

This is a draft document and is subject to revision.



Waste Water Discharge Licence Application Form

EPA Ref. N^o:
(Office use only)

Environmental Protection Agency
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Tracking Amendments to Draft Application Form

Version No.	Date	Amendment since previous version	Reason
V. 1.	11/10/07	N/A	
V. 2.	18/10/07	Inclusion of a Note 1 superscript for Orthophosphate in Tables D.1(i)(b) & D.1(ii)(b).	To highlight the requirement for filtered samples in measurement of O-Phosphate for waste water discharges.
V.3.	13/11/07	Amend wording of Section F.2 to include 'abstraction'.	To accurately reflect the information required
		Amend wording of Checklist in Annex to reflect wording of Regulation 16(5) of S.I. No. 684 of 2007.	To accurately reflect the Regulations and to obtain the application documentation in appropriate format.
		Inclusion of unique point code for each point of discharge and storm water overflow.	To aid in cross-referencing of application documentation.
V.4	18/04/08	Inclusion of requirement to provide name of agglomeration to which the application relates.	To accurately determine the agglomeration to be licensed.
		Amend wording of Section B.7. (iii) to reflect the title of Water Services Authority.	To accurately reflect the Water Services Act, 2007.
		Addition of new Section B.9 (ii) in order to obtain information on developments yet to contribute to the waste water works.	To obtain accurate population equivalent figures for the agglomeration.
		Addition of sub-sections C.1.1 & C.1.2 in order to clarify information required for Storm water overflow and pumping stations within the works.	To obtain accurate information on design and spill frequency from these structures.
		Amend Section D.1 to include a requirement for monitoring data for influent	To acquire information on the population loading onto the plant and to provide information on performance rates within

		to waste water treatment plants, where available. Amend wording of Section E.1 to request information on composite sampling/flow monitoring provisions.	the plant. To acquire accurate information on the sampling and monitoring provisions for discharges from the works.
V.5	07/07/2008	Amend wording of B.7 (iii) to include reference to Water Services Authorities. Amend Section G.1 to include Shellfish Waters Directive.	To accurately reflect the Water Services Act, 2007 requirements.
V.6	26/08/2008	Amendments to Section D to reflect new web based reporting. Amended requirements for reporting on discharges under E.1 Waste Water Discharge Frequency and Quantities. Amendment to Section F.1 to specify the type of monitoring and reporting required for the background environment. Removal of Annexes to application form.	To clarify the reporting requirements. To streamline reporting requirements. To clarify the reporting requirements for ambient monitoring. To reflect the new web based reporting requirements.

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Environmental Protection Agency
Application for a Waste Water Discharge Licence
Waste Water Discharge (Authorisation) Regulations 2007.

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ABOUT THIS APPLICATION FORM

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

The Application Form **must** be completed in accordance with the instructions and guidance provided in the *Waste Water Discharge Licensing Application Guidance Note*. The Guidance Note gives an overview of Waste Water Licensing, outlines the licence 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 Licence must contain the information prescribed in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007). Regulation 16 of the Regulations sets out the statutory requirements for information to accompany a licence 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 in respect of Regulation 16 requirements, please complete the Regulation 16 Checklist provided in Annex 2.

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

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

PROCEDURES

The procedure for making and processing of applications for waste water discharge licences, and for the processing of reviews of such licences, appear 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.

Prior to submitting an application the applicant must publish (within the two weeks prior to date of application) in a newspaper circulating in the area, and erect at the point nearest to the waste water treatment plant concerned or, if no such plant exists, at a location nearest the primary discharge point, a notice of intention to apply. An applicant, not being the local authority in whose functional area the relevant waste water discharge, or discharges, to which the relevant application relates, takes place or is to take place, must also notify the relevant Local Authority, in writing, of their intention to apply.

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

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

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

Additional information may need to be submitted beyond that which is explicitly requested on this form. Any references made should be supported by a bibliography. The Agency may request further information 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 licence is an offence under the Waste Water Discharge (Authorisation) Regulations, 2007.

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

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

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

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

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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 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 N° A.1**

[See Attachment A.1 for Non-Technical Summary](#)

SECTION A – NON TECHNICAL SUMMARY

Attachment A.1

– Non Technical Summary

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NON-TECHNICAL SUMMARY

Meath County Council, County Hall, Navan, County Meath is making an application to the Environmental Protection Agency (the Agency), in accordance with the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) for a Waste Water Discharge Licence, authorising the waste water discharges from the Ballivor Waste Water Treatment Works, serving the agglomeration of: Ballivor, County Meath.

Under Schedule 2 of the above regulations, the prescribed date for submission of Waste Water Discharge Licence Applications for agglomerations (with discharges with a population equivalent of between 1,001 - 2,000 pe) is 28 February 2009. The Ballivor Agglomeration falls under this category, presently serving a population equivalent of 1,792P.E, with a projected possible loading of 1,986P.E by the year 2015.

The agglomeration is currently served by the Ballivor Waste Water Treatment Plant, Kilballivor, Ballivor, County Meath (Grid Reference 269027E, 253820N), as shown on Drawing No. 5270-2680. Ballivor WWTP is located to the south-east of Ballivor Agglomeration and was upgraded and commissioned in 2006, treating municipal waste water from Ballivor Town. This plant has a design capacity of 2,000 P.E and was designed and constructed to provide for a possible Phase 2 expansion to 4000P.E, should same be required in the future. Ballivor Waste Water Treatment Plant utilises biological processes in conjunction with physical settlement and nutrient removal to provide treatment to incoming waste water for compliance with the relevant legislative effluent treatment standards. as shown on Drawing no. 5270-2688 & 5270-2689.

The existing treatment works is supervised during the hours of 8.00 – 16.00 Monday to Friday and 10.00 – 12.00 at Weekends.

Ballivor Agglomeration has 3 no. existing discharge points: a Primary Discharge Point (SW1), at location 269053E - 253834N, which discharges into a tributary of the Stonyford River, as shown on Drawing No. 5270-2684, a Secondary Discharge Point (SW-2) at location 269048E - 253837N (= emergency overflow from NEC discharge lift station), which discharges into a tributary of the Stonyford River, as shown on Drawing No. 5270-2685 and a Storm Water Overflow Discharge Point (SW3), at location 269071E - 253830N, which discharges into a tributary of the Stonyford River, as shown on Drawing no. 5270-2686.

Based on Effluent (Primary Discharge Point) Analysis presented on Tables D.1(i)(b) & D.1(i)(c) of this application and on the analysis of water upstream and downstream of the Primary Discharge Point (Tables F.1(i)(a) & F.1(i)(b), of this application), it is concluded that none 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, at concentrations above the standards set in the Water Quality (Dangerous Substances) Regulations, 2001 (S.I. 12 of 2001).

The emissions from the agglomeration are not expected to have any significant impact on the surrounding environment:

- The 3 no. emissions from the Ballivor Sewerage Agglomeration discharge to an unnamed stream, which is a tributary of the Stonyford River. The unnamed stream has no designation of ecological significance, but drains into the Stonyford River ca. 2km downstream, which is designated as a SAC. The existing 3 no. discharges are in existence for some time and do not appear to be having a negative effect on the water quality of the unnamed stream, or indeed on the water quality of the Stonyford River. It is therefore not expected that the discharges are having any negative affect on the surrounding ecology (aquatic).
- There are no emissions to ground/groundwater from the Ballivor Sewerage Agglomeration. Therefore any impact on ground/groundwater is unexpected.
- The results of water quality analysis presented in Tables F.1(i)(a) & F.1(i)(b) of this application show that there is little or no difference in water quality between the sampling location upstream of the emission points (aSW1u) and the sampling location downstream of the emission points (aSW1d).
- The EPA monitor water quality in the Stonyford River at stations upstream and downstream of the unnamed streams confluence with the Stonyford River. The closest EPA station in the Stonyford River upstream of the agglomeration (unnamed streams confluence with the Stonyford River) has a most recent Q-Value rating of Q4 (= good water quality, unpolluted) as does the closest EPA station downstream of the agglomeration. This is another indication that the effluent discharges from the Ballivor Agglomeration are not having a negative impact on the Stonyford River.
- There are 3 no. Meath County Council Drinking Water Abstraction Points from the River Boyne (Trim, Kilcarn & Roughgrange) located ca. 20.45km, 33.8km & 56.8km downstream (respectively) of the Ballivor Agglomeration Primary Discharge Point. This new WWTP, including phosphorous removal offers greater protection to the downstream waster abstraction points.

Once the Waste Water Discharge Licence is issued for Ballivor Agglomeration, the 'Programme for Environmental Monitoring' is proposed to continue in much the same way as it has done for the last 2 years. This will involve monitoring of the Influent to the Waste Water Treatment Plant and the Effluent from the Waste Water Treatment Plant (i.e. Primary Discharge Point) on a monthly basis for the following parameters: BOD, COD, Total

Suspended Solids (TSS), Total Phosphorus as P, Orthophosphate as P & Total Nitrogen as N.

The Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) also requests water sampling of the aquatic environment into which the Primary and Secondary Discharges occur, in order to monitor the impact of the discharges on the ambient environment.

For the last number of years, the County Council have carried out monthly monitoring in the Stonyford River (upstream and downstream of the unnamed streams confluence with the Stonyford River), at the EPA Station Locations 07S020100 and 07S020400, as shown on Drawing No. 5270-2695. This sampling includes analysis for: Dissolved Oxygen (DO), Temperature, pH, Electrical Conductivity, BOD, Suspended Solids, Ammonia, Total Organic Nitrogen, Nitrate, Chloride, Alkalinity, Hardness, Colour, Copper & Zinc.

It is proposed in this application to replace the monitoring at the EPA station locations (in the Stonyford River) with monitoring locations upstream and downstream of the discharge points within the unnamed stream (i.e. before it drains into the Stonyford River). The proposed monitoring locations aSW1u and aSW1d, are shown on Drawing No. 5270-2695.

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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: Ballivor

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 licence application relates. It should have the boundary of the agglomeration to which the licence application relates clearly marked in red ink.

Name*:	Meath County Council
Address:	County Hall
	Navan
	County Meath
Tel:	046-9097000
Fax:	046-9097001
e-mail:	info@meathcoco.ie

*This should be the name of the water services authority in whose ownership or control the waste water works is vested.

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

Name*:	Mr. Gerry Boyle, Senior Engineer
Address:	Meath County Council
	County Hall,
	Navan
	County Meath
Tel:	046-9067455
Fax:	046-9067754
e-mail:	gboyle@meathcoco.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:	
Tel:	
Fax:	
e-mail:	

*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 (authorisation) licence application.

Design, Build & Operate Contractor Details

Name*:	not applicable
Address:	
Tel:	
Fax:	
e-mail:	

*Where a design, build & operate contract is in place for the waste water works, or any part thereof, the details of the contractor should be provided.

Attachment B.1 should contain appropriately scaled drawings / maps ($\leq A3$) 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*:	Martin Gallagher, Caretaker
Address:	Ballivor Waste Water Treatment Works
	Kilballivor T.D., Ballivor, Navan,
	County Meath
Grid ref (6E, 6N)	269027E, 253820N
Level of Treatment	Secondary Treatment with nutrient removal
Primary Telephone:	087 2573573 (Caretaker Mobile)
Fax:	None
e-mail:	None

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

Attachment B.2 should contain appropriately scaled drawings / maps ($\leq A3$) 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.

Type of Discharge	375mm Diameter Outfall Pipe with Tide Flex Valve
Unique Point Code	SW1
Location	Discharge to tributary of Stonyford River, Kilballivor T.D., Ballivor, Navan, Co. Meath
Grid ref (6E, 6N)	269053E, 253834N

Attachment B.3 should contain appropriately scaled drawings / maps ($\leq A3$) 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.

Type of Discharge	100mm Diameter Simple Open-ended Emergency Overflow Pipe
Unique Point Code	SW2
Location	Emergency overflow from NEC Discharge Lift Station to tributary of Stonyford River, Kilballivor T.D., Ballivor, Navan, Co. Meath
Grid ref (6E, 6N)	269048E, 253837N

Attachment B.4 should contain appropriately scaled drawings / maps ($\leq A3$) 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	375mm Diameter Outfall Pipe with Tide Flex Valve
Unique Point Code	SW3
Location	Storm water overflow from storm water holding tank to closed culvert flowing towards tributary of Stonyford River, Kilballivor T.D., Ballivor, Navan, Co. Meath
Grid ref (6E, 6N)	269071E, 253830N

Attachment B.5 should contain appropriately scaled drawings / maps ($\leq A3$) 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
	✓	

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:	Meath County Council
Address:	Planning Department
	Abbey Mall
	Abbey Road
	Navan, County Meath
Tel:	046-9097500
Fax:	046-9097001
e-mail:	planning@meathcoco.ie

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

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

* Local Authority own development - Part X was prepared for Ballivor

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

Attachment included	Yes	No
	✓	

B.7 Other Authorities

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

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

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

Within the SFADCo Area	Yes	No
		✓

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:	Health Services Executive - North Eastern Area
Address:	Kells
	County Meath
Tel:	046-9280500
Fax:	046-9241459
e-mail:	info@hse.ie

B.7 (iii) Other Relevant Water Services Authorities

Regulation 13 of the Waste Water Discharge (Authorisation) Regulations, 2007 requires all applicants, not being the water services authority in whose functional area the relevant waste water discharge or discharges, to which the relevant application relates, takes place or is to take place, to notify the relevant water services authority of the said application.

Name:	not applicable
Address:	
Tel:	
Fax:	
e-mail:	

Relevant Authority Notified	Yes	No
		✓

Attachment B.7(iii) should contain a copy of the notice issued to the relevant local authority.

Attachment included	Yes	No
		✓

B.8 Notices and Advertisements

Regulations 10 and 11 of the Waste Water Discharge (Authorisation) Regulations, 2007 require all applicants to advertise the application in a newspaper (within two weeks prior to date of application) and by way of a site notice. See *Guidance Note*.

Attachment B.8 should contain a copy of the site notice and an appropriately scaled drawing ($\leq A3$) showing its location. **The original application must include the original page of the newspaper in which the advertisement was placed.** The relevant page of the newspaper containing the advertisement should be included with the original and one (1) copy of the application.

Attachment included	Yes	No
	✓	

B.9 (i) Population Equivalent of Agglomeration

TABLE B.9.1 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	1,792pe (Existing 2009) 1,986pe (Future 2015)
Data Compiled (Year)	2009
Method	Existing: Based on House Count. Future: Projected estimate See Attachment B.9(i)

B.9 (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 water habitat.

B.9 (iii) FEES

State the relevant Class of waste water discharge as per Column 1 of the Second Schedule, 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 €)
Discharges from agglomerations with a population equivalent of 1,001 to 2,000	€15,000.00

Appropriate Fee Included	Yes	No
	✓	

B.10 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), 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.

Attachment B.10 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.11 Significant Correspondence

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

Attachment B.11 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.

Attachment included	Yes	No
		√*

*No Section 63 notices have been issued by the Agency in relation to Ballivor WWTP

B.12 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.12 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
		√

Foreshore Licence not applicable to the Ballivor Sewerage Scheme

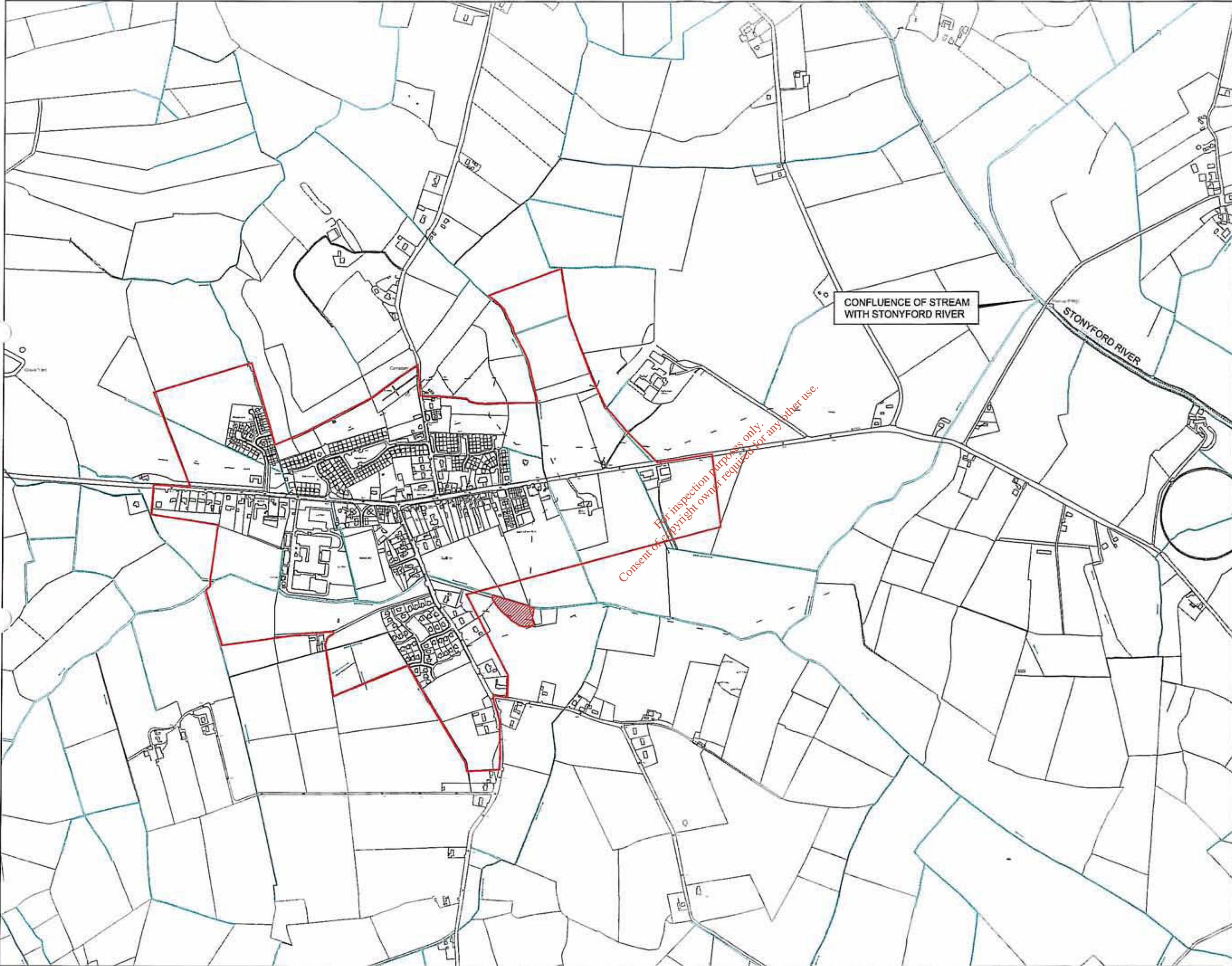
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SECTION B – GENERAL

Attachment B1: Applicant Details

– Drawing No. 5270 - 2680

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AGGLOMERATION
BOUNDARY

WWTP SITE
BOUNDARY

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk'd
A	25/02/09	ISSUE TO MEATH CO. CO.	R.K.	M.H.

Client:

MEATH COUNTY COUNCIL

Project:

**BALLIVOR WASTE WATER
DISCHARGE LICENCE
APPLICATION**

Title:


**AGGLOMERATION OUTLINE
PLAN**

(SECTION / ATTACHMENT B.1)

Scale @ A3: 1 : 10,000

Proposed by:	Checked:	Date:
R.K.	M.H.	05.02.09

Project Director: M.F.G.



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Drawing No: 5270-2680

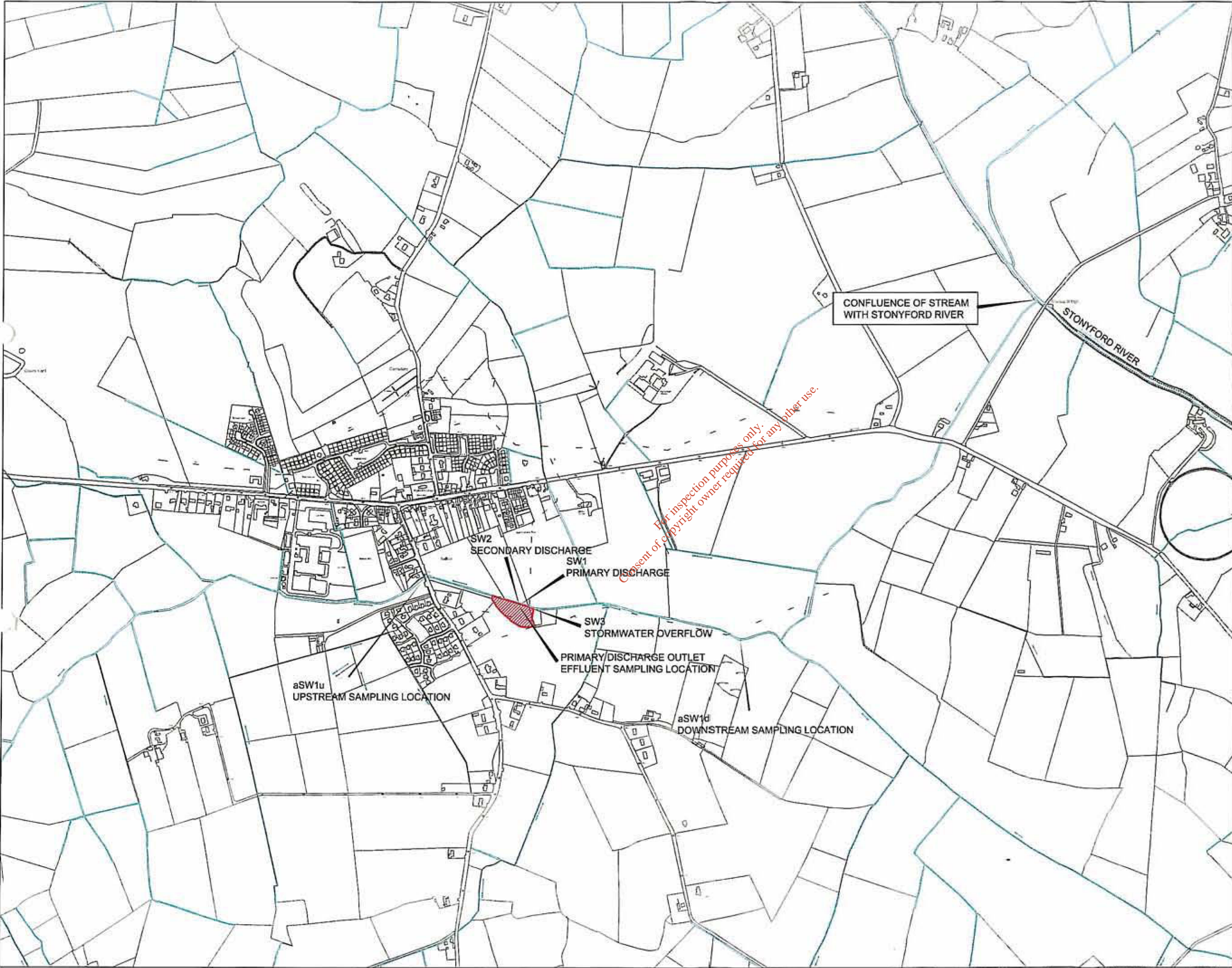
Revision: A


SECTION B – GENERAL

Attachment B2: Location of Wastewater Treatment Plant

- Drawing No. 5270 – 2681
- Drawing No. 5270 – 2682

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WWTP SITE BOUNDARY
PRIMARY DISCHARGE
SECONDARY DISCHARGE
STORMWATER OVERFLOW

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk.
A	20/02/09	ISSUE TO MEATH CO. CO.	JK	MM


Client:
MEATH COUNTY COUNCIL

Project:
BALLIVOR WASTE WATER DISCHARGE LICENCE APPLICATION

Title:
WWTP LOCATION & SITE BOUNDARY (INCLUDING ALL DISCHARGE, MONITORING & SAMPLING POINTS) (SECTION / ATTACHMENT B.2)

Scale @ A3: 1 : 10,000

Prepared by: R.J.K.	Checked: M.H.	Date: 07.01.09
Project Director: M.F.G.		



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Drawing No: 5270-2681

Revision: A



LEGEND

- WWTP SITE BOUNDARY
- PRIMARY DISCHARGE
- SECONDARY DISCHARGE
- STORMWATER OVERFLOW

NOTES

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2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk
A	20.02.09	ISSUE TO MEATH CO. CO.	R.K.	M.H.

Client:
MEATH COUNTY COUNCIL


Project:
BALLIVOR WASTE WATER DISCHARGE LICENCE APPLICATION

Title:
SITE LAYOUT PLAN OF EXISTING WWTP (INCLUDING MONITORING & SAMPLING POINTS)
(SECTION / ATTACHMENT B.2)

Scale @ A3: 1 : 1,000

Prepared by: R.K. **Checked:** M.H. **Date:** 05.02.09

Meath County Council
County Hall
Navan
County Meath
Tel: 046-9097000
Fax: 046-9097001
email: info@meathcoco.ie



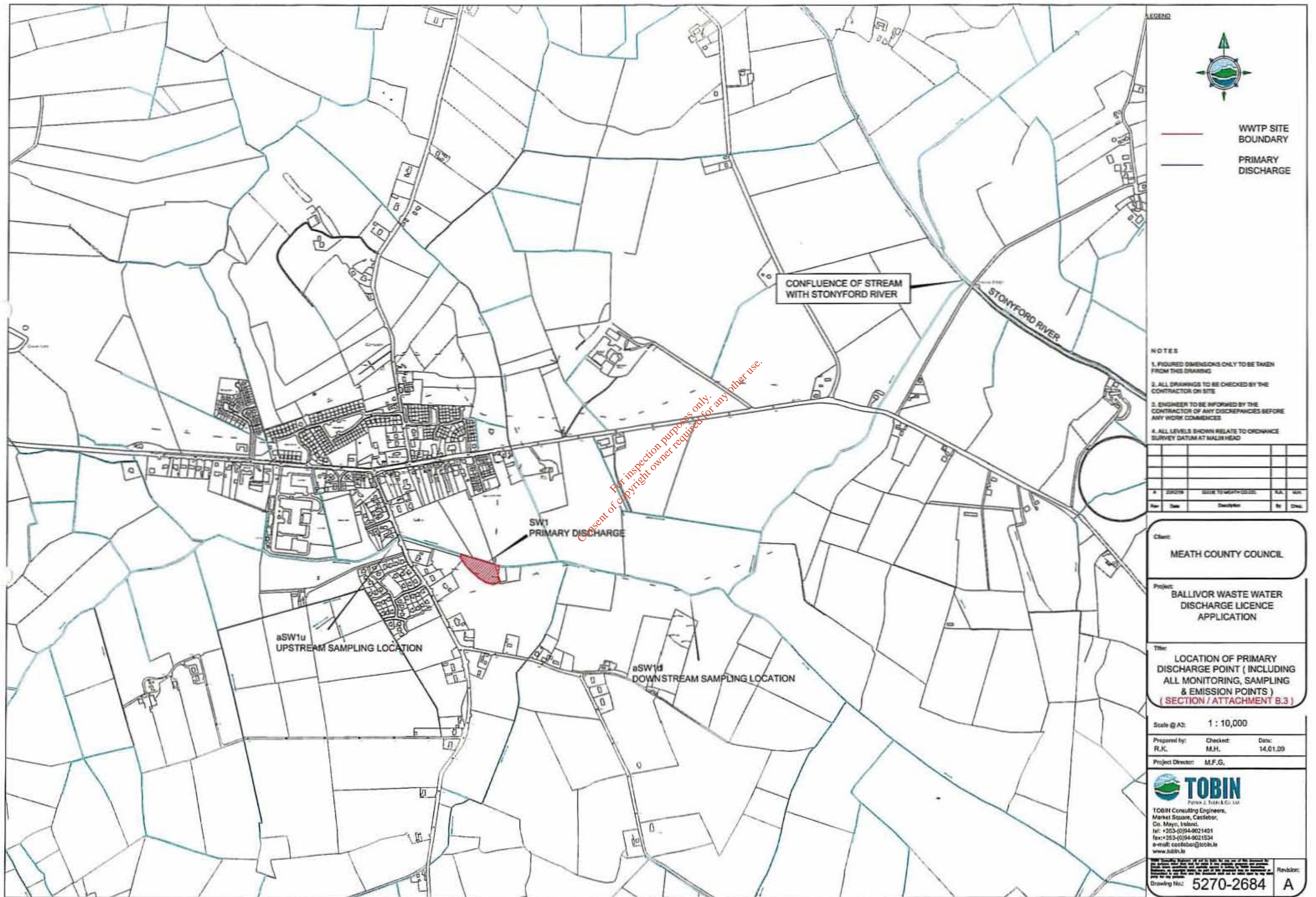
Drawing No: 5270-2682 **Revision:** A

SECTION B – GENERAL

Attachment B3: Location of Primary Discharge Point

– Drawing No. 5270 - 2684

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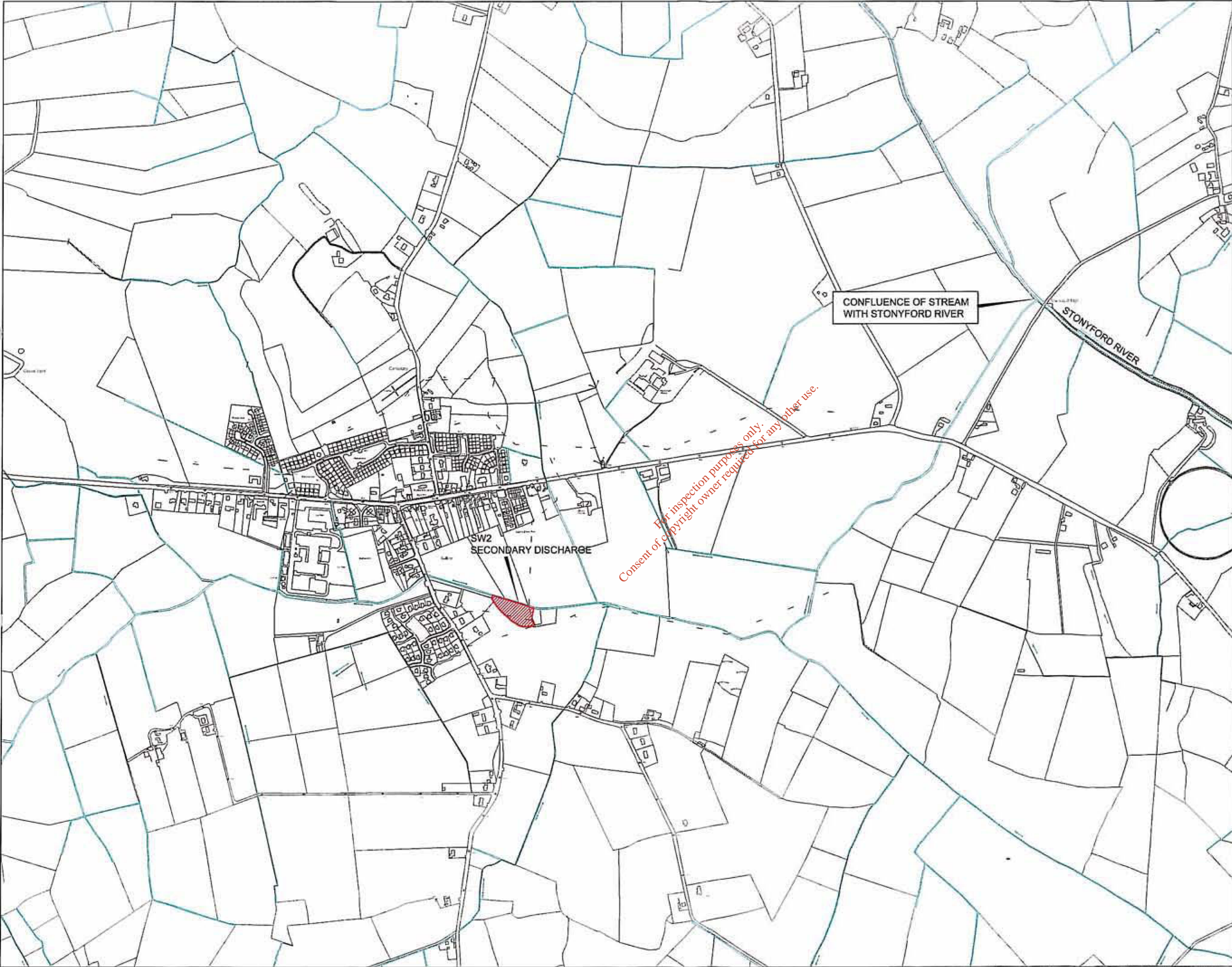


SECTION B – GENERAL

Attachment B4: Location of Secondary Discharge Points

– Drawing No. 5270 - 2685

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WWTP SITE
BOUNDARY

SECONDARY
DISCHARGE

NOTES

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4. ALL LEVELS SHOWN RELATE TO ORDINANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk
A	10/02/09	ISSUE TO MEATH CC CO.	RK	MH

Client:

MEATH COUNTY COUNCIL

Project:

BALLIVOR WASTE WATER
DISCHARGE LICENCE
APPLICATION

Title:

LOCATION OF SECONDARY
DISCHARGE POINT (INCLUDING
ALL MONITORING, SAMPLING
& EMISSION POINTS)
(SECTION / ATTACHMENT B.4)

Scale @ A3: 1 : 10,000

Prepared by: R.K. Checked: M.H. Date: 16.02.09

Project Director: M.F.G.

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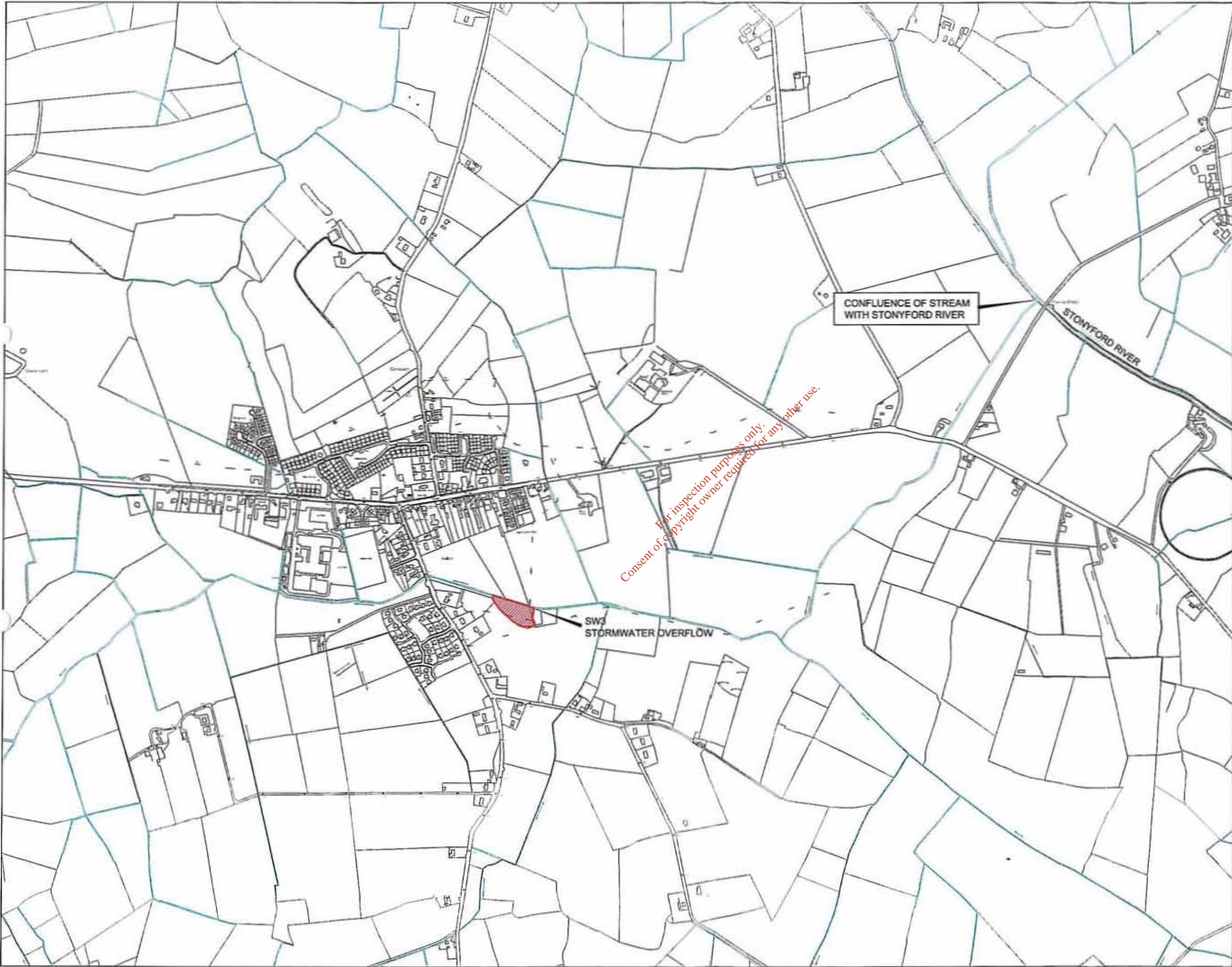
Drawing No: 5270-2685 Revision: A


SECTION B – GENERAL

Attachment B5: Location of Stormwater Overflow

– Drawing No. 5270 - 2686

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WWTP SITE
BOUNDARY

STORMWATER
OVERFLOW

NOTES

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3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES

4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALINHEAD

Rev	Date	Description	By	Check

Client:

MEATH COUNTY COUNCIL

Project:

BALLIVOR WASTE WATER
DISCHARGE LICENCE
APPLICATION

Title:

LOCATION OF STORMWATER
OVERFLOW DISCHARGE POINT
(INCLUDING ALL MONITORING,
SAMPLING & EMISSION POINTS)
(SECTION / ATTACHMENT B.5)


Scale @ A1: 1 : 10,000

Prepared by: R.K.

Checked: M.H.

Date: 16.02.09

Project Director: M.F.G.



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Drawing No: 5270-2686

Revision: A

SECTION B – GENERAL

Attachment B6: Relevant Planning Authority

Please see overleaf for the following documents:

- **Part X Planning Report** : Construction of a new wastewater treatment works to serve Ballivor (Approved at Council meeting held on January 31st 2001).

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Planning Report

From: M. Killeen, S.E.E.
File No.: Part X Application as per 1994 L.G.(P&D) Regulations.
O.S No.:
Applicant: Meath Co. Co.
Road No.:
Townland:
Description of Development: Ballivor Sewerage Scheme PX 90.

I have examined the plans and particulars of the proposed works, which Meath Co. Co. proposes to carry out in the above regard.

The proposed development comprises the provision of a new wastewater treatment plant and an upgrade and extension to the existing sewerage network.

The proposed scheme comprises of the following elements:

1. An upgrade and extension to the sewerage network serving the town and its environs to cater for flows from the present and projected population of the town. This element of the proposed work essentially comprises of the provision of a new sewerage network on Main Street and Kildalkey road.
2. Provision of a new wastewater treatment facility to produce an effluent capable of meeting the requirements of the Urban Wastewater Treatment Regulations, 2001, SI 254 of 2001 consisting of :
3. Inlet Works.
4. Stormwater Tanks and Sludge Holding Tank.
5. Aeration tanks and Clarifiers.
6. Phosphate Removal.
7. Administration and Control Building.

No submission was received as a result of the proposed development being on display for the statutory one- month period.

The file was referred to the Eastern Regional Fisheries Board (ERFB). The ERFB welcomes the scheme it that it should improve the water quality of the receiving waters i.e. a tributary of River Stoneyford, which in turns discharges to the River Boyne an important salmonoid river. The ERFB states that the proposed scheme is long overdue and they request that no in-river works be carried out from the months of October to

February inclusive and pre-consultation prior to any major works being undertaken. I consider this to be a reasonable request and recommend consultation as proposed.

The proposed works are designed in two stages- Stage 1 to cater for the projected population of 2,000 up to year 2015 and Stage 2 for a population of 4000 by year 2030. The proposed network upgrade and extension is designed to cater for flows for the projected population of 4,000. The Stage 1 works will also cater for treated effluent discharge from the NEC Factory in accordance with the terms of its existing discharge licence. There is sufficient assimilative capacity in the River Stoneyford to treat the effluent from the proposed population equivalent (PE) of 2,000 this being Stage 1 of the development as tertiary treatment is proposed.

The existing works is designed to treat effluent from a PE of 500 and is currently biologically and hydraulically overloaded. The proposed works utilise the existing network and are essentially an upgrade of the existing sewage treatment works to the south of the town adjacent to the River Stoneyford tributary. The proposed works will ensure an adequate collection network and treatment capacity to cater for the projected population equivalent of Ballivor as a result of land use zoning in the 2001 County Development Plan without exceeding the assimilative capacity of the receiving waters. Hence the proposal to include for phosphate removal.

The existing Ballivor Scheme is operating at full capacity. Indeed a number of housing developments have been permitted in the Ballivor with interim wastewater treatment systems pending the upgrade of the network and sewage treatment works. This is in accordance with DOE circular L/5/99- Water Services Investment Programme- The Provision of Serviced Land Interim and Temporary Facilities. There are also a number of other developments in the planning system with similar proposals for interim wastewater treatment systems. Clearly there is an urgent need to upgrade the network and sewage treatment works to ensure the continued development of Ballivor during the life of the current development plan. The 2001 Ballivor Development Plan at Section 3.1.3-Water Services states that the existing Ballivor Sewerage Scheme is designed for a PE of 500 operating at full capacity. Specific development objective BA 8 states *"to upgrade the sewage treatment to an ultimate design population of 1,500 persons and to provide for a buffer zone in and around the sewage treatment plant initially and to investigate further augmentation requirements"*. The proposed Stage 1 design caters for a population equivalent of 2,000 to allow for 1,500 persons plus commercial and industrial development. In the period since the publication of the Ballivor Development Plan (BDP) as part of the 2001 Meath County Development Plan (CDP) extensive residential and commercial development has taken place in Ballivor as already outlined. Hence the necessity for the provision of an upgrading and extension to the sewerage network and an increase in treatment capacity.

The proposed development accords with the objectives of the 2001 CDP- Ballivor Development Plan- Section 3.1.3 and objective BA8 and with the proper planning and development of the area. I recommend that the scheme proceed as outlined in the drawings and particulars submitted.

To / The Chairman and Each Member of the Council

Re: Part X - Ballivor Sewerage Scheme

Dear Member,

In accordance with the Local Government (Planning & Development) Regulations, 1994, as amended, Meath County Council published notice of its intentions to carry out the above works in the Meath Chronicle on December 2001.

The extent of the scheme is as set out in the attached report of Mr. M. Killeen, Senior Executive Engineer, Planning.

The period for public consultation and making of submissions has expired. Submissions and observations received in response to public notice are dealt with in Mr. Killeen's report.

Mr. Killeen states that the proposed development accords with the objectives of the 2001 CDP - Ballivor Development Plan and with proper planning and development of the area.

He recommends that the proposed development proceed in accordance with the plans and particulars submitted.

This matter was considered by the Trim Electoral Area Members at their meeting held on 31st January, 2001.

It is proposed to proceed with the works as recommended above.

Yours faithfully,

Martin Rogers,
Senior Executive Officer,
Dated 1st February 2002.

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SECTION B – GENERAL

Attachment B8: Site Notice & Newspaper Advertisement

- **Copy of Site Notice**
- **Drawing No. 5270-2687**
- **Copy of Newspaper Advertisement**

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Site Notice



Meath County Council

"APPLICATION TO THE ENVIRONMENT PROTECTION AGENCY FOR A WASTE WATER DISCHARGE LICENCE"

Applicant: Meath County Council, County Hall, Navan, County Meath

Meath County Council, County Hall, Navan, County Meath is making an application to the Environmental Protection Agency (the Agency), in accordance with the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) for a licence authorising the waste water discharges from the waste water works serving the agglomeration of: Ballivor, Navan, County Meath. The agglomeration is served by the Ballivor Waste Water Treatment Plant, Kilballivor T.D., Ballivor, Navan, County Meath (Grid Reference 269027E, 253820N). Ballivor Waste Water Treatment Plant utilises biological processes in conjunction with physical settlement, and nutrient removal to provide treatment to incoming waste water for compliance with the relevant legislative effluent treatment standards.

This application relates to the following existing discharges:

Primary Discharge Point SW1 - 269053E, 253834N (Receiving Waters: Tributary of Stonyford River)

Secondary Discharge Point SW2 - 269048E, 253837N (Receiving Waters: Tributary of Stonyford River)

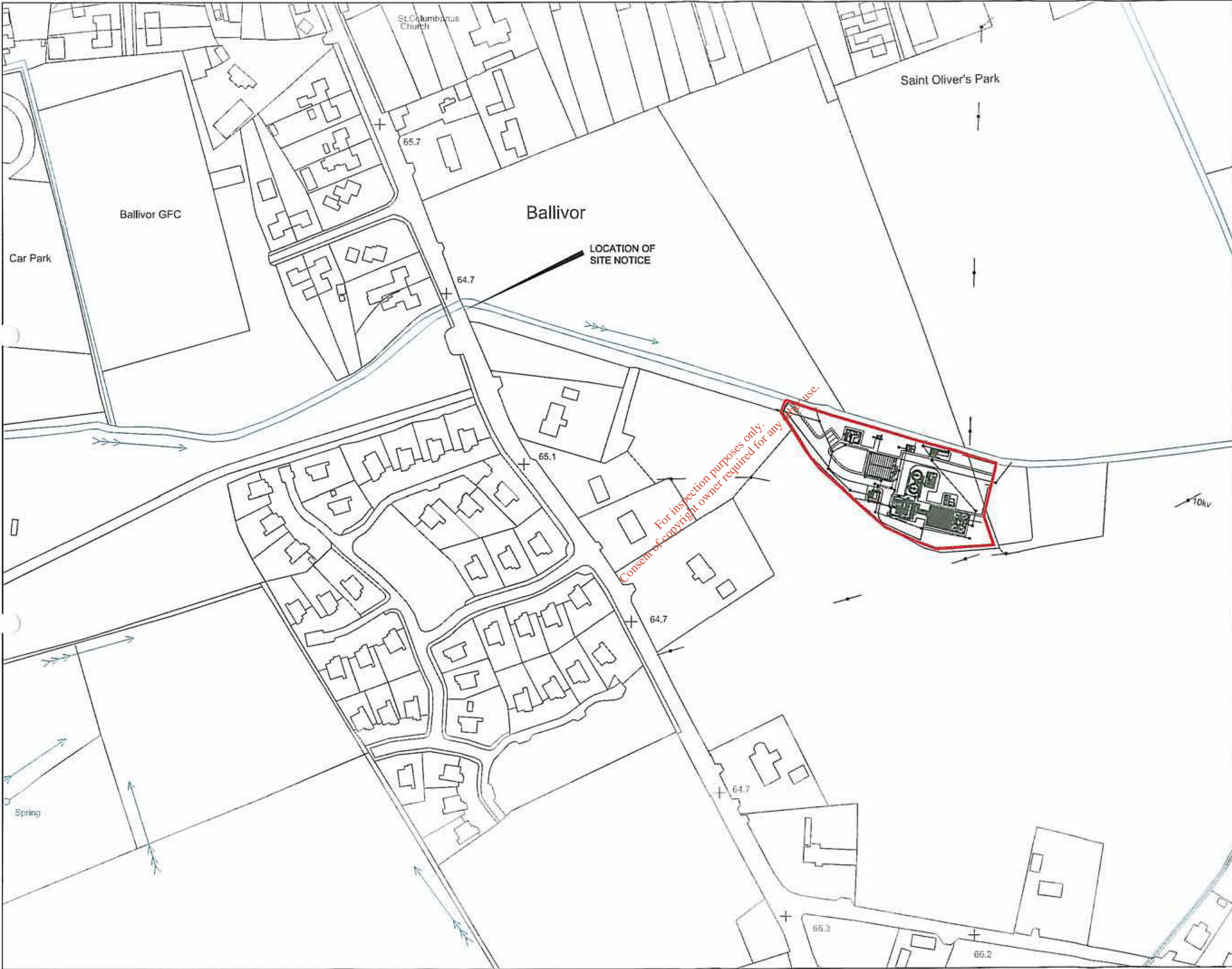
Storm Water Overflow Discharge Point SW3 - 269071E, 253830N (Receiving Waters: Tributary of Stonyford River)

A copy of the:

(i) Waste Water Discharge Licence Application, and;

(ii) such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application; shall, as soon as is practicable after receipt by the Agency, be available for inspection or purchase at the headquarters of the Environmental Protection Agency, Johnstown Castle Estate, County Wexford, and at the offices of Meath County Council, County Hall, Navan, County Meath.

Submissions in relation to the application may be made to the Agency at its headquarters: Environmental Protection Agency, PO Box 3000, Johnstown Castle Estate, County Wexford.



LEGEND

WWTP SITE BOUNDARY

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
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4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk.
A	20/02/09	ISSUE TO MEATH CO. CD.	RM	MH

Client:

MEATH COUNTY COUNCIL

Project:

BALLIVOR WASTE WATER DISCHARGE LICENCE APPLICATION

Title:

LOCATION OF SITE NOTICE

(SECTION / ATTACHMENT B.8)

Scale @ A3: 1 : 2,000

Prepared by:	Checked:	Date:
R.K.	M.H.	16.02.09

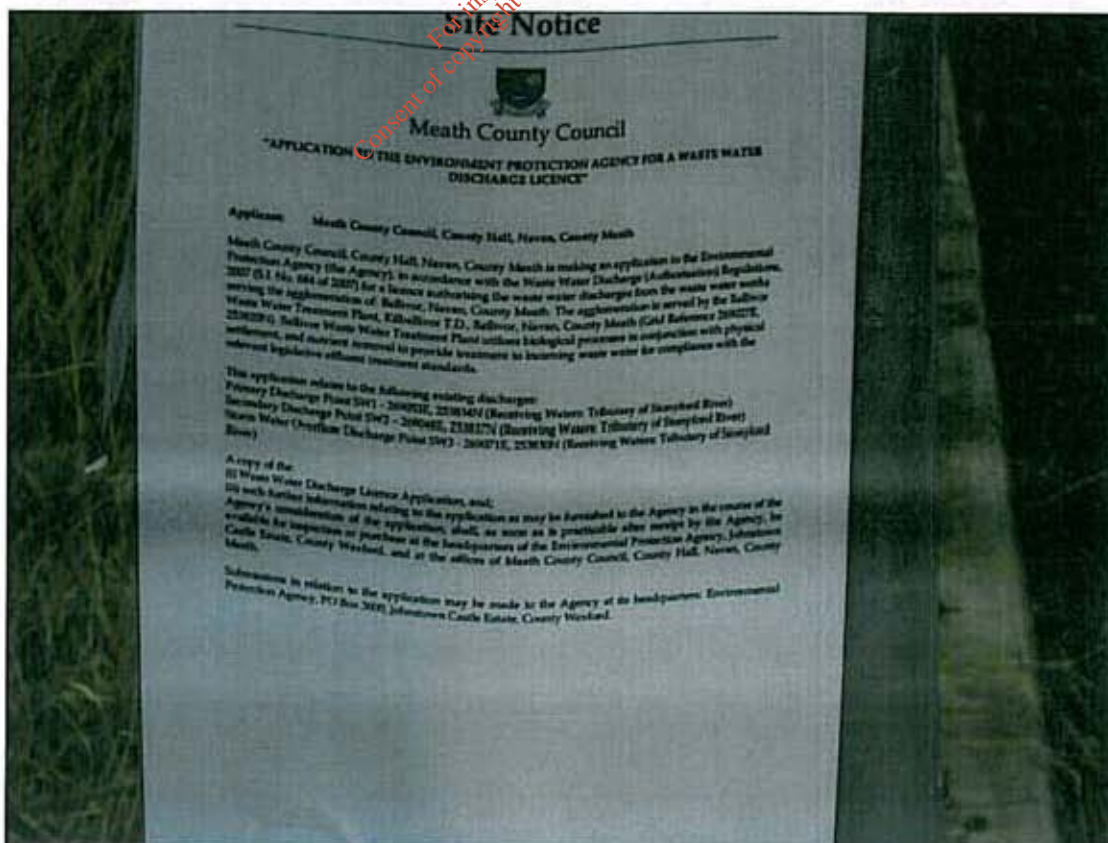
Project Director:	M.F.G.
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Drawing No.:	5270-2687	Revision:	A
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PHOTOGRAPHS OF SITE NOTICE BALLIVOR WASTE WATER TREATMENT PLANT





SECTION B – GENERAL

Attachment B9(i):Population Equivalent of Agglomeration

Calculation of Population Equivalent of the Agglomeration served by the Wastewater Treatment Works – Existing and Future

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Estimated Existing Load for Ballivor WWTP for Year 2009							
Description				DWF (m3/d)	BOD (kg/d)	SS (kg/d)	Population Equivalent
	House Count	Occupancy	Unit Loads	225 lhd	0.06 kg/d	0.04 kg/d	
Domestic Load							
Existing Domestic Load	598	2.73	1633	367.3	98.0	65.3	1633 pe
Domestic Allowance for Infiltration			0	0.0	0.0	0.0	0 pe
Total Domestic Loading (a)				367.3	98.0	65.3	1633 pe
* Occupancy rate taken from Ballivor Draft Area Plan 2008							
	Units	Unit DWF (m ³ /d)	BOD Total (kg BOD/d)				
Non Domestic Loading							
Commercial-Retail Loading				25.6	6.8	4.6	114 pe
Industrial Loading				0.0	0.0	0.0	0 pe
Institutional Loading				10.2	2.7	1.8	45 pe
Non Domestic Allowance for Infiltration				0.0	0.0	0.0	0 pe
Total Non Domestic Load (b)				35.8	9.5	6.4	159 pe
Total Estimated Existing Load 2009 (a+b)				403.1	107.5	71.7	1792 pe

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Estimated Future Load for Ballivor WWTP for Year 2015							
Description				DWF (m ³ /d)	BOD (kg/d)	SS (kg/d)	Population Equivalent
	House Count	Occupancy	Unit Loads	225 lhd	0.06 kg/d	0.04 kg/d	
Domestic Load							
Existing Domestic Load	654	2.73	1785	401.6	107.1	71.4	1785 pe
Domestic Allowance for Infiltration			0	0.0	0.0	0.0	0 pe
Total Domestic Loading (a)				401.6	107.1	71.4	1785 pe
	Units	Unit DWF (m ³ /d)	BOD Total (kg BOD/d)				
Non Domestic Loading							
Commercial-Retail Loading	329	8.84	6.83152	25.6	6.8	4.6	114 pe
Industrial Loading	0		0	0.0	0.0	0.0	0 pe
Institutional Loading	310	0.87	2.7156	10.2	2.7	1.8	45 pe
Non Domestic Allowance for Infiltration				0.0	0.0	0.0	0 pe
Allowance for Future Non-Domestic				9.5	2.5	1.7	42 pe
Total Non Domestic Load (b)				45.3	12.0	8.1	201 pe
Total Estimated Future Load Year 2015 (a+b)				446.9	119.1	79.5	1986 pe

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SECTION B – GENERAL

Attachment B9(ii): Pending Development

- 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
- The ability of the waste water works to accommodate this extra hydraulic and organic loading without posing an environmental risk to the receiving water habitat.

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ATTACHMENT B.9(ii) PENDING DEVELOPMENT

Source	Existing P.E. (2009)	Pending P.E.	Projected P.E. (2015)
Domestic	1,633	79	73
Commercial	159	12	30
Trade effluent	0	0	0
Imported liquid wastes	0	0	0
Sub-total	1,792	91	104
TOTAL (existing + pending + projected)			1,986
<p>Pending P.E.</p> <p>Planning has been granted for 29 residential units within the Ballivor Agglomeration.</p> <p>29 x 2.73 (persons per unit) = additional 79 P.E.</p> <p>Construction has commenced, and in some cases has been completed for 92 units, however this figure has already been included in existing P.E.</p> <p>Pending development with regards to commercial activity will contribute an additional P.E. of 12 to Ballivor WWTP.</p> <p>With regards to industrial development, there are no pending developments.</p> <p>TOTAL PENDING P.E. = 91</p>			
<p>Projected P.E. by 2015 (i.e. the maximum P.E.)</p> <p>It is estimated that Ballivor WWTP will serve a population equivalent of 1,986 by 2015.</p>			

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PENDING DEVELOPMENT – BALLIVOR AGGLOMERATION

As shown on the Pending Development Table, the calculated population equivalent to be contributed to the waste water works as a result of those planning permissions already granted is 91 P.E.

The percentage of the *projected* P.E. to be contributed by the non-domestic activities is as follows:

Total Projected P.E. (2015):	104 P.E.*
Projected Non-Domestic Portion (2015):	30 P.E.*

*(does not include existing population equivalent)

Projected Non-Domestic expressed as a percentage of Total Projected (2015): 29%

It is estimated that Ballivor WWTP is currently serving an existing population equivalent of 1,792. The calculated population equivalent to be contributed to the waste water works as a result of pending development (planning permissions already granted) is 91 P.E. By including this pending contribution, Ballivor WWTP may be required to cater for 1,883 PE in the short term. A new waste water treatment plant was commissioned at Ballivor in 2005, which has a design capacity of 2,000 P.E. (Furthermore, the inlet works are capable of handling a Phase 2 loading of 4,000 P.E.). Ballivor Waste Water Treatment Plant will accommodate this extra loading without posing an environmental risk to the receiving water habitat. The existing treatment plant will also be capable of accommodating the projected 2015 population equivalent of 1,986.

SECTION B – GENERAL

Attachment B10: Capital Investment Programme

– Capital Investment Programme – Ballivor Sewerage Scheme

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CAPITAL INVESTMENT PROGRAMME – BALLIVOR SEWERAGE SCHEME

1.0 INTRODUCTION

In order to provide adequate waste water collection and treatment infrastructure for Ballivor, Meath County Council commissioned the Ballivor Sewerage Scheme. This scheme involved major capital investment to provide for the upgrading and remediation of sewers within the agglomeration, sewer extensions where required, and to provide for the construction and commissioning of the Ballivor Waste Water Treatment Works.

A new 2,000 PE (Phase 1) waste water treatment plant was completed at a cost of circa €3,700,000.00 in Spring, 2006. In addition, extensive rehabilitation and expansion of the foul sewer network within Ballivor was undertaken.

In the 'Meath County Council – Water Services Investment Programme – Assessment of Needs (2007-2013)' document, Ballivor Sewerage Scheme is identified under the heading "Schemes Complete".

In terms the plant's ability to cater for future expansion, the inlet works and outfall are already capable of handling a Phase 2 loading of 4,000 P.E. Thus, provisions have included in the design for a fairly straightforward modification to Stage 2 expansion, to meet the requirements of the planned development of the Ballivor agglomeration.

The treatment process is currently based on the extended aeration (activated sludge) process, with nutrient removal. Treated effluent from the works is currently discharged to the adjacent stream, which forms a tributary of the Stonyford River. A full description of the treatment facilities has been provided in Attachment C.1.

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.

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.

Attachment included	Yes	No
	✓	

C.2 Outfall Design and Construction

Provide details on the primary discharge point & secondary discharge points and storm overflows to include reference, location, design criteria and construction detail.

Attachment C.2 should contain any supporting documentation on the design and construction of any and all discharge outfalls, including stormwater overflows, from the waste water works.

Attachment included	Yes	No
	✓	

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SECTION C – INFRASTRUCTURE & OPERATION

Attachment C1: Operational Information Requirements

- Outline Description of the Treatment Process at Ballivor WWTP & Agglomeration
- Drawing No. 5270-2688
- Drawing No. 5270-2689

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OUTLINE DESCRIPTION OF THE TREATMENT PROCESS FOR BALLIVOR WASTE WATER TREATMENT PLANT AND AGGLOMERATION

1.0 INTRODUCTION

The existing Ballivor Wastewater Treatment Plant (WWTP) expanded / upgraded in 2005. Rehabilitation of the existing sewerage network is proposed for 2010. The following sections describe the processes at this upgraded plant.

2.0 EXISTING PLANT

Ballivor WWTP is located to the south east of the Ballivor agglomeration. The plant was upgraded and was subsequently commissioned in 2005, treating municipal waste water from the town of Ballivor, with a design capacity in the order of 2,000 P.E. (The inlet works are capable of handling Phase 2 loading of 4,000 P.E.) Phosphorus removal is included at the plant, which is designed to bring final effluent to at least a concentration of 0.5mg/l Total Phosphorus.

The treatment process is currently based on the extended aeration (activated sludge) process, with nutrient removal as stated above.

Treated effluent from the works is currently discharged to an adjacent stream, which forms a tributary of the Stonyford River, (the stream is known locally as the "Ballivor River").

The treatment works currently consists of the following units:-

- Inlet lift pumping station
- Inlet works (preliminary treatment)
- Storm water holding tank
- Aeration plant & clarifiers
- Sludge Holding Tanks
- Ferric Sulphate Dosing (for phosphate reduction)
- Sludge Dewatering Building
- Gravity outfall to adjacent stream
- Administration building

Inlet to Works

Untreated waste water combined with storm water enters the plant via a 375mm diameter sewer to the inlet lift pumping station. The pumping station is equipped with 3 Nr. submersible wet well pumps. Up to 2.5 times DWF is pumped forward to the preliminary treatment works. Flows in excess of 2.5 DWF overflow a weir, contained within the pump sump that has been fitted with an emergency screen. Coarsely screened storm water then gravitates from the inlet sump in a 300mm diameter pipeline to the storm water holding tank.

Storm water handling

Storm water control is provided such that 2.5 DWF immediately flows forward to preliminary treatment. Flows in excess of 2.5 DWF are diverted to the storm water holding tank. This tank has been subdivided into 2 Nr. cells, with a combined capacity of approximately 495m³. Storm water is returned to the inlet pump sump when storm conditions abate, however, during extreme wet weather conditions and in the event that storm water holding tank capacity has been filled, a facility is available for excess storm water to bypass the works and discharge directly to the receiving waters via a closed culvert.

The storm water holding tank contains a number of submerged mixer pumps to prevent settlement of solids on the tank floor and for minimisation of odour formation and to prevent septicity.

Inlet Works (Preliminary Treatment)

Preliminary treatment currently entails the removal of plastics, rags, grit, silt and sand from the waste stream. Screening facilities have been provided for solids removal of inorganic materials via 2 Nr. automatic screens and 1 Nr. manual bar screen. A screenings compactor has been installed on site, which delivers partially dewatered screenings to a nearby skip. Grit removal is also applied to incoming waste water via 2 Nr. grit traps / classifiers. These units also discharge collected grit to an adjacent skip.

Screened sewage flows forward to the inlet channel of the aeration tanks.

Secondary Treatment

An extended aeration activated sludge process has been constructed at the plant to achieve the required effluent standards.

This process is a variant of the activated sludge process and involves the aeration of screened sewage in 2 Nr. aeration tanks. A small anoxic chamber has also been provided upstream of the aeration tanks for denitrification of the effluent.

A fine bubble diffused air aeration system has been installed in the aeration basins to maintain dissolved oxygen at sufficient levels. Dissolved oxygen concentration in the aeration basins is monitored on a continuous basis via D.O. probes mounted to the tank walls.

The biomass generated in the aeration process tends to readily settle out in the 4 Nr. clarifiers. The secondary sludge collected in the clarifiers is returned to the anoxic stage via the sludge return pump chamber. A smaller amount of this secondary sludge is 'wasted' and is pumped to the sludge holding tanks via the surplus sludge pump chamber.

The activated sludge reactor has been constructed to the following approximate dimensions:

Anoxic zone = 3.00m (L) x 0.90m (W) x 3.55m (D)
= 9.6m³
Aerobic zone = 14.00m (L) x 5.50m (W) x 3.55m (D)
= 273.4m³ x 2 Nr. tanks
= 546.8m³

The clarification zone has been constructed to the following approximate dimensions:

Volume per clarifier = 33 m³
= 33m³ x 4 Nr. units
Total Clarifier Volume = 132m³ (approx.)

Phosphate Reduction

Ferric sulphate dosing is practiced at the facility for the purposes of reducing the phosphate levels in the treated effluent down to 0.5mg/l Total Phosphorus. A ferric sulphate dispenser has been constructed on site for storage of the ferric in viable quantities.

Tertiary Treatment

A sand filter has been installed at the site. This unit is currently not in use, i.e. it has not been commissioned.

Treated Effluent Outfall

Treated effluent flows by gravity in a 375mm diameter pipe terminating in a tide flex valve to the adjacent stream, which forms a tributary of the Stonyford River.

Sludge Handling

2 Nr. picket fence thickeners have been constructed on site for the temporary storage and partial thickening of sludge prior to off-site removal. The combined capacity of these units is in the order of 106m³. Settled sludge is drawn from the clarifier bases via the surplus sludge pump chamber and sent forward for temporary storage in the picket fence thickeners. As discussed above, return activated sludge (RAS) is pumped back to the anoxic stage via the sludge return pump chamber.

Partially thickened sludge is sent forward to a sludge belt press via sludge feed pumps. Polyelectrolyte dosing is practiced at the facility to improve dewatering efficiencies. Dewatered sludge cake, coming off the press is conveyed to an enclosed sludge skip for temporary storage.

Dewatered sludge cake is removed from site every three to four weeks (approximately).

Existing Odour Control

The upgraded facility has been designed such that potential problems with odour and septicity are minimised, e.g. with the use of mixers in the storm water holding tanks and aeration tanks to prevent undesirable settlement of sludge.

Administration Building:

A new Control Building has been constructed at the site, which comprises a laboratory, wash facilities, canteen, and office / control room.

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LEGEND



- WWTP SITE BOUNDARY
- PRIMARY DISCHARGE
- SECONDARY DISCHARGE
- STORMWATER OVERFLOW

NOTES

- FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
- ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
- ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
- ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

A.	REVISION	ISSUE TO MEATH CO. COUNCIL	REL.	DATE
Rev	Date	Description	By	CHKD

Client:
MEATH COUNTY COUNCIL

Project:
BALLIVOR WASTE WATER
DISCHARGE LICENCE
APPLICATION

Title:
EXISTING PLANT PROCESS
SITE PLAN

(SECTION / ATTACHMENT C.1)

Scale @ A2: 1 : 1,000

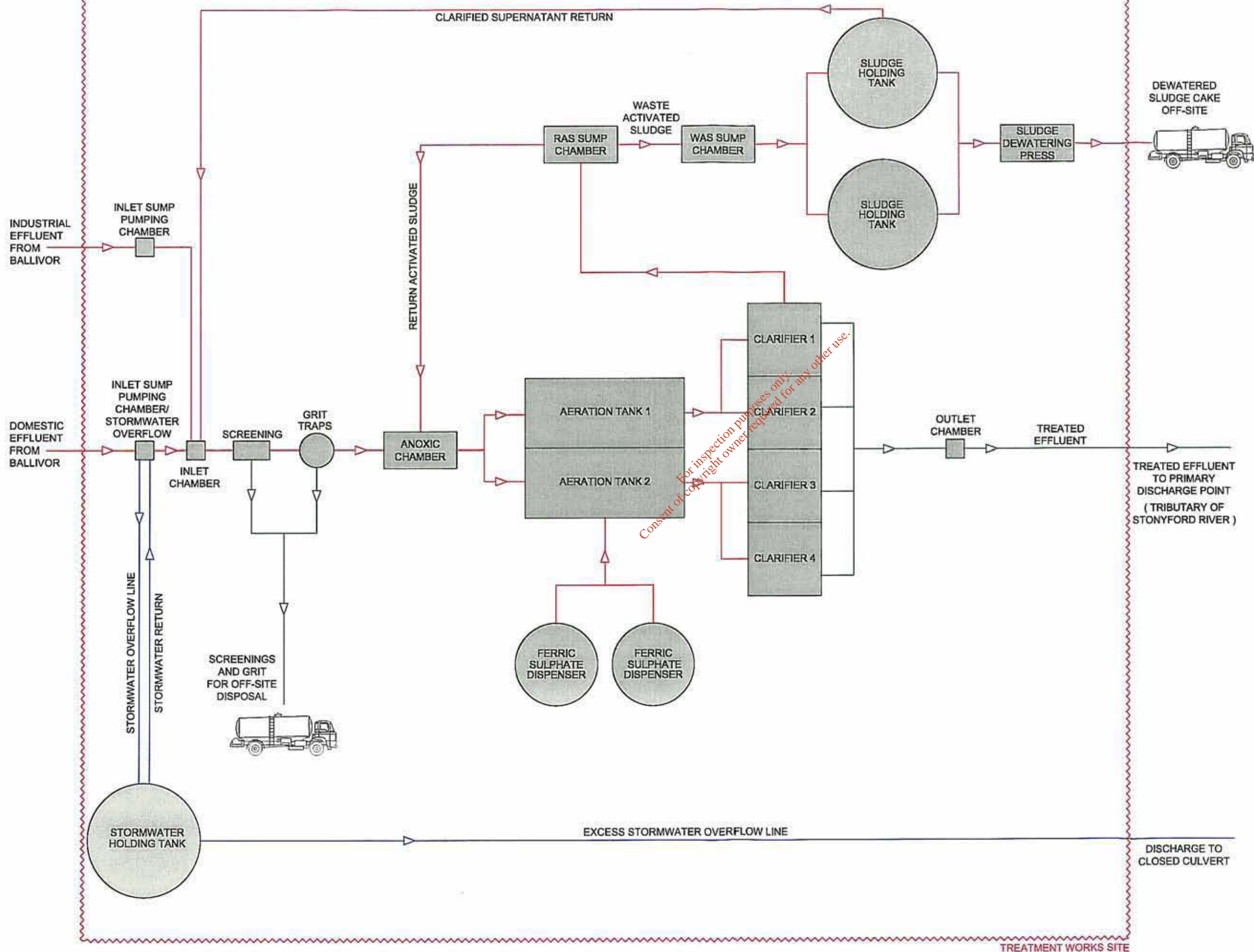
Prepared by: R.K. Checked: M.H. Date: 16.02.09

Meath County Council
County Hall
Naven
County Meath
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email: info@meathcoco.ie



Drawing No.: 5270-2688

Revision:
A



NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk
A	05/01/09	ISSUE TO MEATH CO. CO.	RA	MR

Client:

MEATH COUNTY COUNCIL

Project:

BALLIVOR WASTE WATER
DISCHARGE LICENCE
APPLICATION

Title:

PLANT / PROCESS
FLOW DIAGRAM

(SECTION / ATTACHMENT C.1)

Scale @ A3: 1 : 1000

Prepared by: R.K. Checked: M.H. Date: 06.01.09

Project Director: M.F.G.



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Drawing No: 5270-2689 Revision: A

SECTION C – INFRASTRUCTURE & OPERATION

Attachment C2: Outfall Construction & Design

- **Outline Description of Outfall Design and Construction**
- **Drawing No. 5270-2692**
- **Drawing No. 5270-2693**

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OUTLINE DESCRIPTION OF OUTFALL DESIGN AND CONSTRUCTION

1.0 PRIMARY DISCHARGE POINT

Location: SW1 – Ballivor WWTP, Kilballivor T.D., Ballivor, Navan, County
Meath
269053E, 253834N

Receiving Water: Discharge to tributary of Stonyford River

Originates: Final treated effluent from Ballivor WWTP

Invert Level: no data available

Pipe Size: 375mm diameter gravity pipeline from WWTP

Design Criteria: Continuous flow of treated effluent from WWTP

Construction Detail: Closed pipeline fitted with tideflex valve

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2.0 SECONDARY DISCHARGE POINTS

Location: SW2 – Ballivor WWTP, Kilballivor T.D., Ballivor, Navan, County Meath
269048E, 253837N

Receiving Water: Discharge to tributary of Stonyford River

Originates: Emergency overflow from NEC Discharge Pumping Station located on site of Ballivor WWTP (Note: NEC is now non-operational, hence this pump station is currently not in use. Future plans for this industry are not known.)

Invert Level: no data available

Pipe Size: 100mm diameter, gravity pipeline

Design Criteria: Emergency / safety overflow – only to operate in event of pump failure – currently not in use

Construction Detail: Simple open-ended outfall pipe

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3.0 STORM WATER OVERFLOW DISCHARGE POINTS

Location: SW3 – Ballivor WWTP, Kilballivor T.D., Ballivor, Navan, County Meath
269071E, 253830N

Receiving Water: Discharge in closed culvert to tributary of Stonyford River

Originates: Storm water overflow from storm holding tank at Ballivor WWTP

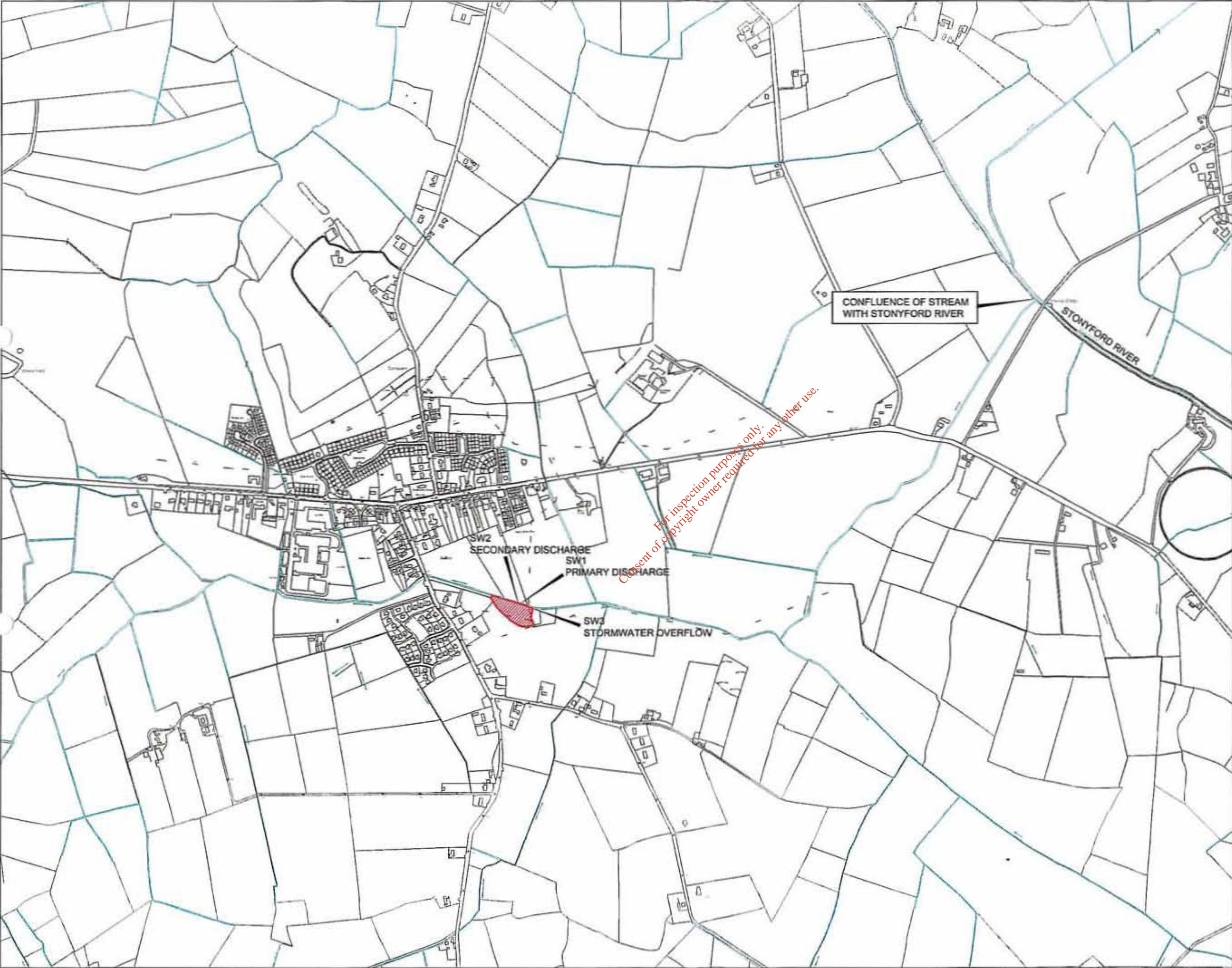
Invert Level: no data available


Pipe Size: 375mm diameter gravity pipeline discharging to closed culvert

Design Criteria: Storm water control is provided such that 2.5 DWF immediately flows forward to preliminary treatment. Flows in excess of 2.5 DWF are diverted to the storm water holding tank. This tank has a capacity of approximately 495m³. Storm water is returned to the inlet pump sump when storm conditions abate, however, during extreme wet weather conditions and in the event that storm water holding tank capacity has been filled, a facility is available for excess storm water to bypass the works and discharge directly to the receiving waters via a closed culvert.

Construction Detail: Closed pipeline fitted with tideflex valve

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WWTP SITE BOUNDARY
STORMWATER OVERFLOW
PRIMARY DISCHARGE
SECONDARY DISCHARGE

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
2. ALL DRAWINGS TO BE CHECKED BY THE CONTRACTOR ON SITE
3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Chk
1	16.02.09	ISSUE TO MEATH CO. CO.	R.K.	M.H.


Client:
MEATH COUNTY COUNCIL

Project:
BALLIVOR WASTE WATER DISCHARGE LICENCE APPLICATION

Title:
PRIMARY DISCHARGE POINT, SECONDARY DISCHARGE POINT & STORMWATER OVERFLOW LAYOUT / LOCATION PLAN (SECTION / ATTACHMENT C.2)

Scale @ A3: **1 : 10,000**

Prepared by: R.K.	Checked: M.H.	Date: 16.02.09
Project Director: M.F.G.		

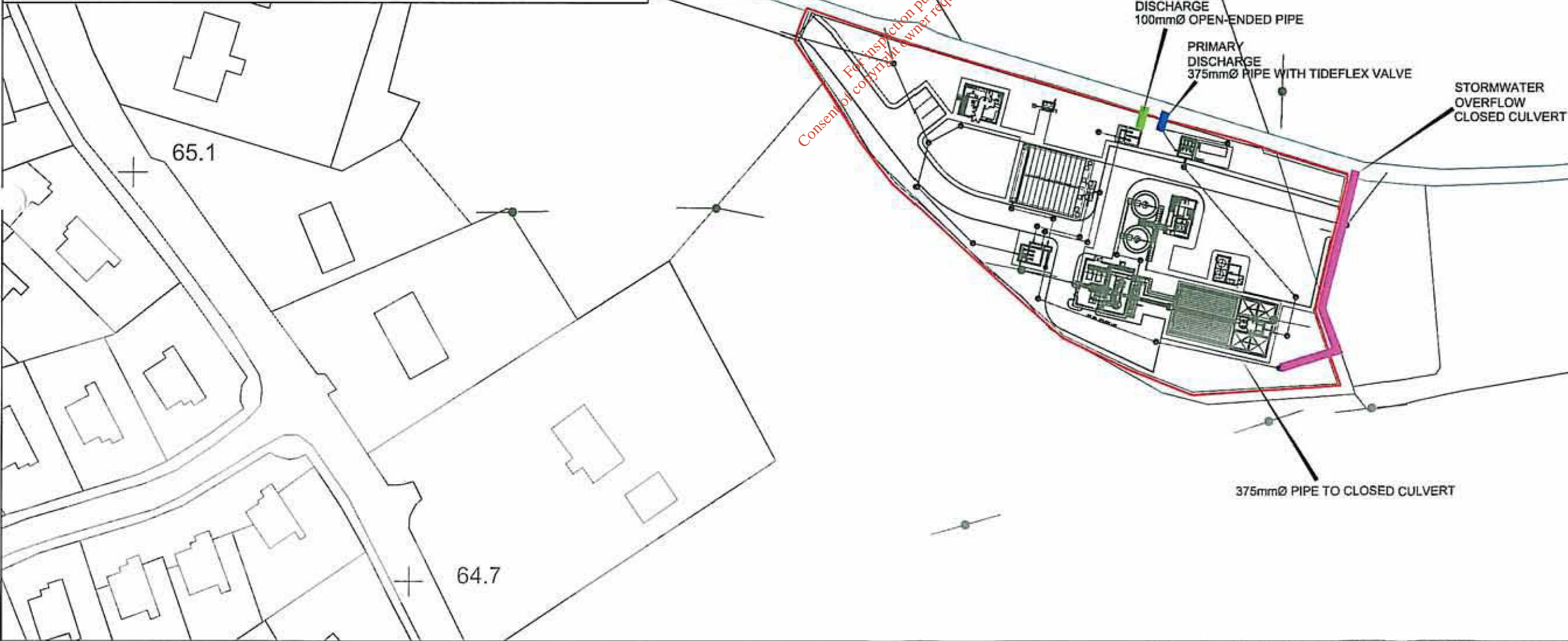


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Drawing No.: 5270-2692	Revision: A
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PRIMARY DISCHARGE
375mm OUTFALL PIPE WITH TIDEFLEX VALVE



LEGEND



- WWTP SITE BOUNDARY
- PRIMARY DISCHARGE
- STORMWATER OVERFLOW
- SECONDARY DISCHARGE

NOTES

1. FIGURED DIMENSIONS ONLY TO BE TAKEN FROM THIS DRAWING
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3. ENGINEER TO BE INFORMED BY THE CONTRACTOR OF ANY DISCREPANCIES BEFORE ANY WORK COMMENCES
4. ALL LEVELS SHOWN RELATE TO ORDNANCE SURVEY DATUM AT MALIN HEAD

Rev	Date	Description	By	Check
A	20.02.09	ISSUE TO MEATH CO. CO.	R.K.	M.H.

Client:
MEATH COUNTY COUNCIL

Project:
BALLIVOR WASTE WATER
DISCHARGE LICENCE
APPLICATION

Title:
PRIMARY DISCHARGE POINT,
SECONDARY DISCHARGE POINT
& STORMWATER OVERFLOW
CONSTRUCTION & DESIGN
(SECTION / ATTACHMENT C.2)

Scale @ A3: 1 : 1,000
Prepared by: R.K. Checked: M.H. Date: 16.02.09

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Drawing No.: 5270-2693 A

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 emissions 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 D.1(i), (b) & (c) and D.1(ii), (b) & (c) of Annex 1 are emitted.

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

D.1 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 D.1(i)(a), (b) & (c), should be completed for the primary discharge point from the agglomeration and Tables D.1(ii)(a), (b) & (c) should be completed for **each** secondary discharge point, where relevant. Table D.1(iii)(a) 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 plant this data should also be provided in response to Section D.1.

Supporting information should form **Attachment D.1**

Attachment included	Yes	No
	✓	

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
Point Code Provide label ID's	Point Type (e.g., Primary/ Secondary/ Storm Water Overflow)	Local Authority Name (e.g., Donegal County Council)	Receiving Water Body Type (e.g., River, Lake, Groundwater, Transitional, Coastal)	Receiving Water Body Name (e.g., River Suir)	Protected Area Type (e.g., SAC, candidate SAC, NHA, SPA etc.)	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference

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.

ATTACHMENT D.2 INCLUDED

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SECTION D – DISCHARGES TO THE AQUATIC ENVIRONMENT

Attachment D1: Discharges to Surface Waters

- **Table D.1(i)(a): Emissions to Surface/Ground Waters (Primary Discharge Point)**
- **Table D.1(i)(b): Emissions to Surface/Ground Waters – Characteristics of the Emission (Primary Discharge Point)**
- **Table D.1(i)(c): Emissions to Surface/Ground Waters – Characteristics of the Emission (Primary Discharge Point)**
- **Table D.1(ii)(a): Emissions to Surface/Ground Waters (Secondary Discharge Point)**
(NOTE: No Information on Quantity of Waste Water discharged available as it is an emergency overflow from a pump station and as such, flows are not continuous or consistent)
- **Table D.1(ii)(b): Emissions to Surface/Ground Waters – Characteristics of the Emission (Secondary Discharge Point)**
(NOTE: No data, as it is an emergency overflow from a pump station and as such, flows are not continuous or consistent)
- **Table D.1(ii)(c): Emissions to Surface/Ground Waters – Characteristics of the Emission (Secondary Discharge Point)**
(NOTE: No data, as it is an emergency overflow from a pump station and as such, flows are not continuous or consistent)
- **Table D.1(iii)(a): Emissions to Surface/Ground Waters (Storm Overflow)**
(NOTE: No Information on Quantity of Waste Water discharged available for Storm Water Overflow, as flows are not continuous or consistent)
- **Monitoring Information for the 'Influent' to the WWTP**
- **Statement on Annex X of the Water Framework Directive (2000/60/EC) & Annex VIII of the Water Framework Directive (2000/60/EC)**

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:	Waste Water Treatment Plant - Treated Effluent
Location:	Ballivor Waste Water Treatment Plant
Grid Ref (12 digits, 6E, 6N)	269053 / 253834
Name of Receiving waters:	A Stream - Tributary of Stonyford River
Water Body:	River Water Body
River Basin District	Eastern RBD
Designation of Receiving Waters:	Stream - No Designation / Stonyford River - SAC
Flow Rate in Receiving Waters:	0 m ³ .sec ⁻¹ Dry Weather Flow
	0.004 m ³ .sec ⁻¹ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	DWF & 95%-tile flow based on EPA/MCC Data Logger Station No. 07044. WWTP emission details based on weekly flow readings recorded over a period of 8 weeks.

Emission Details:

(i) Volume emitted			
Normal/day	498 m ³	Maximum/day	0 m ³
Maximum rate/hour	0 m ³	Period of emission (avg)	60 min/hr 24 hr/day 365 day/yr
Dry Weather Flow	0.004713 m ³ /sec		

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

Discharge Point Code: SW-1

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 7.4	
Temperature	°C	Grab	= 0	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 1004	
Suspended Solids	mg/l	Grab	< 10	4.98
Ammonia (as N)	mg/l	Grab	= 3.6	1.793
Biochemical Oxygen Demand	mg/l	Grab	= 5	2.49
Chemical Oxygen Demand	mg/l	Grab	= 25	12.45
Total Nitrogen (as N)	mg/l	Grab	= 13	6.474
Nitrite (as N)	mg/l	Grab	= 0.76	0.378
Nitrate (as N)	mg/l	Grab	= 9.11	4.537
Total Phosphorous (as P)	mg/l	Grab	= 0.89	0.443
OrthoPhosphate (as P)	mg/l	Grab	= 0.63	0.314
Sulphate (SO ₄)	mg/l	Grab	= 80	39.84
Phenols (Sum)	µg/l	Grab	< 0.01	0.000005

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	< 1	0.0005
Dichloromethane	µg/l	Grab	< 1	0.0005
Simazine	µg/l	Grab	< 1	0.0005
Toluene	µg/l	Grab	< 1	0.0005
Tributyltin	µg/l	Grab	< 0.02	0.00001
Xylenes	µg/l	Grab	< 1	0.0005
Arsenic	µg/l	Grab	< 1	0.0005
Chromium	µg/l	Grab	= 3	0.0015
Copper	µg/l	Grab	= 4	0.002
Cyanide	µg/l	Grab	< 10	0.005
Flouride	µg/l	Grab	= 300	0.1494
Lead	µg/l	Grab	< 1	0.0005
Nickel	µg/l	Grab	= 6	0.003
Zinc	µg/l	Grab	= 31	0.0154
Boron	µg/l	Grab	= 55	0.0274
Cadmium	µg/l	Grab	< 0.4	0.0002
Mercury	µg/l	Grab	< 0.05	0.00002
Selenium	µg/l	Grab	< 1	0.0005
Barium	µg/l	Grab	= 26	0.0129

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6249, or equivalent.

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

Discharge Point Code: SW-2

Local Authority Ref No:	
Source of Emission:	Emergency Overflow from NEC Pump Station
Location:	Ballivor Waste Water Treatment Plant
Grid Ref (12 digits, 6E, 6N)	269048 / 253837
Name of Receiving waters:	A Stream - Tributary of Stonyford River
Water Body:	River Water Body
River Basin District	Eastern RBD
Designation of Receiving Waters:	Stream - No Designation / Stonyford River - SAC
Flow Rate in Receiving Waters:	0 m ³ .sec ⁻¹ Dry Weather Flow 0.004 m ³ .sec ⁻¹ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	DWF & 95%-tile flow based on EPA / MCC Data Logger Station No. 07044.

Emission Details:

(i) Volume emitted			
Normal/day	0 m ³	Maximum/day	0 m ³
Maximum rate/hour	0 m ³	Period of emission (avg)	0 min/hr 0 hr/day 0 day/yr
Dry Weather Flow	0 m ³ /sec		

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

Discharge Point Code: SW-2

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
pH	pH	Grab	= 0	
Temperature	°C	Grab	= 0	
Electrical Conductivity (@ 25°C)	µS/cm	Grab	= 0	
Suspended Solids	mg/l	Grab	= 0	0
Ammonia (as N)	mg/l	Grab	= 0	0
Biochemical Oxygen Demand	mg/l	Grab	= 0	0
Chemical Oxygen Demand	mg/l	Grab	= 0	0
Total Nitrogen (as N)	mg/l	Grab	= 0	0
Nitrite (as N)	mg/l	Grab	= 0	0
Nitrate (as N)	mg/l	Grab	= 0	0
Total Phosphorous (as P)	mg/l	Grab	= 0	0
OrthoPhosphate (as P)	mg/l	Grab	= 0	0
Sulphate (SO ₄)	mg/l	Grab	= 0	0
Phenols (Sum)	µg/l	Grab	= 0	0

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(ii)(c): DANGEROUS SUBSTANCE EMISSIONS TO SURFACE/GROUND WATERS - Characteristics of The Emission (Secondary Discharge Point)

Discharge Point Code: SW-2

Substance	As discharged			
	Unit of Measurement	Sampling Method	Max Daily Avg.	kg/day
Atrazine	µg/l	Grab	= 0	0
Dichloromethane	µg/l	Grab	= 0	0
Simazine	µg/l	Grab	= 0	0
Toluene	µg/l	Grab	= 0	0
Tributyltin	µg/l	Grab	= 0	0
Xylenes	µg/l	Grab	= 0	0
Arsenic	µg/l	Grab	= 0	0
Chromium	µg/l	Grab	= 0	0
Copper	µg/l	Grab	= 0	0
Cyanide	µg/l	Grab	= 0	0
Flouride	µg/l	Grab	= 0	0
Lead	µg/l	Grab	= 0	0
Nickel	µg/l	Grab	= 0	0
Zinc	µg/l	Grab	= 0	0
Boron	µg/l	Grab	= 0	0
Cadmium	µg/l	Grab	= 0	0
Mercury	µg/l	Grab	= 0	0
Selenium	µg/l	Grab	= 0	0
Barium	µg/l	Grab	= 0	0

For Orthophosphate: this monitoring should be undertaken on a sample filtered on 0.45µm filter paper

For Phenols: USEPA Method 604, AWWA Standard Method 6240, or equivalent.

Table D.1(iii)(a): EMISSIONS TO SURFACE/GROUND WATERS (Storm Overflow)

Discharge Point Code: SW-3

Local Authority Ref No:	
Source of Emission:	Waste W Treatment Plant - Storm Water Holding Tank
Location:	Ballivor Waste Water Treatment Plant
Grid Ref (12 digits, 6E, 6N)	269071 / 253830
Name of Receiving waters:	A Stream - Tributary of Stonyford River
Water Body:	River Water Body
River Basin District	Eastern RBD
Designation of Receiving Waters:	Stream - No Designation / Stonyford River - SAC
Flow Rate in Receiving Waters:	0 m ³ .sec ⁻¹ Dry Weather Flow 0.004 m ³ .sec ⁻¹ 95% Weather Flow
Additional Comments (e.g. commentary on zero flow or other information deemed of value)	DWF & 95%-tile flow based on EPA / MCC Data Logger Station No. 07044.

Emission Details:

(i) Volume emitted			
Normal/day	0 m ³	Maximum/day	0 m ³
Maximum rate/hour	0 m ³	Period of emission (avg)	0 min/hr 0 hr/day 0 day/yr
Dry Weather Flow	0 m ³ /sec		

MONITORING INFORMATION FOR THE 'INFLUENT' TO THE WWTP

Monitoring data on the 'Influent' accepted at the Waste Water Treatment Plant for 2007 and 2008 are attached overleaf.

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BALLIVOR 'INFLUENT' MONITORING 2007										
Plant Name	Sample	Date of Sampling	Sample Type	BOD mg/l	COD mg/l	TSS mg/l	Total P mg/l P	Ortho P mg/l P	Total N mg/l N	
Ballivor	Influent	19/01/2007	G	300	795	560	728	-	52.6	
	Influent	20/02/2007	G	103	364	145	5.06	-	19.5	
	Influent	02/03/2007	G	100.5	348	179	-	-	-	
	Influent	25/04/2007	G	174.5	503	172	-	-	-	
	Influent	24/05/2007	G	-	-	-	-	-	-	
	Influent	14/06/2007	G	104	280	33	3.53	-	28.3	
	Influent	26/07/2007	G	268.5	860	796	9.95	-	44.4	
	Influent	10/08/2007	G	127	364	101	4.24	-	33.1	
	Influent	24/09/2007	G	141	323	156	6.14	-	34.4	
	Influent	18/10/2007	G	244	801	485	7.71	-	41.3	
	Influent	15/11/2007	G	50	173	84	6.43	-	26.8	

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BALLIVOR 'INFLUENT' MONITORING 2008												
	16-Jan-08	26-Feb-08	04-Mar-08	18-Apr-08	08-May-08	26-Jun-08	04-Jul-08	15-Aug-08	04-Sep-08	02-Oct-08	11-Nov-08	18-Dec-08
Parameter	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf	Inf
BOD mg/l	49	107.75	110.5	211.5	216	86	25.8	29.3	19	130.8	98.25	
COD mg/l	334	3.5	254	457	506	128	68.4	70.3	261	194	216	752
TSS mg/l	30	95	42	170	205	157	40	10	105	122	36	1454
Tot P mg/l	2.97	3.76	3.92	6.03	7.19	6.1	1.72	2.19	7.37	4.11	4.47	5.94
Tot N mg/l	18.8	50.6	27.8	39.5	53.2		12.7	14.7	15.7	17.8	25.6	25.7

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STATEMENT ON:
ANNEX X OF THE WATER FRAMEWORK DIRECTIVE (2000/60/EC)
&
ANNEX VIII OF THE WATER FRAMEWORK DIRECTIVE (2000/60/EC)

Based on Effluent (Primary Discharge Point) Analysis presented on Tables D.1(i)(b) & D.1(i)(c) and on the analysis of water upstream and downstream of the Primary Discharge Point (Tables F.1(i)(a) & F.1(i)(b)), it is concluded that none 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, at concentrations above the standards set in the Water Quality (Dangerous Substances) Regulations, 2001 (S.I. 12 of 2001).

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SECTION D – DISCHARGES TO THE AQUATIC ENVIRONMENT

Attachment D2: Tabular Data on Discharge Points

- Table D.2: Tabular Data on Discharge Points
- Drawing No. 5270-2694

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Table D2

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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 E.1(i) 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 E.1(ii) 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 meters.

ATTACHMENT E.1 INCLUDED

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 emission 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.

Attachment included	Yes	No
	✓	

E.3. Tabular data on Monitoring and Sampling Points

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

PT_CD	PT_TYPE	MON_TYPE	EASTING	NORTHING	VERIFIED
Point Code Provide label ID's assigned in section E of application	Point Type (e.g., Primary, Secondary, Storm Water Overflow)	Monitoring Type M = Monitoring S = Sampling	6E-digit GPS Irish National Grid Reference	6N-digit GPS Irish National Grid Reference	Y = GPS used N = GPS not used

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.

ATTACHMENT E.3 INCLUDED

E.4 Sampling Data

Regulation 16(1)(h) of the Waste Water Discharge (Authorisation) Regulations 2007 requires all applicants in the case of an existing waste water treatment plant 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 16(1)(l) of the regulations requires applicants to give details of compliance with any applicable monitoring requirements and treatment standards.

Attachment E.4 should contain any supporting information.

Attachment included	Yes	No
	✓	

SECTION E – MONITORING

Attachment E1: Wastewater Discharge Frequency & Quantities – Existing & Proposed

- **Table E.1(i): Waste Water Frequency and Quantity of Discharge
Primary and Secondary Discharge Points**

(NOTE: No Information on Quantity of Waste Water discharged available for Secondary Discharge, as it is an emergency overflow from a pump station and as such, flows are not continuous or consistent)

- **Table E.1(ii): Waste Water Frequency and Quantity of Discharge
Storm Water Overflows**

(NOTE: No Information on Quantity of Waste Water discharged available for Storm Water Overflow, as flows are not continuous or consistent)

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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	181770
SW-2	0	0

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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
SW-3	0	0	Yes

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SECTION E – MONITORING

Attachment E2: Monitoring & Sampling Points

- Programme for Environmental Monitoring
- Drawing No. 5270-2695

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PROGRAMME FOR ENVIRONMENTAL MONITORING

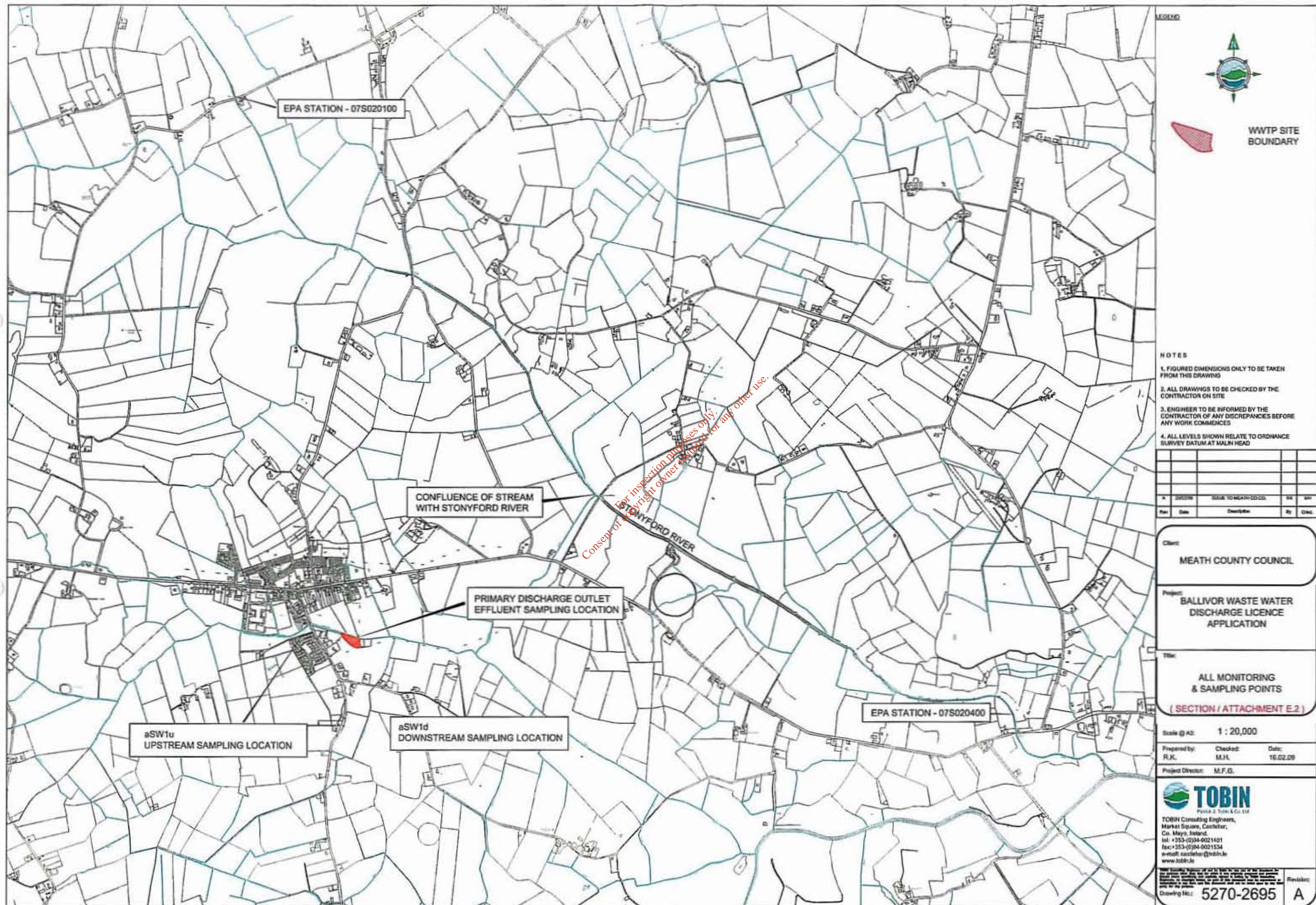
The 'Programme for Environmental Monitoring' is proposed to continue in much the same way as it has done for the last 2 years. This will involve monitoring of the Influent to the Waste Water Treatment Plant and the Effluent from the Waste Water Treatment Plant (i.e. Primary Discharge Point) on a monthly basis for the following parameters: BOD, COD, Total Suspended Solids (TSS), Total Phosphorus as P, Orthophosphate as P & Total Nitrogen as N.

The Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) requests water sampling of the aquatic environment into which the Primary and Secondary Discharges occur, in order to monitor the impact of the discharges on the ambient environment.

The Primary Discharge Point (SW1), the Secondary Discharge Point (SW2) and the Storm Water Overflow (SW3) from Ballivor WWTP discharge directly to an unnamed stream, which is a tributary of the Stonyford River. For the last number of years, the County Council have carried out monthly monitoring in the Stonyford River (upstream and downstream of the unnamed streams confluence with the Stonyford River), at the EPA Station Locations 07S020100 and 07S020400, as shown on Drawing No. 5270-2695 (overleaf). This sampling includes analysis for: Dissolved Oxygen (DO), Temperature, pH, Electrical Conductivity, BOD, Suspended Solids, Ammonia, Total Organic Nitrogen, Nitrate, Chloride, Alkalinity, Hardness, Colour, Copper & Zinc.

It is proposed to replace the monitoring at the EPA station locations (in the Stonyford River) with monitoring locations upstream and downstream of the discharge points within the unnamed stream (i.e. before it drains into the Stonyford River). The proposed monitoring locations aSW1u and aSW1d, are shown on Drawing No. 5270-2695 (overleaf).

All sampling points proposed above have a safe means of access. Samples will be tested for DO, Temperature, pH & Electrical Conductivity by the sampler at the time of sampling, using fully calibrated and serviced equipment. The remainder of analysis will be carried out by an independent fully quality-controlled laboratory.



SECTION E – MONITORING

Attachment E3: Tabular Data on Monitoring and Sampling Points

- Table E3: Tabular Data on Monitoring & Sampling Points

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Table E3

[illegible]

SECTION E – MONITORING

Attachment E4: Sampling Data

- Sampling Data Pertaining to the Existing Waste Water Treatment Plant for Previous 12 Months
- Details of Compliance with Any Applicable Monitoring Requirements and Treatment Standards

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**SAMPLING DATA PERTAINING TO THE EXISTING WASTE WATER TREATMENT
PLANT FOR PREVIOUS 12 MONTHS**

As stated in Attachment E.2 above - '*Programme for Environmental Monitoring*', monitoring of the Influent to the Waste Water Treatment Plant and the Effluent from the Waste Water Treatment Plant (i.e. Primary Discharge Point) have been carried out on a monthly basis for the last number of years. Monitoring results for the 'Influent' to the WWTP (2007 & 2008) were attached in Attachment D.1. Monitoring results for the 'Effluent' from the WWTP (2007 & 2008) are attached overleaf.

For the last number of years, the County Council have carried out monthly monitoring in the Stonyford River (upstream and downstream of the unnamed streams confluence with the Stonyford River), at the EPA Station Locations 07S020100 and 07S020400, as shown on Drawing No. 5270-2695. The results of this monitoring can be forwarded to the EPA in the future, should they be required.

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BALLIVER 'EFFLUENT' MONITORING 2007									
Plant Name	Sample	Date of Sampling	Sample Type	BOD mg/l	COD mg/l	TSS mg/l	Total P mg/l P	Ortho P mg/l P	Total N mg/l N
Ballivor	Final Effluent	19/01/2007	G	10	20.3	0	0.16	-	10.3
	Final Effluent	20/02/2007	G	1.4	36.5	9.6	0.338	-	9.71
	Final Effluent	02/03/2007	G	1.4	33.4	12	-	-	-
	Final Effluent	25/04/2007	G	5	45.9	8.4	-	-	-
	Final Effluent	24/05/2007	G	<1	34.3	5.6	-	-	-
	Final Effluent	14/06/2007	G	1.56	281	5.6	0.41	-	10.7
	Final Effluent	26/07/2007	G	1.82	16.7	6	0.483	-	10.8
	Final Effluent	10/08/2007	G	1.95	86.4	1.6	0.698	-	10
	Final Effluent	24/09/2007	G	4.06	31.3	22.4	0.999	-	16.5
	Final Effluent	18/10/2007	G	2.6	26.3	11.2	1.07	-	14.7
	Final effluent	15/11/2007	G	3.05	27.3	5.6	1.25	-	19.9

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BALLIVOR 'EFFLUENT' MONITORING 2008												
	16-Jan-08	26-Feb-08	04-Mar-08	18-Apr-08	08-May-08	26-Jun-08	04-Jul-08	15-Aug-08	04-Sep-08	02-Oct-08	11-Nov-08	18-Dec-08
Parameter	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff	Eff
BOD mg/l	5.7	3.5	3.12	5.25	3.95	4.5	3.8	2.95	2.8	12.5	4.85	
COD mg/l	13.4	28.3	28.7	33.9	31.8	31.7	25.3	31.4	26.1	22	36.9	28.9
TSS mg/l	18.8	8	10.4	13.6	15.2	12.8	12.4	2.8	10	10.8	10	20
Tot P mg/l	0.816	0.388		0.438	0.953	1.48	0.51	0.44	2.59	0.556	0.632	0.865
Tot N mg/l	6.05	14	12.5	13.1	15.6		6.58	7.71	32.9	11.3	11.8	12.8

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**DETAILS OF COMPLIANCE WITH ANY APPLICABLE MONITORING REQUIREMENTS
AND TREATMENT STANDARDS**

The existing treatment works at Ballivor provides effluent treatment Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001) standards.

Final effluent from Ballivor WWTP is discharged to a tributary of the Stonyford River, which is not classified as nutrient sensitive under the Urban Waste Water Treatment Regulations 2001 (S.I. No. 254 of 2001). Nonetheless, phosphorus removal is included at the plant, which is designed to bring final effluent to at least a concentration of 0.5mg/l Total Phosphorus.

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