP, Ballyforan Townland.
Grid ref (6E, 6N)	182275E, 246052N

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

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

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***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

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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***	

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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.

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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	780 (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 Ballyforan WWTP. The 2009 population equivalent for Ballyforan WWTP is 334 with a projected 2015 PE of 346 at a low growth rate of 0.6%.The 2029 PE is 376.

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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 5 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
		√

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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 though 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.

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.

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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
		√

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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.

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There is no pump station on the waste water network.

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 4 attachment C.1:- Ballyforan WWTP Detail Process Plan and Drawing 5 attachment C.1:- Ballyforan WWTP Flow Process Diagram.

Attachment included	Yes	No
	√	

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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.

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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**
	√	

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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

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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	River Suck	None	182275E	246052N

Refer to Drawing 6 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.

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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 7 Attachment E2: – Location of Sampling and Monitoring points.

Attachment included	Yes	No

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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	181627E	246334N	Y
aSW1d	Primary	M	182554E	242471N	Y
ES1	Primary	S	182340E	246648N	Y
ES2	Primary	S	182339E	246640N	Y
ES3	Primary	S	182341E	246629N	Y

Table E.3: Monitoring and Sampling Points.

Sample points ES1, ES2 and ES3 are all located within the boundary of the WWTP. These locations are sampled and tested monthly.

ES1 is a grab sample point of raw effluent on the inlet to the treatment works site.

ES2 is a 3 no. grab sample point in each aeration tank cell.

ES3 is a grab sample 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.

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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
	√	

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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.

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- 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**

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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.

ABS_CD	AGG_SERVED	ABS_VOL	PT_CD	DIS_DS	EASTING	NORTHING	VERIFIED
Abstraction Code	Agglomeration served	Abstraction Volume in m^3/day	Point Code Provide label ID's	Distance Downstream in meters from Emission Point to Abstraction Point	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

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

Ballyforan village obtains its drinking water from Four Roads Regional Water Supply Scheme. The source is a spring, 182045E, 252394N and is located upstream of the discharge points from Ballyforan WWTP.
Refer to Drawing 8 for location of Four Roads RWSS.

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.

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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).

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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
	√	

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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
		√

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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.

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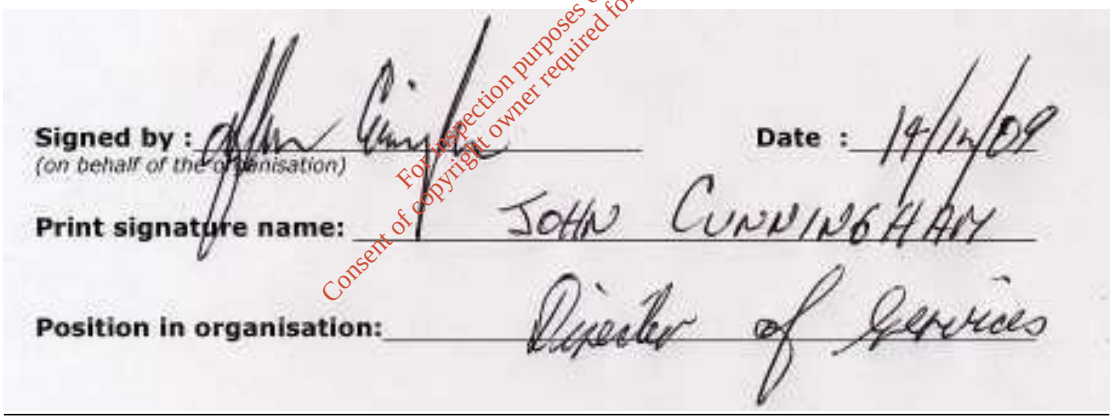

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SECTION I: JOINT DECLARATION

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.

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Agglomeration details

Leading Local Authority	Roscommon County Council
Co-Applicants	
Agglomeration	Ballyforan and Environs
Population Equivalent	334
Level of Treatment	Secondary Treatment
Treatment plant address	Ballyforan WWTP, Ballyforan Townland, Ballyforan, County Roscommon
Grid Ref (12 digits, 6E, 6N)	182343 / 246631 (Verifed using GPS)
EPA Reference No:	

Contact details

Contact Name:	Mr. Kieran Madden - Senior Engineer
Contact Address:	Water Services Department. Roscommon County Council, Courthouse, Roscommon
Contact Number:	09066 37100
Contact Fax:	09066 37108
Contact Email:	kmadden@roscommoncoco.ie

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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 to Watercourse	
Location:	Ballyforan WWTP, Ballyforan Townland	
Grid Ref (12 digits, 6E, 6N)	182275 / 246052 (Verifed using GPS)	
Name of Receiving waters:	river Suck	
Water Body:	River Water Body	
River Basin District	Shannon IRBD	
Designation of Receiving Waters:	NHA, SPA	
Flow Rate in Receiving Waters:	1.2	$m^3.sec^{-1}$ Dry Weather Flow
	1.6	$m^3.sec^{-1}$ 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 m^3	Maximum/day	75 m^3
Maximum rate/hour	99999 m^3	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	75 m^3/sec		

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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	Grab	= 7.5	
Temperature	℃	Grab	= 999999	
Electrical Conductivity (@ 25℃)	µS/cm	Grab	= 771	
Suspended Solids	mg/l	Grab	= 19	1.42
Ammonia (as N)	mg/l	Grab	= 6.2	0.465
Biochemical Oxygen Demand	mg/l	Grab	= 12.9	0.96
Chemical Oxygen Demand	mg/l	Grab	= 25.6	1.92
Total Nitrogen (as N)	mg/l	Grab	= 2.9	0.21
Nitrite (as N)	mg/l	Grab	= 0.21	0.015
Nitrate (as N)	mg/l	Grab	= 5.8	0.43
Total Phosphorous (as P)	mg/l	Grab	= 2.6	0.19
OrthoPhosphate (as P)	mg/l	Grab	= 1.6	0.12
Sulphate (SO_4)	mg/l	Grab	= 25.6	1.92
Phenols (Sum)	µg/l	Grab	= 99999	999999

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.

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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	Grab	< 0.01	0.00075
Dichloromethane	µg/l	Grab	< 1	0.075
Simazine	µg/l	Grab	< 0.01	0.00075
Toluene	µg/l	Grab	< 0.28	0.021
Tributyltin	µg/l	Grab	< 0.02	0.0015
Xylenes	µg/l	Grab	< 1	0.075
Arsenic	µg/l	Grab	< 0.58	0.04
Chromium	µg/l	Grab	= 0.74	0.55
Copper	µg/l	Grab	= 28	2.1
Cyanide	µg/l	Grab	= 8.5	0.63
Flouride	µg/l	Grab	= 999999	999999
Lead	µg/l	Grab	< 1.39	0.104
Nickel	µg/l	Grab	= 2.85	0.213
Zinc	µg/l	Grab	= 21.6	1.62
Boron	µg/l	Grab	= 0.159	0.011
Cadmium	µg/l	Grab	= 0.145	0.01
Mercury	µg/l	Grab	= 0.115	0.0086
Selenium	µg/l	Grab	= 1.43	0.107
Barium	µg/l	Grab	= 5.19	0.389

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.

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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	27375

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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

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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)	182554 / 242471 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	22/07/09	29/09/09	11/11/09				
pH	= 8.09	= 7.83	= 8.05		Grab		pH Meter
Temperature	= 11.7	= 999999	= 15.3		Grab		DO Meter
Electrical Conductivity (@ 25℃)	= 99999	= 387	= 624		Grab		Conductivity Meter
Suspended Solids	= 999999	= 4	< 1		Grab	1.8	Membrane Filtration
Ammonia (as N)	< 999999	= 0.018	= 0.021		Grab	0.002	Kone Autoanalyser
Biochemical Oxygen Demand	= 0.39	= 1.46	= 1		Grab		DO Meter
Chemical Oxygen Demand	= 999999	= 9999999	= 4.8		Grab	6.0	Hach
Dissolved Oxygen	= 9.56	= 7	= 10.61		Grab		DO Meter
Hardness (as $CaCO_3$)	= 999999	= 999999	= 334		Grab		Kone Autoanalyser
Total Nitrogen (as N)	= 999999	= 0.464	= 0.07		Grab	0.007	Kone Autoanalyser
Nitrite (as N)	< 0.004	< 0.002	< 0.002		Grab	0.001	Kone Autoanalyser
Nitrate (as N)	= 0.46	= 0.07	= 999999		Grab	0.006	Kone Autoanalyser
Total Phosphorous (as P)	= 9999999	= 0.059	= 0.011		Grab	0.002	Ganimede Autoanalyser
OrthoPhosphate (as P)	= 999999	= 0.005	= 0.011		Grab	0.002	Kone Autoanalyser
Sulphate (SO_4)	= 999999	= 999999	= 5.5		Grab	0.11	Kone Autoanalyser
Phenols (Sum)	< 999999	< 999999	= 999999		Grab	0.5	APHA 5530C

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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:	

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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)	182554 / 242471 (Verifed using GPS)

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	22/07/09	29/09/09					
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	
Xylenes	< 1	< 1			Grab	0.1	USEPA 5035
Arsenic	= 0.96	< 0.5			Grab	0.2	ICP-MS
Chromium	< 2.6	< 0.58			Grab	1.0	ICP-MS
Copper	< 0.5	< 0.9			Grab	3	ICP-MS
Cyanide	< 5	< 5			Grab	5	Spectrophotometry
Flouride	= 9999999	= 9999999			Grab		IC
Lead	= 0.38	< 1.7			Grab	0.3	ICP-MS
Nickel	= 2.1	= 2.5			Grab	0.5	ICP-MS
Zinc	< 4.6	< 9.2			Grab	1	ICP-MS
Boron	< 0.13	< 0.11			Grab	0.02	ICP-MS
Cadmium	< 0.09	< 0.08			Grab	0.1	ICP-MS
Mercury	< 0.03	< 0.2			Grab	0.02	ICP-MS
Selenium	< 0.74	< 0.54			Grab	0.2	ICP-MS
Barium	= 14	= 14.9			Grab	1	ICP-MS

Additional Comments:	

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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)	181627 / 246334 (Verifed using GPS)

Parameter	Results (mg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	22/07/09	29/09/09	11/11/09				
pH	= 7.71	= 8.06	= 7.78		Grab		pH Meter
Temperature	= 15.2	= 11.7	= 7.7		Grab		DO Meter
Electrical Conductivity (@ 25℃)	= 383	= 614	= 421		Grab		Conductivity Meter
Suspended Solids	< 3.2	< 3	= 3		Grab	1.8	Membrane Filtration
Ammonia (as N)	< 0.01	< 0.01	< 0.01		Grab	0.002	Kone Autoanalyser
Biochemical Oxygen Demand	= 1.22	= 1.7	= 1		Grab		DO Meter
Chemical Oxygen Demand	= 17.1	= 34.1	= 35.9		Grab	6	Hach
Dissolved Oxygen	= 10.86	= 10.29	= 7		Grab		DO Meter
Hardness (as $CaCO_3$)	= 327	= 186	= 210		Grab		Kone Autoanalyser
Total Nitrogen (as N)	< 0.036	< 0.036	< 0.036		Grab	0.007	Kone Autoanalyser
Nitrite (as N)	< 0.004	< 0.004	< 0.004		Grab	0.001	Kone Autoanalyser
Nitrate (as N)	= 0.393	= 9999999	= 9999999		Grab	0.006	Kone Autoanalyser
Total Phosphorous (as P)	= 0.023	= 0.019	= 0.04		Grab	0.002	Ganimede Autoanalyser
OrthoPhosphate (as P)	< 0.008	< 0.008	< 0.17		Grab	0.002	Kone Autoanalyser
Sulphate (SO_4)	= 1.78	= 6.1	= 1.78		Grab	0.11	Kone Autoanalyser
Phenols (Sum)	< 99999	= 99999	< 99999		Grab	0.5	APHA 5530C

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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:	

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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)	181627 / 246334 (Verifed using GPS)

Parameter	Results (µg/l)				Sampling method	Limit of Quantitation	Analysis method / technique
	22/07/09	29/09/09					
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	= 0.6			Grab	0.2	ICP-MS
Chromium	= 0.93	< 0.58			Grab	1.0	ICP-MS
Copper	< 2.1	< 0.21			Grab	3	ICP-MS
Cyanide	< 5	< 5			Grab	5	Spectrophotometry
Flouride	= 999999	= 999999			Grab		IC
Lead	< 0.38	< 999999			Grab	0.3	ICP-MS
Nickel	< 1.6	= 0.27			Grab	0.5	ICP-MS
Zinc	< 14.5	< 8.1			Grab	1	ICP-MS
Boron	< 0.034	< 0.77			Grab	0.02	ICP-MS
Cadmium	= 0.09	< 0.01			Grab	0.1	ICP-MS
Mercury	= 0.2	< 0.03			Grab	0.02	ICP-MS
Selenium	< 0.74	< 0.54			Grab	0.2	ICP-MS
Barium	= 17.9	= 20.3			Grab	1	ICP-MS

Additional Comments:	

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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,		
(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 waste water treatment plant and/or the waste water discharge point or points to which the application relates,		
(d)	state the population equivalent of the agglomeration to which the application relates,		
(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,		
(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.		
(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,		
(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,		
(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,		
(j)	give particulars of the nearest downstream drinking water abstraction point or points to the discharge point or points,		
(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,		
(l)	give detail of compliance with relevant monitoring requirements and treatment standards contained in any applicable Council Directives of Regulations,		
(m)	give details of any work necessary to meet relevant effluent discharge standards and a timeframe and schedule for such work.		
(n)	Any other information as may be stipulated by the Agency.		
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,		
(b)	where appropriate, a copy of the notice given to a relevant water services authority under Regulation 13,		
(c)	Such other particulars, drawings, maps, reports and supporting documentation as are necessary to identify and describe, as appropriate -		
(c) (i)	the point or points, including storm water overflows, from which a discharge or discharges take place or are to take place, and		
(c) (ii)	the point or points at which monitoring and sampling are undertaken or are to be undertaken,		
(d)	such fee as is appropriate having regard to the provisions of Regulations 38 and 39.		

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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.		
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.		
2	2 hardcopies of application provided or 2 CD versions of application (PDF files) provided.		
3	1 CD of geo-referenced digital files provided.		
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.		
1	EIA provided if applicable		
2	2 hardcopies of EIS provided if applicable.		
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.		

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ANNEX G PROGRAMME OF IMPROVEMENTS

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ROSCOMMON COUNTY COUNCIL

BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION

ANNEX A

NON TECHNICAL SUMMARY

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SECTION A: NON-TECHNICAL SUMMARY

A.1 General

This application refers to the Ballyforan Waste Water Works which serves an agglomeration including Ballyforan Town and Environs. The Ballyforan WWTP in Ballyforan townland, Ballyforan is the primary discharge point and discharges to the River Suck just south of Ballyforan Town. There is no secondary discharge point on the separate Waste Water network system.

The town of Ballyforan is located in the south of County Roscommon adjacent to the border of County Galway. It is also located along the R363 Regional Route and the River Suck. The natural drainage of Ballyforan village is such the land generally slopes to the south and is drained by the River Suck.

The town is served by a foul system, which is a separate sewerage system. The WWTP was commissioned in 1984 and has a design population equivalent capacity of 780 and a final effluent standard of BOD 25mg/l and SS 35mg/l.

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A.2 Wastewater Treatment Works

The treatment process is Secondary treatment. The plant is currently designed to serve a population equivalent (p.e) of 780.

The plant is made up of the following elements:-

- Inlet Works – Preliminary Treatment

  There is no preliminary treatment and flow measurement unit at Ballyforan WWTP.

- Biological Treatment

  The influent flows by gravity unscreened to the aeration tank. The aeration system is fine bubble diffused aeration whereby air is induced into a glass lined steel aeration tank by means of an air blower and membrane disk diffusers.

  For a population equivalent of 780 at 60 grams B.O.D./head/day the volume required is 144m^3 based on the conventional criterion of 225 mg/litre for extended aeration.

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The physical size of aeration tank is a tank diameter of 6.8m with a operating tank depth of 3.96m gives a total tank liquid volume of 144m^3.

- Sedimentation

After the aeration stage, the mixed liquor is forwarded to the central bellmouth feed in the sedimentation tanks. In the sedimentation tank, the sludge is settled out. The floor slopes into a central sump, where the sludge is gathered by a rotating half bridge scrapers. The sludge that settles out in the bottom of the settlement tank and removed by a tanker to Monksland WWTP, Athlone. A portion of the sludge is returned to the aeration tank chamber in order to maintain the activated sludge process. Any suspended matter which is less than dense than water will rise to the surface and form a scum. Skimmer blades attached to the scrapper bridge push the scum across the surface of the tank where it is discharged into a special sump called a scum box. From the scum box, it is pumped to the aeration tank.

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The supernatant liquid from these tanks is decanted off the top through the overflow weir and baffle plate. The overflow weir and baffle runs around the periphery of the tank. The final effluent gravitates to the outfall into the River Suck adjacent to the southern boundary of the WWTP. There is no continuous flow monitoring of the treated effluent discharging from the WWTP. Effluent samples are collected from the outlet sump via a grab sampler.

The design of the settling tank has been based on an upward flow rate of 2.4 $m^3/m^2/hr$ for 6 times the Dry Weather Flow. For a population equivalent of 780 an area of tank of 17.6m^2 is required. Activated sludge is removed from a central hopper in the tank and returned under hydrostatic head at a rate of 1 D.W.F. to the sludge Return Pump Chamber where sludge is pumped to the head of the aeration tanks.

The physical size of the settlement tank is 4.8m diameter tank with a surface area of 18.09m^2. The retention time is 0.62 hours to allow settleable solids to settle to the bottom of the tank.

The plant is designed such that the concentrations for BOD and suspended solids do not exceed 25 mg/l o2 and 35 mg/l respectively.

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- Sludge Treatment and Disposal

  There is no sludge treatment on-site. A licensed service provider removes the excess sludge from the settlement tank via tanker to Monksland WWTP, Athlone. The supernatant draw off pipe, returns the supernatant liquid directly to the inlet aeration tank chamber.

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

- Plant Controls

  The caretaker checks the WWTP on a daily basis and maintains the sewer network. There is no Programmable Logic Controller (PLC) system used at this WWTP.

A.3 Sources of Emissions

All treated effluent from the WWTP flows through a dedicated outfall line to the River Suck. This is the primary discharge point (SW1) and discharges effluent along a gravity pipeline at the southern boundary of the WWTP. The incoming effluent is treated in the wastewater plant through a series of secondary treatment processes.

There is no secondary discharge points on the separate waste water network.

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

All treated effluent from the Ballyforan WWTP discharges to the River Suck 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. 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. There are no chemicals injected as part of the treatment at the plant. These potential loadings to the aquatic environment are greatly reduced by the process and levels leaving the works are well below levels

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indicated in the Urban Waste Water Directive and the parameters indicated for the plant.

The River Suck is not designated a salmonoid river under S.I No. 293-1998.

The plant is designed to achieve an effluent of BOD5 = 25 mg/l and suspended solids = 35 mg/l. The treated effluent is currently meeting the required parameters.

The plant is designed to provide Secondary treatment, for a population equivalent (PE) of 780 (1 PE = 0.06kg BOD/d).

The plant is currently working satisfactory and there are no plans to upgrade the plant in the near future.

A.5 Supervision, Control and Emissions Monitoring

The Ballyforan 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 Athlone Area office. The Senior Executive Engineer – Athlone 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 caretaker checks the WWTP Monday to Friday.

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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 on the River Suck is carried out on a monthly basis at the location on Drawing 7. The results are published every three years in the EPA's report on Water Quality in Ireland. The EPA have two biological quality rating (Q values) sampling points near River Suck. They are sampling station number 1100 (Ballyforan Bridge) and sampling station number 1125 (Bridge W. of Feevagh). Refer to attachment E.2 for a summary of the current environmental programme out by Roscommon County Council.

Ballyforan Waste Water plant is provided with two monitoring points and three sampling points. The monitoring points are to measure

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and record flow data on the influent and effluent lines. Sampling and testing procedures are carried out by Roscommon County Council in accordance with Standard Operating Procedure No. 900.

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. Treatment plant inlet works 1
2. Aeration tank 1
3. Outlet flume 1

(1 = grab sample)

The grab inlet sample 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 is taken from the aeration tank in Ballyforan. The samples are analysed for PH and MLSS. The Caretaker also carries out cone tests.

A grab outlet sample ES2 is taken once a month. The sample are analysed for BOD, COD, Suspended Solids, PH, Ammonia, Nitrate, Nitrite, Total Oxidized Nitrogen, Ortho P and Total P, fluoride, Conductivity and Temperature.

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The treated effluent is discharged into the River Suck (see Table D.2 for monitoring locations). On a monthly basis, the Executive technician takes grab samples at a down stream aSW1d station of the plants discharge point (SW1) to the River Suck. 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 produce a final standard effluent of 25mg/l BOD5 and 35mg/l suspended solids.

The results from the last 12 month sampling at Ballyforan plant indicates that the treatment works is operating within it design parameters.

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A.6 Conclusion

The Wastewater Treatment Plant at Ballyforan provides treatment for the sewerage effluent generated by the agglomeration of Ballyforan Town and Environs.

The final effluent achieves the standards of emissions to the aquatic environment as set out in the Urban Waste Water Directive.

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ROSCOMMON COUNTY COUNCIL

BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION

ANNEX B

GENERAL

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B.9 (i) Population Equivalent of Agglomeration Ballyforan Present Pollution Load 2009

Existing Population Equivalent

			Ballyforan			
Description	Typical Loading (g BOD/d)	Typical Loading (m^3/d)	No. of	(m^3/d)	Kg BOD/d	PE
Residential						
Houses	178.7	0.67	81	54.27	14.47	241
Institutional						
Schools (no. pupils)	10.7	0.04	69	2.76	0.74	12
Nursing Homes (per bed)	112	0.42	0	0.00	0.00	0
Garda station	53.3	0.2	1	0.20	0.05	1
Commercial						
Shop (retail)	53.3	0.2	2	0.40	0.11	2
Shop (chemist)	53.3	0.2	0	0.00	0.00	0
Laundrette	1200	4.5	0	0.00	0.00	0
Library	133.3	0.5	0	0.00	0.00	0
Restaurant	800	3	0	0.00	0.00	0
Business (trade)	666.7	2.5	0	0.00	0.00	0
Butcher	186.7	0.7	0	0.00	0.00	0
Public House	880	3.3	2	6.60	1.76	29
Funeral Home	133.3	0.5	1	0.50	0.13	2
Hairdresser	746.7	2.8	1	2.80	0.75	12
Bank	373.3	1.4	1	1.40	0.37	6
Garage	666.7	2.5	1	2.50	0.67	11
Hotel (per bed)	112	0.42	0	0.00	0.00	0
B&B (per bed)	112	0.42	0	0.00	0.00	0
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	0.00	0.00	0
Health centre	133.3	0.5	1	0.50	0.13	2
Sports club	480	1.8	1	1.80	0.48	8
Total Existing PE						**334.4**

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 based on CSO data on house occupancy rates in County Roscommon from 1986 to 2004.
The current PE includes 9 unoccupied houses. These houses have been vacant for over 1 year. This would reduce the PE to 308.

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Overall Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballyforan	334	0.6	1.8	3	0.6	377	478	604	377

Domestic Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballyforan	241	0.6	1.8	3	0.6	272	345	436	272

Commercial Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballyforan	80	0.6	1.8	3	0.6	90	114	144	90

Institutional Growth Rate									
Town	**2009 PE**	**Growth rate**				**Population 2029**			
		Low	**Medium**	**High**	**LA**	**Low**	**Medium**	**High**	**VSGR**
Ballyforan	13	0.6	1.8	3	0.6	15	19	24	15

VSGR = Village Specific Growth Rate.

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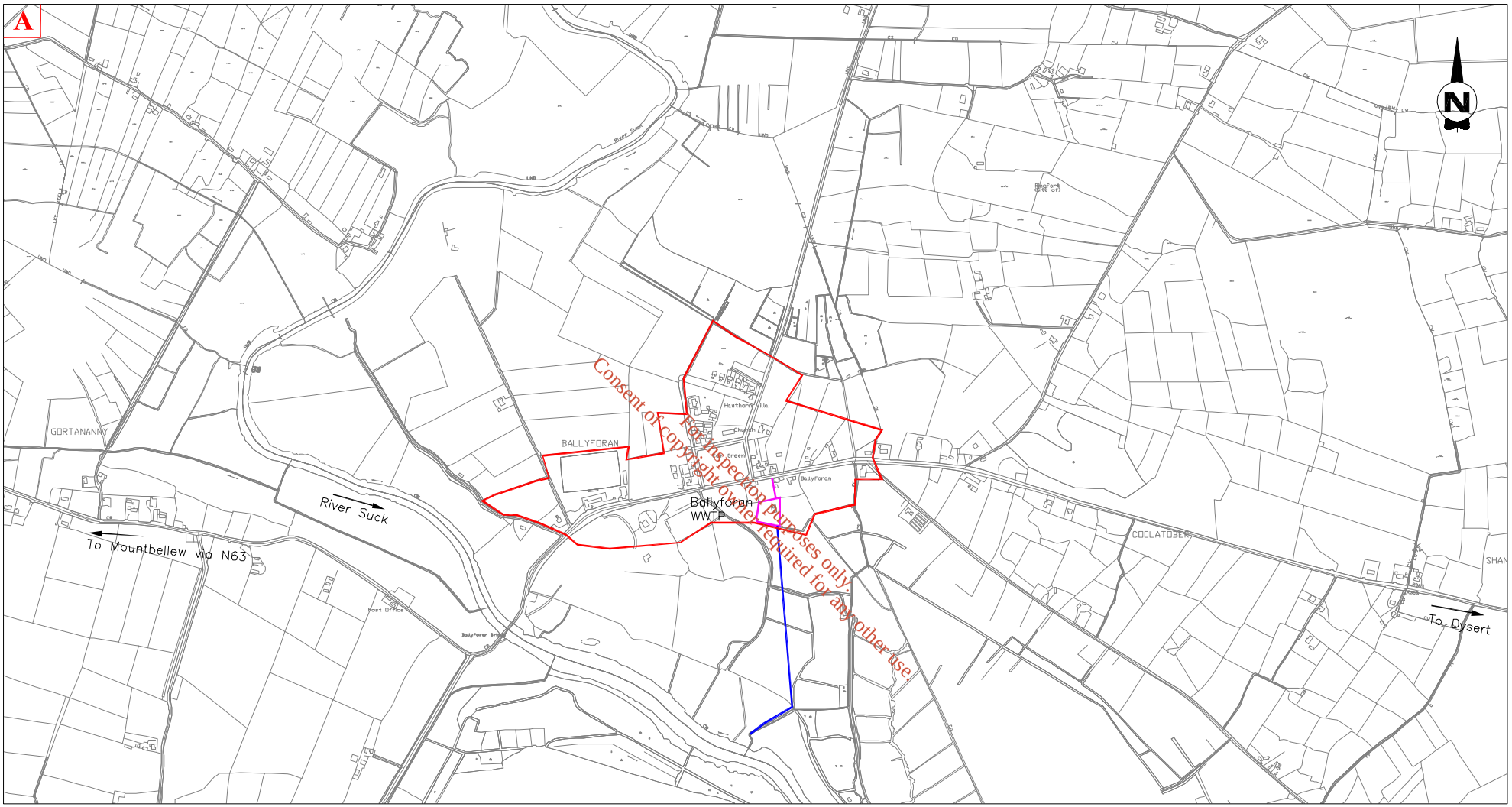
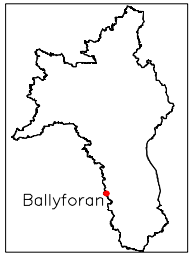
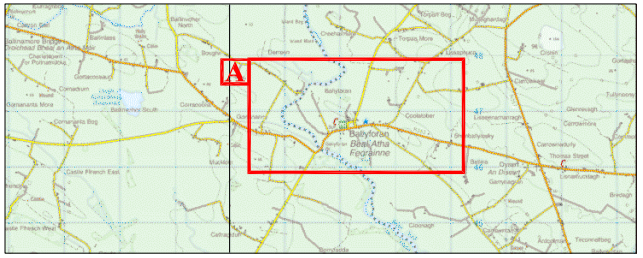


LEGEND

- WWTP BOUNDARY
- AGGLOMERATION BOUNDARY
- EFFLUENT OUTFALL PIPE





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE.

Agglomeration Served by Ballyforan WWTP

DRAWN:	DRAWING No.
P Fleming	01
SCALES: 1:10,000	

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

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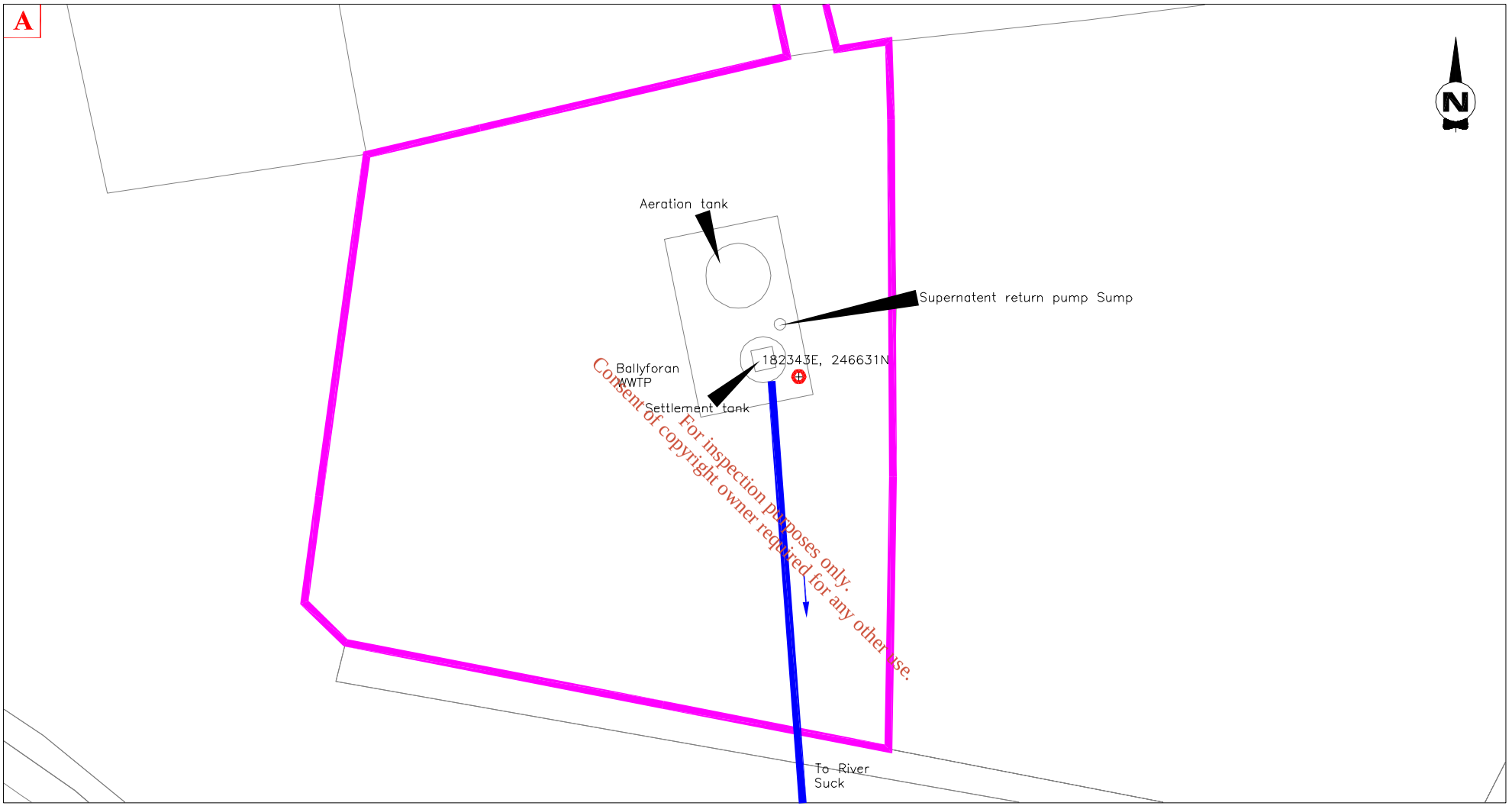

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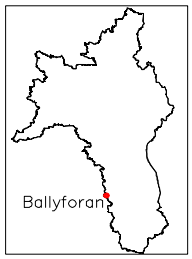
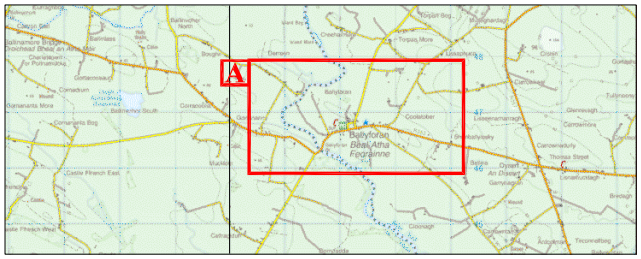
LEGEND

WWTP BOUNDARY

Location of Ballyforan WWTP

Effluent Outfall Pipe





COMHAIRLE CHONTAE ROSCOMAIN
ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE.

Ballyforan WWTP Site Plan & Boundary

DRAWN:	DRAWING No.
P Fleming	02
SCALES:	
N.T.S.	

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

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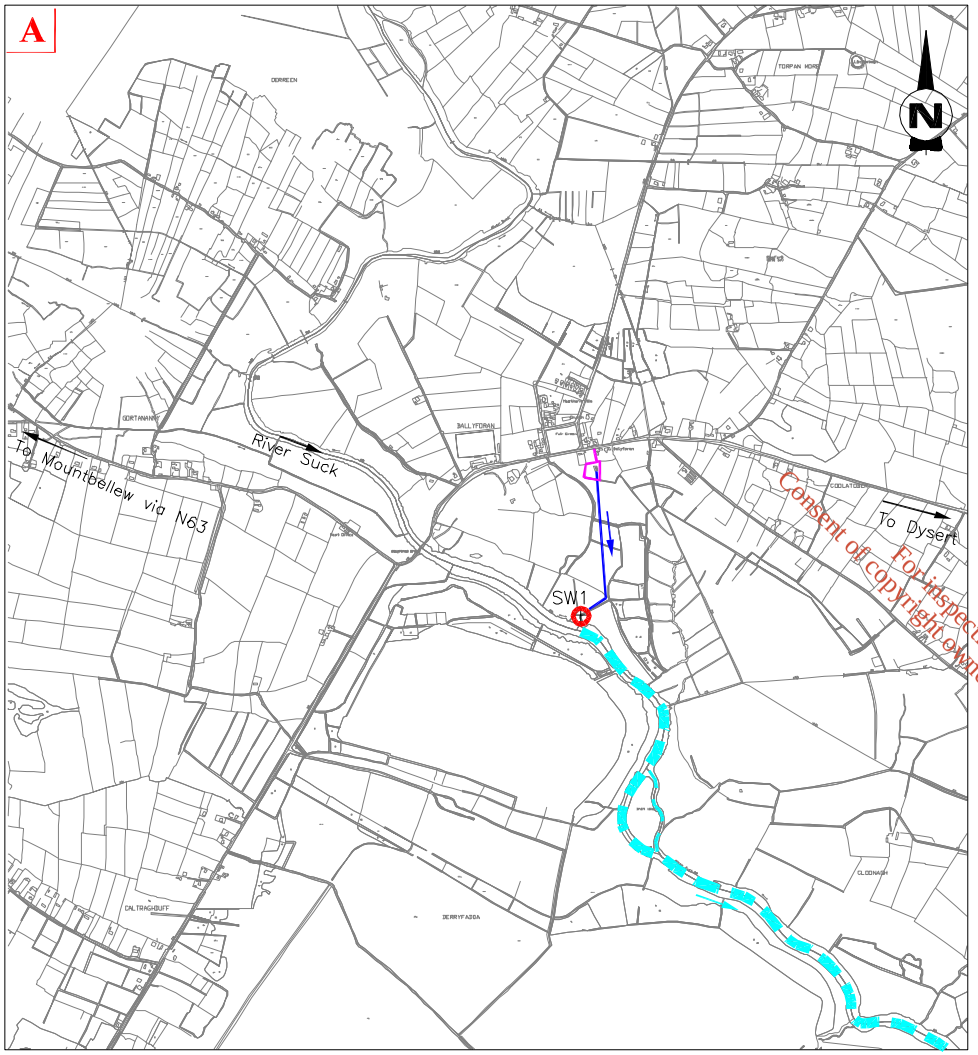

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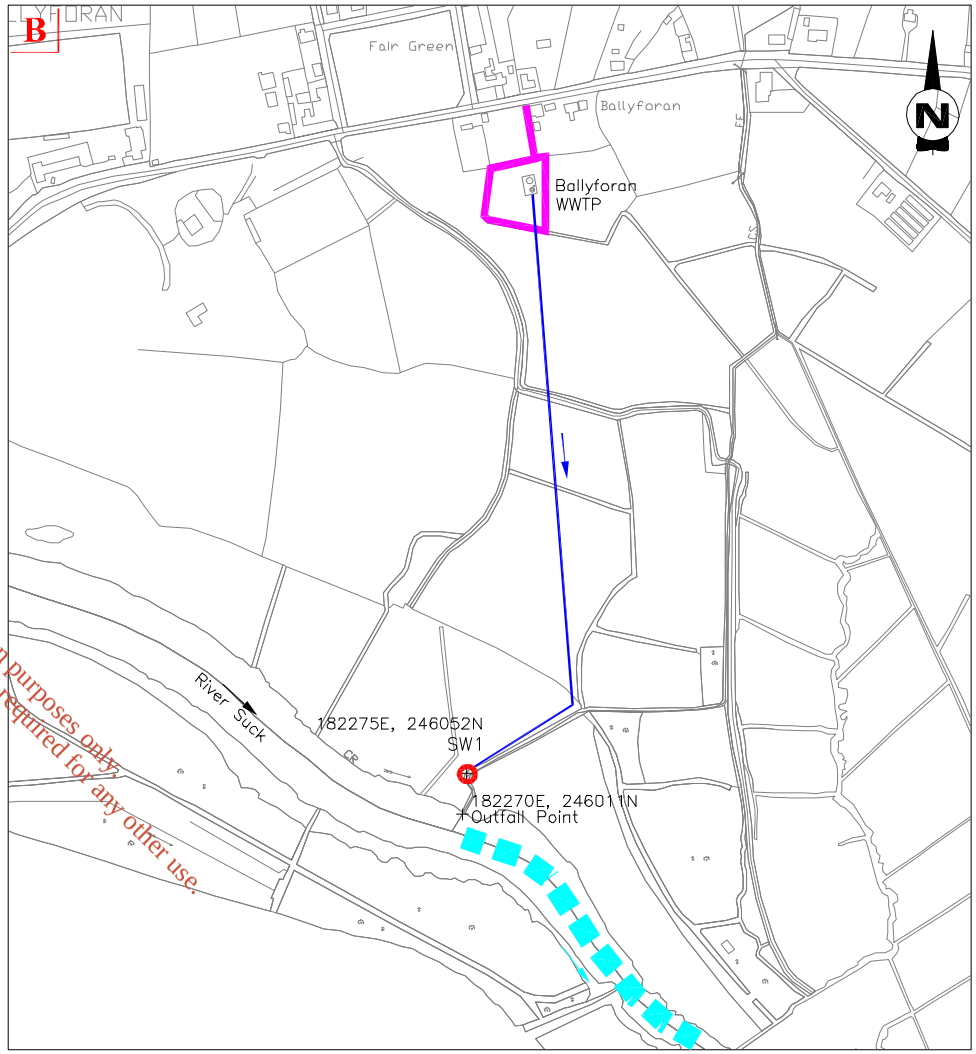

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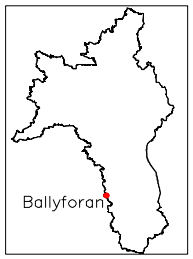
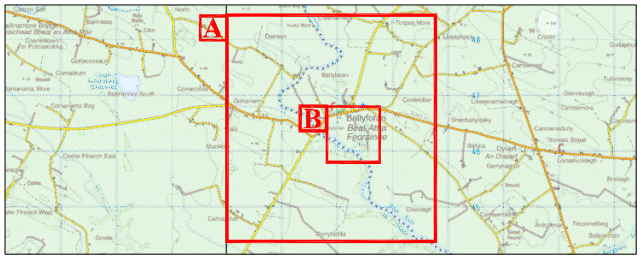
LEGEND

- WWTP BOUNDARY
- Primary Discharge Point SW1
- Flow path of River Suck
- Outfall Discharge Point
- Effluent Outfall Pipe





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ROSCOMMON COUNTY COUNCIL

PROJECT.

Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE.

Location of Primary Discharge Point - SW1

DRAWN:	DRAWING No.
P Fleming	03
SCALES:	
Varies	

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

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BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION

ANNEX C

INFRASTRUCTURE & OPERATION

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SECTION C: OPERATIONAL INFORMATION REQUIREMENTS

Treatment Process Description

C.1.0 Design Criteria

The Ballyforan 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 BOD and 35mg/l suspended solids.

All effluent collected by the separate wastewater network in Ballyforan is conveyed to the aeration tank of Ballyforan WWTP. At this site, unscreen influent flow up to 3 DWF flows by gravity from the inlet manhole to the aeration tank. There is no overflow at the WWTP.

Allow for 60 grams/head/day of B.O.D. in a volume of 225 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
525	140	780

Table C.1.0 Ballyforan Treatment Plant Design Loading total

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C.1.0.1 Flow Monitoring and Preliminary Treatment

The influent flows to the aeration tank via gravity, unscreened. There is no preliminary treatment at the WWTP.

The treatment plant is designed to treat fully 3 DWF (525m3/day). There is no overflow as the wastewater network is a separate system.

There is no flow measurements at the WWTP. Influent samples are also collected from the inlet manhole via a grab sampler.

C.1.0.2 Secondary Biological Treatment

Flow from the inlet manhole is flows directly by gravity to the aeration tank. The aeration system is fine bubble diffused aeration whereby air is induced into a glass lined steel aeration tank by means of an air blower and membrane disk diffusers. Here, the influent is mixed with returned activated sludge from the settlement tank.

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The aeration tank is design for a population equivalent of 780 at 60 grams B.O.D./head/day the volume based on the conventional criterion of 300 mg/litre for extended aeration. The physical diameter of aeration tank is 6.8m with a liquid depth of 3.96m gives a total tank volume of 144m^3. The basis on which the aeration tanks are designed are set out in table C.1.0.2.

Population Equivalent (P.E.)	780
Incoming BOD5 Load	47 kg/day
Design B.O.D. loading	300mg./litre volume
MLSS Concentration	2750mg/l
F/M Ratio	0.1kg BOD/kg MLSS
Tank volume provided	144 m^3

Table C.1.0.2.1 Aeration tank Design Parameter

After the aeration stage, the mixed liquor is forwarded to the central bellmouth feed in the sedimentation tanks. The sludge is settled out to a central sump and suspended solids less dense than water is collected in a scum box. The supernatant liquid from these tanks is decanted off the top through the overflow weir and baffle plate. The contents in the sump and scum box are forwarded to the aeration tank. The physical size of the sedimentation tank is 4.8m diameter with a tank depth of 4.6m gives a total tank area of 18.09m^2. The basis on which the sedimentation tank are designed are set out in table C.1.0.2.2

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Population Equivalent (P.E.)	780
Design Basis (Sedimentation)	6 DWF upward velocity of 1.2m^3/m^{2}m/hr
6 DWF	525m^3/day or 21.8m^3/hr
Surface Overflow Rate	29m/d
4.8m diameter tank area	69m^2
Tank depth	4.6m
Retention time	3.8 hour
Return Sludge to Aeration	1DWF

Table C.1.0.2.2 Sedimentation tank Design Parameter

The supernatant liquid from these tanks is decanted off the top through the overflow weir and baffle plate. The overflow weir and baffle runs around the periphery of the tank. The final effluent gravitates to the outfall into the River Suck, 550m south of the WWTP boundary. There is no continuous flow monitoring of the treated effluent. Effluent samples are collected from the outlet sump via a grab sampler.

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C.1.0.3 Phosphorous Removal
There is no facility for the removal of phosphorus at this WWTP.

C.1.0.4 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 is stored at the bottom of the settlement tank and is removed by tanker to Monksland WWTP for further treatment.

C.1.0.5 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 Ballyforan is a separate collection system.

C.1.2 Pumping Stations

There is no pump station on the wastewater network.

Power Failure Procedure

There is no pump station on the wastewater network.
The caretaker inspects Ballyforan WWTP, daily.

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C.2.0 Outfall Design and Construction

Final effluent from Ballyforan wastewater treatment works currently discharge to the River Suck, via a gravity 605m outfall pipeline. The primary discharge point SW1 is located south of the treatment plant boundary. Refer to Drawing 3 Attachment B.3.

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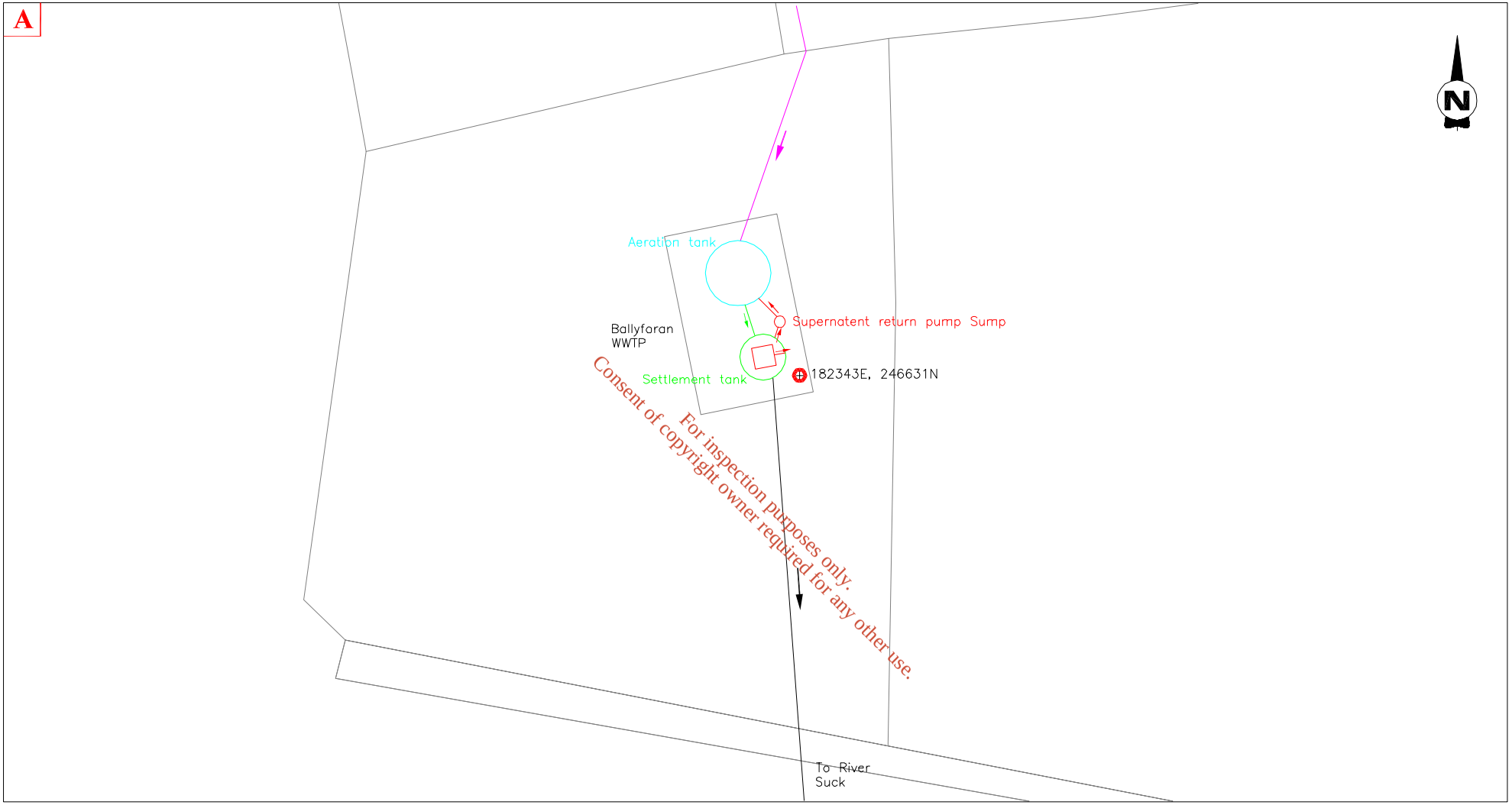

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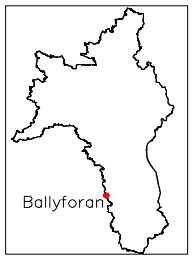
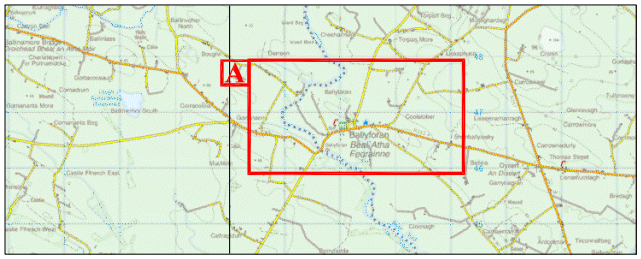
LEGEND

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





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PROJECT.

Ballyforan Waste Water
Discharge Certificate of
Authorisation Application

DRAWING TITLE.

WWTP Detail Process Plan

DRAWN:	DRAWING No.
P Fleming	04
SCALES: N.T.S.	

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

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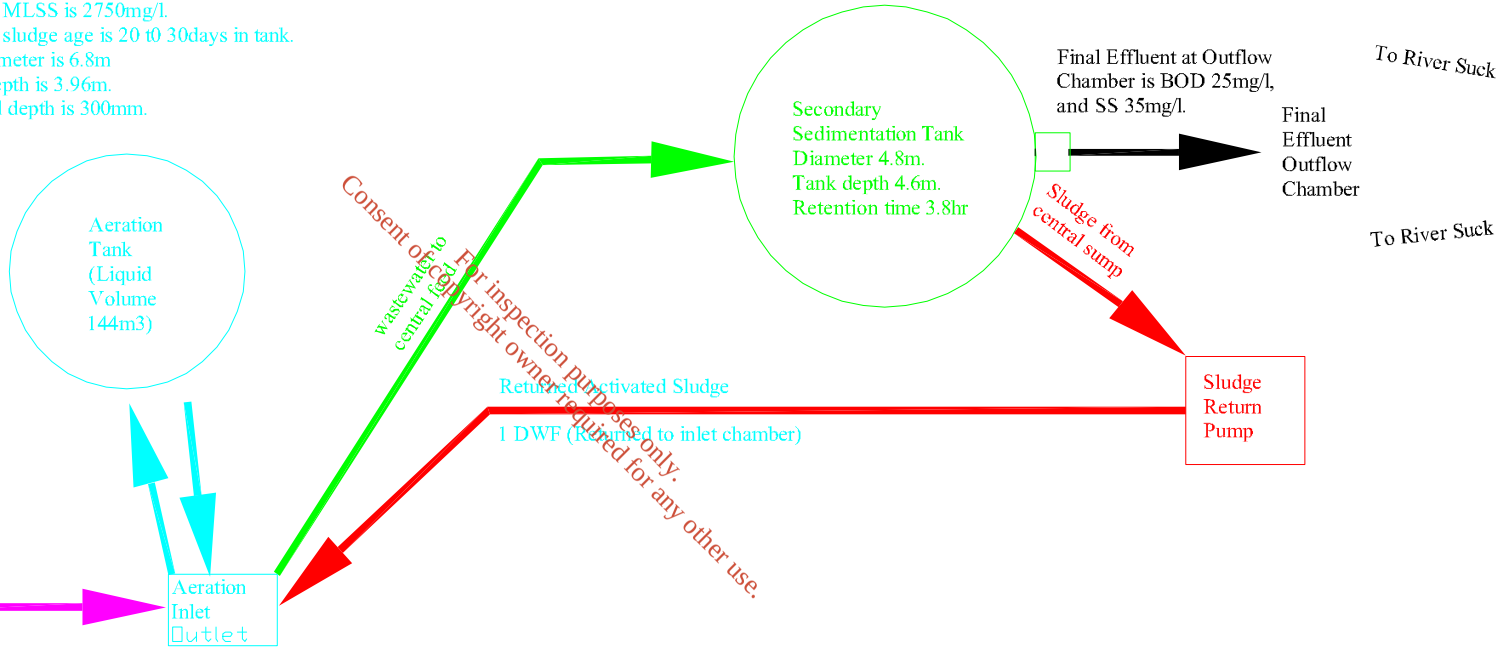
A

SECONDARY TREATMENT

BIOLOGICAL TREATMENT

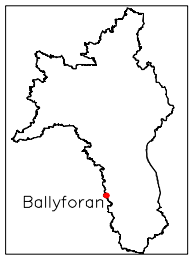
Note: Aeration tank capacity is for P.E. of 780 at 60 grams B.O.D./head/day is based on conventional criterion of 225 mg./litre for extended aeration.
Desirable F/M ratio is 0.1kg BOD/kg MLSS.
Desirable MLSS is 2750mg/l.
Desirable sludge age is 20 t0 30days in tank.
Tank Diameter is 6.8m
Liquid Depth is 3.96m.
Freeboard depth is 300mm.

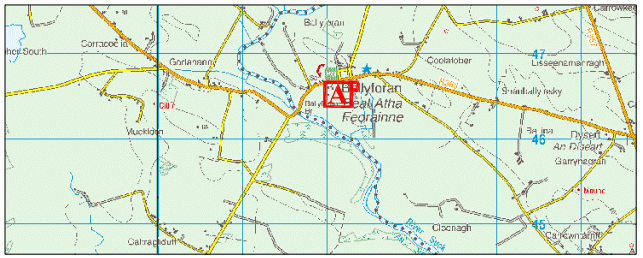
Note: Sedimentation tank capacity based on an upflow flow of 1.2m3/m2/hour for 3 D.W.F.
For P.E. of 780 an area of tank of 18.09m2 is provided.



LEGEND

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





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PROJECT.
Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE.
WWTP Detail Process Plan

DRAWN:	DRAWING No.
P Fleming	5
SCALES: N.T.S.	

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

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ROSCOMMON COUNTY COUNCIL

BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX D

DISCHARGES TO AQUATIC ENVIRONMENT

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Annex D: - DISCHARGES TO AQUATIC ENVIRONMENT

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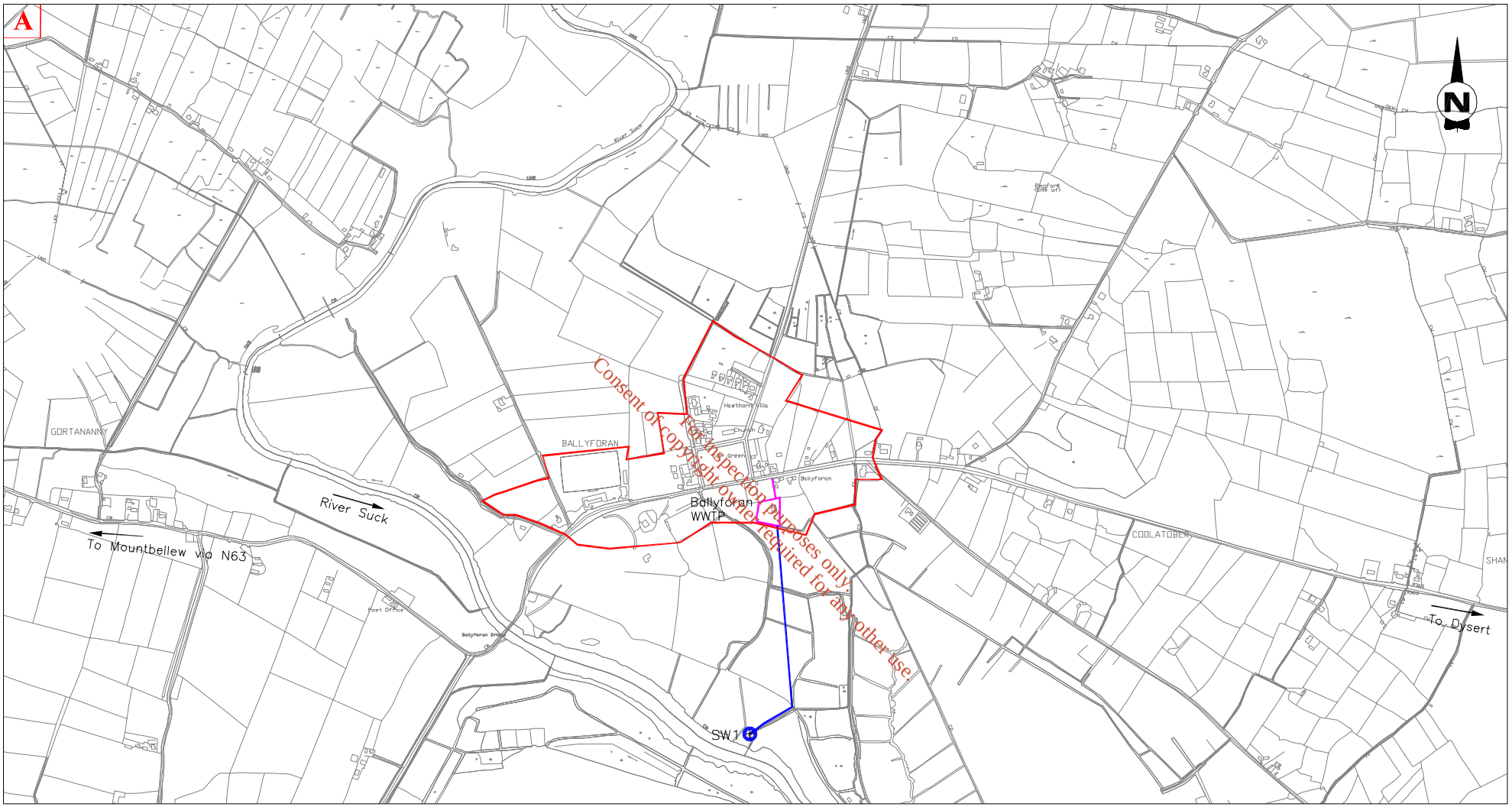


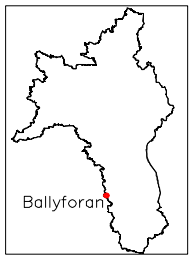
LEGEND

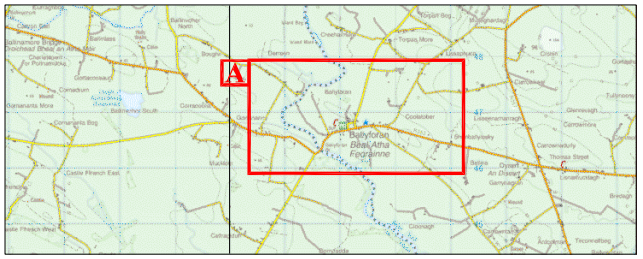
WWTP BOUNDARY

AGGLOMERATION BOUNDARY

Primary Discharge Point

Secondary Discharge Point





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Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE.

Overview of Discharge Points

DRAWN:	DRAWING No.
P Fleming	06
SCALES: 1:10,000	

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

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BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION APPLICATION

ANNEX E

MONITORING

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Annex E: - MONITORING

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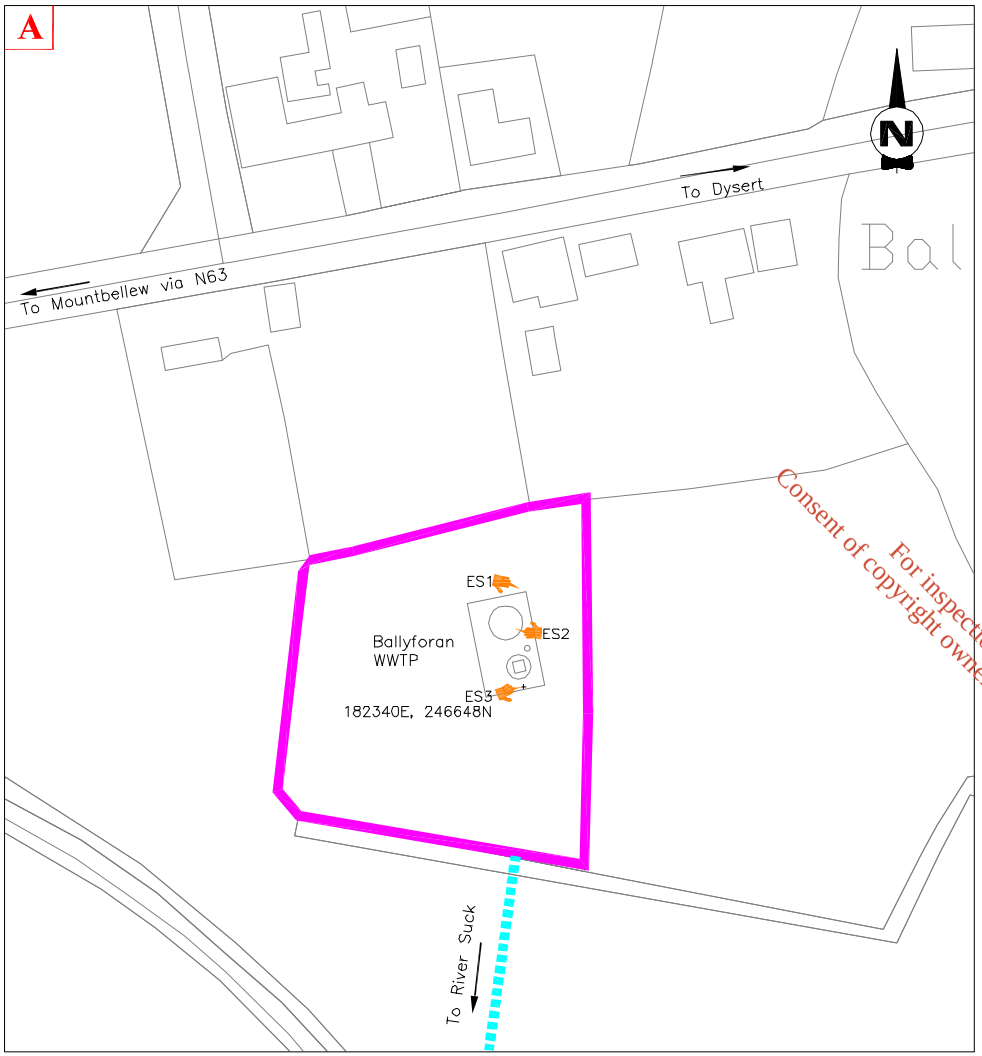

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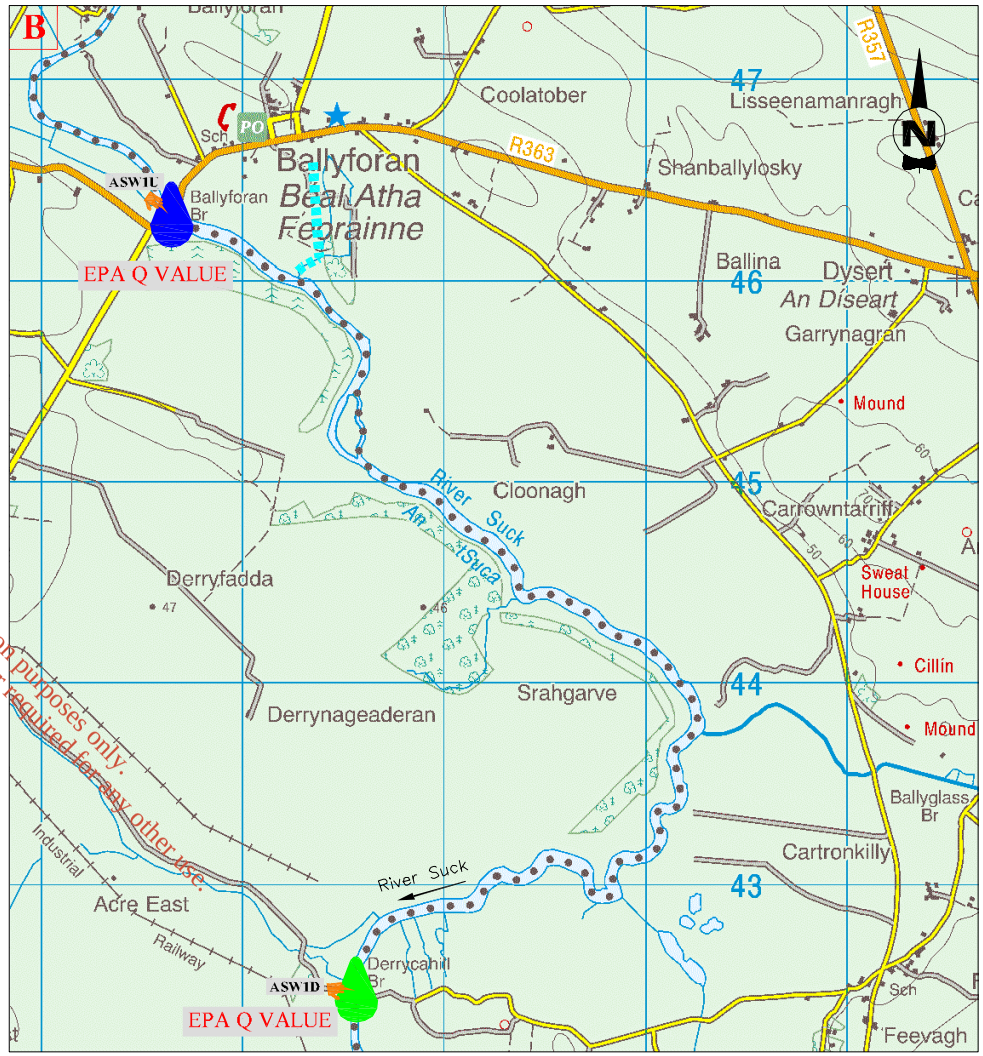

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LEGEND

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

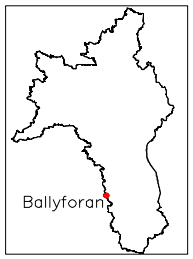
Flow path to river Suck

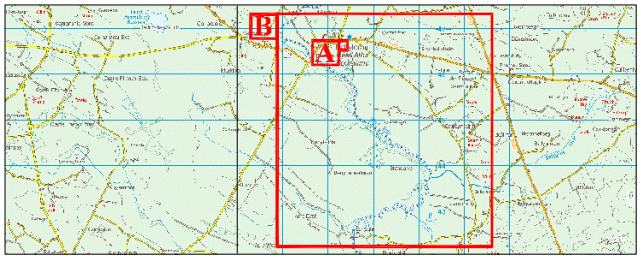
SAMPLING LOCATIONS
(ES=Effluent Sampling)
Grab Sample

Influent/Effulent Sample

ASW1d-1

ES1/ES3





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Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE.

Location of Sampling & Monitoring Points

DRAWN:	DRAWING No.
P Fleming	7
SCALES:	
As Shown	

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

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BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION

ANNEX F

EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGES

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

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

The primary outfall (SW1) from the Ballyforan Waste Water Treatment works discharges to the tributary of the river Suck.

There are no secondary discharge points with emergency overflows on the Ballyforan waste water network.

The River Suck 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 River Suck is designated a Natural Heritage 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.

Ballyforan village obtains its drinking water from Four Roads Regional Water Supply Scheme. The source is a spring, 182045E, 252394N and is located upstream of the discharge points from Ballyforan WWTP.

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The 95%ile Flow in the stream adjacent to WWTP is given as 1.6m^3/sec. The normal daily flow from the plant is in the region of 75m^3/day or 0.00086m^3/sec. Therefore, on a normal day, the flow in the river is 1860 times that being discharged from the plant (based on a 95%ile flow of 1.6m^3/sec), 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,

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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 1100 "Ballyforan Bridge" and station number 1125 "Bridge W. of Feevagh" is downstream of SW1.

Biological Quality Rating (Q Values)										
River Ballyforan		Code 26/S/08. Tributary of Scramoge / Mountain								
Station No.	1974	1978	1980	1983	1984	1987	1992	1996	1999	2002
1100	5	4-5	4	-	4	4	4	4	4	4-5
1125	-	-	-	-	4	-	4	4	4	4

Roscommon County Council monitors the Suck River upstream and downstream of the discharge from the Waste Water Works. These locations are shown on drawing 7 of attachment E3. Samples are collected every month and analyzes for suite of parameters as outlined table D.1(i)(b).

The results of treated effluent indicate wastewater complying with standard.

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

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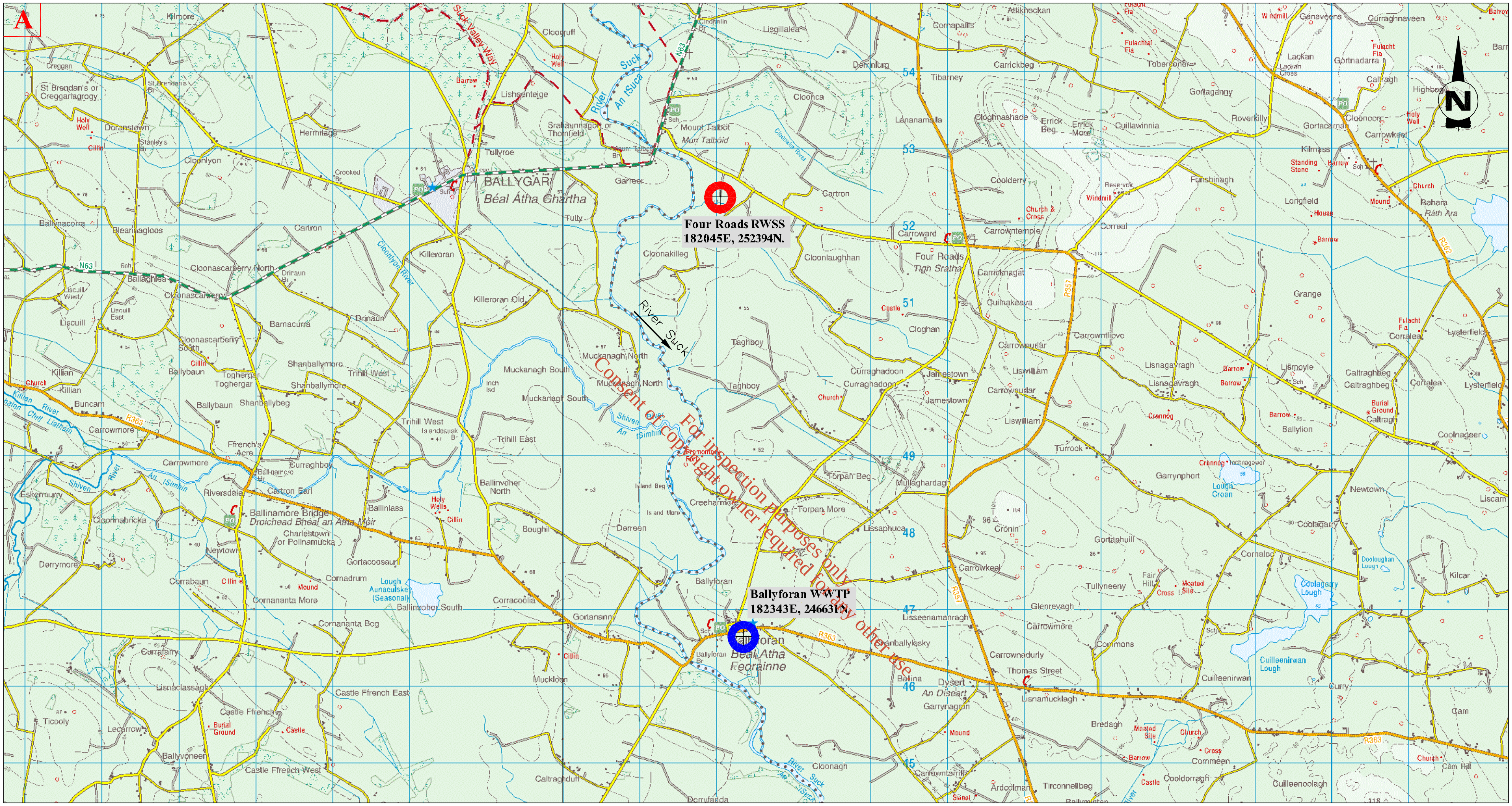

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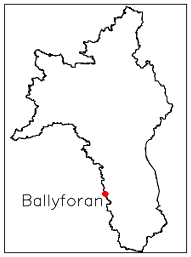
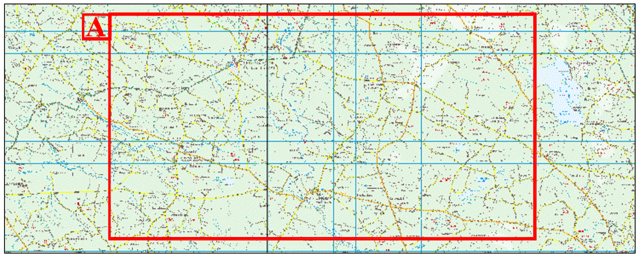
LEGEND

Water Abstraction Point

Ballyforan WWTP





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ROSCOMMON COUNTY COUNCIL

PROJECT:

Ballyforan Waste Water Discharge Certificate of Authorisation Application

DRAWING TITLE:

Water Abstraction Point
Four Roads RWSS

DRAWN:	DRAWING No.	
P Fleming	8	
SCALES: 1:50,000		
DATE: 11th December 2009	CHECKED: P. Fleming	APPROVED: V. Walsh

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ROSCOMMON COUNTY COUNCIL

BALLYFORAN WASTE WATER CERTIFICATE OF AUTHORISATION

ANNEX G

PROGRAMME OF IMPROVEMENTS

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SECTION G: PROGRAMMES OF IMPROVEMENTS

G.1. Compliance with Council Directives

Programme of Improvements

The Ballyforan 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 Ballyforan 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.

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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 780 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 Western 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 Lough Corrib to achieve/maintain "high status" under the WFD.

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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 River Suck 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: Suck River Callows (NHA)
SITE CODE: 000222

The Suck River Callows is a long sinuous area of semi-natural lowland wet grassland, which floods extensively each winter along the River Suck between Castlecoote in thenorth and Shannonbridge in the south, passing through Ballinasloe. The Suck River forms the Roscommon - Galway county boundary and joins the River Shannon at Shannonbridge. Along most of its borders, former raised bogs (now in the process of large-scale harvesting by Bord na Móna) are present. Just south of Ballyforan, there is a small intact raised bog on the eastern bank of the river, which contains both high bog and cutover. This is situated in the townlands of Ballina, Ballyforan, Coolatober and Cloonagh, Co. Roscommon and can be accessed from a road to the east.

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The main habitat of the Suck River Callows is flood meadows of wet grassland and the associated aquatic and semi-aquatic habitats of drainage ditches. Secondary habitats of importance, which directly border the callows within the site are speciesrich dry and wet calcareous grassland, flooded fen, wet woodland and a small raised bog with a tear pool system. There is a semi-natural margin between this raised bog and the river. Improved grasslands are also included within the site at the upper margin of wet grasslands.

The wet grassland vegetation consists of Common Sedge (*Carex nigra*), Creeping Bent (*Agrostis stolonifera*), Brown Sedge (*Carex disticha*), Marsh Foxtail (*Alopecurus geniculatus*), Reed Canary-grass (*Phalaris arundicacea*), Creeping Buttercup (*Ranunculus repens*), Jointed Rush (*Juncus articulatus*), Common Spikerush (*Eleocharis palustris*) and Floating Sweet-grass (*Glyceria fluitans*). Many of these species are important food plants for the wintering wildfowl which also forage on the improved grasslands within the site. A large area of flooded fen with Black Bog-rush (*Schoenus nigricans*) and Common Reed (*Phragmites australis*) occurs to the north of Derrycahill

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Bridge. Small patches of Common Club-rush (*Scirpus lacustris*) occur in shallows along the river margin.

At Ballyforan the small intact raised bog has been classified as a True Midland Raised Bog. The vegetation of the high bog has been affected by burning and is dominated by Carnation Sedge (*Carex panicea*), Bog Asphodel (*Narthecium ossifragum*), Deergrass (*Scirpus cespitosus*) and Ling Heather (*Calluna vulgaris*), however, there is active Bog Moss (*Sphagnum* spp.) regeneration occurring. Species occurring on the site include *Sphagnum fuscum*, *S. imbricatum* and *S. capillifolium*, *S. cuspidatum* (in elongated tear pools), Great Sundew (*Drosera anglica*), Brown Beak-sedge (*Rhyncospora fusca*) and Lesser Bladderwort (*Utricularia minor*). Cross-leaved Heath (*Erica tetralix*), Bog-rosemary (*Andromeda polifolia*), cottongrasses (*Eriophorum* spp.) and lichens (*Cladonia* spp.) occur in the unburnt areas. The bog appears to be drying out and the western margin has been invaded by Downy Birch (*Betula pubescens*).

At Ballyforan Bog, the cutover to the south of the high bog is primarily reclaimed grassland. There is an uninterrupted transition from this high bog to low-lying callow grassland to the west. Active peat-cutting occurs to the north-west and east with some scrub encroachment on old cutover.

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There are also small areas of cutover at the margins of the developed (cut-away) raised bogs on the banks of the River Suck. Some of this cutover is very wet, bordering on to floodmeadows and contains permanent pools with Lesser Bladderwort. Royal Fern (*Osmunda regalis*), cottongrasses and orchids (*Dactylorhiza* spp.) have been recorded on these cutover areas. Regenerating birch and Alder (*Alnus glutinosa*) woods occurs on old cutover margins throughout the site. These wet woodlands have an understory of Ling Heather and Bog-myrtle (*Myrica gale*).

The Suck River Callows is an important site for wintering waterfowl. Of particular note is the internationally important flock of Greenland White-fronted Geese based along the Suck. The birds congregate mainly in the middle reaches of the river. A separate sub-flock is centred at Glenamaddy turlough. The average maximum winter count for the period 1988/89 to 1993/94 was 386. In recent years, the only complete count of waterfowl for the site was in January 2002. Three species had populations of national importance: Whooper Swan 124, Wigeon 1,203 and Lapwing 3,640. Other species which were present included Mute Swan 90, Teal 325, Pintail 5 and Curlew 67. Of the species which occur regularly at this site, Greenland White-fronted Geese and Whooper Swan are listed on Annex I of the E.U. Birds Directive. A further Annex I species, Golden Plover, occurs at

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times. The good quality riverine and grassland habitats are also home to populations of Otter and Irish Hare, and Brown Trout occur in the river.

Current landuses on the site include, agriculture, active peat-cutting, forestry and conservation. The wet grasslands of the callows are used for agriculture. At Ballyforan Bog, active peat-cutting is most prevalent to the north-west and along the eastern margin of the high bog. The cutover to the south has been reclaimed for agriculture. There are extensive areas of peat-cutting by Bord na Móna along the boundaries of the site and a large area of callow and esker has been recently planted with forestry. Damaging activities associated with these landuses include habitat loss and drainage throughout the site and burning of the high bog. These activities have all resulted in the loss of habitat and damage to the hydrological status of the raised bog, and pose a continuing threat to its viability. There is a no-shooting area at Muckanagh, north of Ballyforan.

The Suck River Callows NHA, along with the River Shannon Callows cSAC (216) and River Little Brosna Callows NHA (564), form by far the largest area of lowland wet grassland in Ireland and Britain. These callows are each designated as a Special Protection Area under the E.U. Birds Directive for the presence of Internationally and Nationally Important numbers of wintering waterfowl.

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The presence of raised bog is of considerable conservation significance as it is 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 and pools. 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. The site is of major ornithological importance.

SITE SYNOPSIS

SITE NAME: Four Roads Turlough (NHA, SAC)

SITE CODE: 001637

Four Roads Turlough is located south-west of Four Roads village, 2.5 km from the River Suck. It lies below a low scarp of limestone hills and is an open, shallow basin without permanent standing water which seems to flood predictably and dry out early.

The site has a very uniform vegetation structure with the eastern part predominantly of grass, mostly Creeping Bent (*Agrostis stolonifera*), and the western of sedges, mostly Common Sedge (*Carex nigra*). There are a few low-lying places where Bottle Sedge (*Carex rostrata*) and Bogbean (*Menyanthes trifoliata*) grow and a few pools with

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Thread-leaved Water-crowfoot (*Ranunculus trichophyllus*), Lesser Water-plantain (*Baldellia ranunculoides*) and Lesser Marshwort (*Apium inundatum*). No oligotrophic fen vegetation occurs and only a few tufts of Black Bog-rush (*Schoenus nigricans*) are found. Peat is a significant presence throughout and there are occasional tree stumps, suggesting that the floods recede quite early in some years, and earlier that in most turloughs.

The site is undrained, despite a few attempts around the margins, and is fertilized in the eastern half. It is intensively grazed and in some areas there is poaching of the peaty soil.

Four Roads Turlough has long been recognised as an area of ornithological importance for the large numbers of waterfowl that use it in winter, and it is part of a Wildfowl Sanctuary. As with most turloughs, bird numbers are highly variable. There are times when the whole of the River Suck population of Greenland Whitefronted Geese (500) are on the site, along with 2,600 wildfowl and 8,000 waders. At other times bird numbers are in the hundreds. Except where indicated, the following numbers are the average of 11 counts over 3 seasons, 1984/85-1986/87: Wigeon (983), Teal (870), Shoveler (81), Bewick's Swan (21), Greenland White-fronted Goose (177, 1 count in 1987/88), Mallard (235), Pintail (40), Golden Plover (317), Lapwing (473) and Curlew (103). A single count on 17th January 1988 emphasises the importance of assessing bird populations of turloughs based on as large a series of counts as possible - present on that date were 3,600 Wigeon, 2,500 Teal, 177 Greenland White-fronted Geese and 2,900 Lapwing. The site is also used by Whooper Swan (recent count of 60) and breeding Lapwing, Redshank and Snipe. Several of these species are listed in the Red Data Book and on Annex I of the EU Birds Directive.

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The uniformity of the turlough basin and the fertilization of its eastern half means that there is little interest in the vegetation. However, turloughs are listed, with priority status, on Annex I of the EU Habitats Directive and, as such, are of considerable conservation significance. The site is very important as a refuge or feeding area for wildfowl and waders, some of which occur in numbers of national importance.

SITE SYNOPSIS

SITE NAME: Lough Croan Turlough (SAC)

SITE CODE: 001610

Lough Croan Turlough is located south of the Athlone to Mount Talbot road and is a linear wetland, aligned north-west/south-east, which lies in a flattish area of glacial till. It is split into two main parts - the east functions as a typical turlough, with a wet, reedy centre, while the west is a fen, floating in places, which also floods in winter. In

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between there is undulating ground. There is little overground flow, but both basins retain some water all year round.

Lough Croan is a large, complex site which supports a multitude of vegetation types. The midline of the turlough is generally the wettest ground and there are beds of Common Reed (*Phragmites australis*) with Tufted-sedge (*Carex elata*), Bottle Sedge (*Carex rostrata*) and Water Horsetail (*Equisetum fluviatile*) in the centre of much of the western half. Cowbane (*Cicuta virosa*), Lesser Water-parsnip (*Berula erecta*), Greater Spearwort (*Ranunculus lingua*) and Yellow Iris (*Iris pseudacorus*) are frequent and there are occasional clumps of Grey Willow (*Salix cinerea*). Drains on the site support aquatic vegetation, with Bogbean (*Menyanthes trifoliata*), Whorled Water-milfoil (*Myriophyllum verticillatum*) and Lesser Pondweed (*Potamogeton pusillus*). At the eastern end a larger waterbody produces the same vegetation, with substantial areas of Common Club-rush (*Scirpus lacustris*), Tufted-sedge and Bogbean, mixed with Brached bur-reed (*Sparganium erectum*) and Yellow Iris. On the southern side a distinct band of annual plants follows the edge of the sedges on the whitish mud. Here the Rare, Red Data Book species, Northern Yellow-cress (*Rorippa islandica*) occurs frequently, along with Marsh Cudweed (*Gnaphalium uliginosum*), Red Goosefoot (*Chenopodium rubrum*) and Toad Rush (*Juncus bufonius*).

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Outside of these wet areas the turlough bottom is covered with sedge-dominated vegetation, particularly Common Sedge (*Carex nigra*); the occurrence here of Purple Moor-grass (*Molinia caerulea*), Tufted Hair-grass (*Deschampsia cespitosa*) and Marsh Horsetail (*Equisetum palustre*) reflect the high peat content of the soil.

Peat is especially thick at the western end where Blunt-flowered Rush (*Juncus subnodulosus*), Bogbean, Marsh Lousewort (*Pedicularis palustris*) and Water Horsetail are scattered through vegetation of Common Sedge, Bottle Sedge and Brown Sedge (*Carex disticha*). An area of sedge fen with Devil's-bit Scabious (*Succisa pratensis*), a little Black Bog-rush (*Schoenus nigricans*) and Slender Sedge (*Carex lasiocarpa*) is also found here.

Around the margins grassland is predominant, calcareous grassland at the southern end where the shore rises abruptly, but elsewhere grassland which is more nutrient enriched and generally species-poor.

Lough Croan is an important ornithological site and is a Wildfowl Sanctuary. The following species use the site (except where indicated, numbers are the average of 11 counts over 3 seasons, 1984/85-1986/87): Shoveler (154), Wigeon (483), Gadwall

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(10, 1 count), Teal (473), Mallard (32), Pintail (17), Coot (42), Lapwing (445; 2,600 in 1988), Curlew (103), Golden Plover (160; occasionally numbers between 1000 and 3000 are recorded), Whooper Swan (11) and Bewick's Swan (18, 1 count). Pochard (6 breeding pairs in 1991), Shoveler (proved breeding in 1993), Mute Swan and Blackheaded Gull also occur at the site and nest, as do Snipe, Curlew and Lapwing. Greenland White-fronted Geese regularly utilise this turlough for feeding and, when water is high, for roosting. These birds are part of the River Suck population. Numbers vary, but in most winters between 150 and 300 individuals are recorded. Short-eared Owl has once been recorded from the site; this species, Whooper Swan, Golden Plover and Greenland White-fronted Goose are listed in the Red Data Book and, along with Bewick's Swan, on Annex I of the EU Birds Directive.

Lough Croan Turlough is an unusual, wetland that contains fen, reedswamp and turlough vegetation communities in juxtaposition. The vegetation is highly diverse, with a total of 17 different communities occurring, several of which are rare or very large in extent. The site is notable for the presence of the rare, Northern Yellow-cress, which occurs frequently. The wintering waterfowl numbers are large and the site is especially useful to dabbling duck. This is an important site on account of its overall size, its birdlife and the rare plant communities and species it supports. Turloughs are rare and threatened habitats that are listed, with priority status, on Annex I of the EU Habitats Directive and, as such, are of considerable conservation significance.

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SITE SYNOPSIS

SITE NAME: Killeglan Grassland (SAC)
SITE CODE: 002214

Killeglan grassland is situated in County Roscommon, approximately 9.5 km north of Ballinasloe. The underlying geology is Upper Carboniferous Limestone. A shallow rendzina type soil formation has developed in places between the outcropping limestone boulders and the shattered limestone formations. The topography of the site is undulating.

The site is dominated by semi-natural dry grasslands rich in orchids, a priority habitat on Annex I of the EU Habitats Directive. The calcareous grassland vegetation comprises low-growing species such as Red Fescue (*Festuca rubra*), Wild Thyme (*Thymus praecox*), Cat's-ear (*Hypochoeris radicata*), Mouse-ear Hawkweed (*Hieracium pilosella*), Devil's-bit Scabious (*Succisa pratensis*), Mountain Everlasting (*Antennaria dioica*), Carline Thistle (*Carlina vulgaris*), Dandelion (*Taraxacum officinale* agg.), Sedges (*Carex* spp.), Ribwort Plantain (*Plantago lanceolata*), Bulbous Rush (*Juncus bulbosus*), Heather

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(*Calluna vulgaris*), Crested Dog's-tail (*Cynosurus cristatus*), Cock's-foot (*Dactylis glomerata*), Common Bent (*Agrostis capillaris*), Yorkshire Fog (*Holcus lanatus*), Carnation Sedge (*Carex panicea*), Sheep's Sorrel (*Rumex acetosella*), Yellow Rattle (*Rhinanthus minor*), Daisy (*Bellis perennis*), Yarrow (*Achillea millefolium*), Clover (*Trifolium* spp.), Selfheal (*Prunella vulgaris*) and Early-purple Orchid (*Orchis mascula*).

On the out-cropping limestone, Herb Robert (*Geranium robertianum*), Wall-rue (*Asplenium ruta-muraria*), Hart's-tongue Fern (*Phyllitis scolopendrium*), Wild Thyme, Cat's-ear, Mouse-ear Hawkweed, Mountain Everlasting, Fairy Flax (*Linum catharticum*) and many mosses and lichens are present. Patches of Gorse (*Ulex europaeus*) and Bracken (*Pteridium aquilinum*) occur, with occasional specimens of Yew (*Taxus baccata*). The Red Data Book species, Green-winged Orchid (*Orchis morio*), was recorded in abundance at this site in 1998.

Badger and Hare, two Red Data Book mammals occur on this site. Birds recorded at this site include Kestrel, Sparrowhawk, Pheasant, Stonechat, Wheatear and Raven.

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The majority of the site appears to be managed in a manner which is suitable for the continued conservation of the grasslands. Low numbers of cattle are grazed during winter, and low numbers of sheep in summer and autumn. Horses are occasional grazers. The grasslands have been improved in the past and limestone boulders have been cleared and placed in heaps scattered throughout the site. The site is divided into a number of small field systems which are defined by dry stone walls. Neighbouring lands have recently been cleared of boulders and shattered pavement and have been re-seeded and heavily fertilised. Reclamation within the site would pose a threat to the conservation interest of the grassland.

Overall, the site is of outstanding quality and provides an excellent example of the Annex I priority habitat orchid-rich dry calcareous grasslands. It plays host to an important population of the Red Data Book plant species Green-winged Orchid, along with a number of Red Data Book mammals. The current management of the site appears to be suitable for the continued conservation of the grasslands.

SITE SYNOPSIS

SITE NAME: Feacle Turlough (NHA)

SITE CODE: 001634

Feacle turlough lies about 12km west of Athlone in an uneven, glacial terrain of kame deposits. The basin runs roughly E - W but the edge is sinuous because of encroaching mounds. An esker-like feature projects from the southern side. The floor of the basin is similarly uneven with a

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number of discrete hollows: some at the western end show bedrock. Elsewhere there is loose rock at the edges and a number of walls.

A permanent pond exists across the road at the northwestern end. There was no other water when the site was visited except in a well at the western end. This would seem to be the original swallow hole. There is no overground inflow to the turlough and it is a dry site in summer. Flooding to a depth of 3- 4m is likely however. There is no sign of drainage within or outside the basin.

The turlough is largely grazed by sheep with a few cattle at the eastern end. There is no silage made locally and noobvious effluent to the basin. Some seepage from a house may enter the permanent pond.

The vegetation is extremely simple. All the lower hollows have Polygonum amphibium with some Alopecurus geniculatus, Phalaris and sometimes Rorippa islandica. Above this Carex nigra and Potentilla reptans occupy the western section and poor grassland (2B) the drier, eastern half. This spreads onto the esker on the south where there is a compact zonation. Animal treading at the eastern end has allowed a Rumex crispus, R.obtusifoius, Potentilla anserina mixture to grow on low land around a pond with Polygonum spp, Ranunculus trichophyllus and Potamogeton crispus within. Capsella, Stellaria media etc are frequent in this sandy ground. The south-east corner used to carry a significant amount of Rhamnus woodland around a hummocky limestone outcrop. This has largely been felled but a fragment persists. The hedges at the western end have a high proportion of Rhamnus also and the roadside pond connected to the turlough at times of high water is covered in dense Amblystegium varium, Lemna minor, L.gibba and Myriophyllum spicatum with Filaginella and Rorippa islandica around the edges.

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Lapwings probably nest in the turlough but no other species were seen. There is no winter information.

The value of this turlough is that it is at the dry end of the wet - dry gradient but seems to be unaffected by any artificial drainage. It is also unusual (like Coolcam) in being surrounded by gravelly deposits which may affect its hydrology. Its vegetation is limited in type but the zonation on the surrounding glacial hills is of some interest. It also contains two unusual plant species: Lemna gibba and Rorippa islandica. Its overall rating score (30) puts the turlough two-thirds way down the scale but its generally good condition would seem to qualify it as regionally important.

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Circular L8/08 2

September 2008

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

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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.

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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)

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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.**

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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

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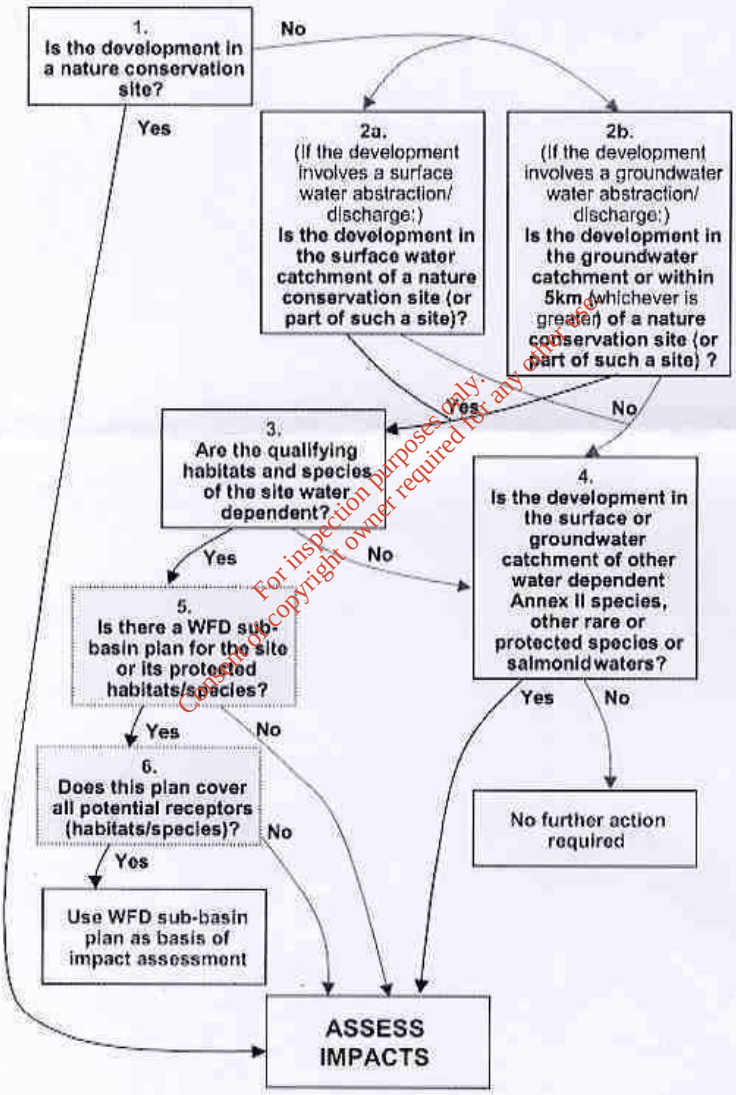
Below is a flow diagram for screening water services infrastructure projects, followed by explanatory notes on the diagram and other points of information. If the conclusion of the screening outlined in this **Natura 2000 Screening Protocol** is to **"ASSESS IMPACTS"**, then the plan or project must 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.

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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

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An "Assess Impacts" is required as per Circular L8/08 flow diagram. The appropriate National Parks and Wildlife Service maps showing conservation sites were examined to see whether the treatment plants are within such conservation sites. Ballyforan WWTP is not located within a nature conservation site. However, the primary discharge point SW1, discharge directly to the river Suck, which is located within a conservation site.

Wastewater Treatment & Discharge Standards.

The Ballyforan WWTP is below the 10,000-population equivalent required for an Environmental Impact Statement. The current Ballyforan WWTP has been recently upgraded to a design capacity of 800 p.e.. The effluent flows through preliminary, secondary treatment units with phosphorous removal and tertiary reed bed. The current Ballyforan WWTP has a design effluent discharge limit to the tertiary reed bed of 25mg/l BOD and 35mg/l suspended solids in the final effluent. Recent effluent analysis indicate that the Ballyforan WWTP is performing in a satisfactory manner and providing an effluent that complies with the urban waste water treatment regulations (BOD & Suspended Solids) as summarised below table 10.

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Parameter	**Average Value (mg/l)**	**UWWT Regulation Limits (mg/l)**
BOD	12.9	25
Suspended Solids	19	35
Orthophosphate (as P)	1.6	2
NH4 (as N)	2.9	15

Table 10:- Ballyforan WWTP final effluent results 2008 – 2009.

Nature conservation sites located within a 10km of Ballyforan WWTP:

- Natural Heritage Site:
  None

- Proposed Natural Heritage Site:
  Suck River Callows is located approximately 0.5km downstream of the WWTP.
  Four roads Turlough is located approximately 4.9km upstream of the WWTP.
  Bugn Croan Turlough is located approximately 5.6km upstream of the WWTP.
  Feacle Turlough is located approximately 9.1km upstream of the WWTP.

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- Special Areas of Conservation:
  Four roads Turlough is located approximately 4.9km upstream of the WWTP.
  Lough Croan Turlough is located approximately 5.6km upstream of the WWTP.
  Killeglan Grassland is located approximately 5.9km upstream of the WWTP.

- Special Protection Areas:
  Suck River Callows is located approximately 0.5km downstream of the WWTP.

The habitats and species that are site water dependent in the River Suck are:-

- none.

Impact of effluent discharges from Ballyforan WWTP:-
The treated effluent from the Ballyforan WWTP to the river Suck complies with the Urban Wastewater Directive standard and has no detrimental impact on the aquatic life of the river. The EC Directive – Urban Wastewater Directive requires that the proposed treatment process shall be capable of producing an effluent with a BOD not exceeding 25mg/l and suspended solids not exceeding 35mg/l with percentage reduction of 70-90% in BOD.

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The receiving water from Ballyforan WWTP is the river Suck. The river Suck 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.

At Ballyforan the small intact raised bog has been classified as a true midland raised bog. The habitats and species of the raised bog do not depend on the hydrology of the river Suck. The cutover bog to the south of the raised bog is primarily reclaimed grassland. Annex G of the submitted Ballyforan Certificate of Authorisation contains the site synopsis for River Suck Callows.

Mitigation Measures:-
The Ballyforan WWTP is not causing localised pollution to the tributary of the river Suck. The inclusion of secondary treatment units to the Ballyforan WWTP will mitigate any adverse impact on ecology to the tributary of the river Suck.

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Conclusion:-
Ballyforan WWTP effluent is standard and has no impact on the aquatic environment and this will further enhance the Q-ratings for the river Suck and river Shannon.

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

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

Phosphorus Regulations

The Ballyforan Waste Water treatment Plant and Agglomeration currently has no phosphorus treatment process. However, an upgrade of the WWTP with phosphorus removal unit is listed in the "assessment of needs" and is subject to funding from the DoEHLG and Roscommon County Council. 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 Ballyforan 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).

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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.

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Implementation Report for County Roscommon (July 2006)

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

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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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ORDER OF REPORT

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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**
SUCK	26S07	1000	Mount Talbot Bridge	181174 / 252943	4		Yes	4,5	19	4	30	Yes				
SUCK	26S07	1100	Ballyforan Bridge	181646 / 246481	4		Yes	4,5	17	4	30	Yes				
SUCK	26S07	1125	Bridge W. of Feevagh	182517 / 242551	4		Yes	4	17	4	30	Yes				

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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.

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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	

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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
	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.			

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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
	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			

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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
	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.			

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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
	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		

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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
SUCK	Mount Talbot Bridge	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				
SUCK	Ballyforan Bridge	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				
SUCK	Bridge W. of Feevagh	To ensure continued compliance with the P Regs	Monitoring	Provide up to date information at this station	Monitor Surface Water	Ongoing	Environment/Laboratory				

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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.

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(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.

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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

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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.

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(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.

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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.

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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

Ballyforan:

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 Ballyforan 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
Ballyforan:	Upgrading of treatment plant and collection system.
Cootehall:	Provision of new sewerage scheme
Creagh:	Provision of new sewerage scheme
Ballyforan:	Upgrading of treatment plant
Ballyforan:	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
Ballyforan:	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.

(b) Problems Encountered

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

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(c) 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)

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8. Septic Tanks

(a) Progress to date

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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.

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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.

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10. Reed Beds

(a) Progress to date

Reed beds have been provided in Arigna, Keadue, Ballyforan 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.

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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.

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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.

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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

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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

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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

(c) Future Plans/New Directions

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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.

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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

Continue to request adequate staffing levels.

Annex G: - PROGRAMME OF IMPROVEMENTS

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G.3. Impact Mitigation

The Ballyforan 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 Ballyforan WWTP and agglomeration in the future will ensure that any further emissions from the agglomeration would continue to not result in significant environmental pollution.

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