Environmental Protection Agency,
P.O. Box 3000,
Johnstown Castle Estate,
Co. Wexford.

Re: Waste Water Discharge Certificate of Authorisation – Nurney Waste Water Works

A Chara,

With regard to the attached application form for a Waste Water Discharge Certificate of Authorisation for Nurney Waste Water Works, I confirm that the contents of the electronic files on the accompanying CD-ROM is a true copy of the original application form.

Mise le meas,

JERRY CROWLEY,
Senior Executive Engineer,
Water Services.
Waste Water Discharge Certificate of Authorisation Application Form

Nurney Waste Water Works

EPA Ref. No.: A0080-01

Environmental Protection Agency
PO Box 3000, Johnstown Castle Estate
Lo Call: 1890 335599 Telephone: 053-8687744
Web: www.epa.ie

Nurney Waste Water Works
## Tracking Amendments to Draft Application Form

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

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Nurney Waste Water Works
ABOUT THIS APPLICATION FORM

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

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

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

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

Should there be any contradiction between the information requirements set out in the Application Form and any clarifying explanation contained in the accompanying Guidance Note, then the requirements in this Application Form shall take precedence.
The procedure for making and processing of applications for waste water discharge Certificates of Authorisation, and for the processing of reviews of such Certificates, appears in the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007) and is summarised below. The application fees that shall accompany an application are listed in the Third Schedule to the Regulations.

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

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

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

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

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

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

The provision of information in an application for a waste water discharge Certificate of Authorisation which is false or misleading is an offence under Regulation 35 of the Waste Water Discharge (Authorisation) Regulations, 2007 (S.I. No. 684 of 2007).
Note: **Drawings.** The following guidelines are included to assist applicants:

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

**It should be noted that it will not be possible to process or determine the application until the required documents have been provided in sufficient detail and to a satisfactory standard.**
SECTION A: NON-TECHNICAL SUMMARY

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

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

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

A description of:

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

Supporting information should form Attachment N² A.1

Nurney Waste Water Works
Advice on completing this section is provided in the accompanying Guidance Note.

B.1 Agglomeration Details

| Name of Agglomeration: | Nurney |

Applicant's Details

**Name and Address for Correspondence**

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

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

| Name*: | Carlow County Council |
| Address: | County Buildings |
| | Athy Road |
| | Carlow |
| Tel: | 059 9170300 |
| Fax: | 059 9141503 |
| e-mail: | secretar@carlowcoco.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*: | Sean Laffey |
| Address: | Water Services Assembly Rooms |
| | No. 40 Dublin Street |
| | Carlow |
| Tel: | 059 9136262 |
| Fax: | 059 9164232 |
| e-mail: | slaffey@carlowcoco.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*: | Non 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 Certificate of Authorisation application.
Attachment B.1 should contain appropriately scaled drawings/maps (≤A3) of the agglomeration served by the waste water works showing the boundary clearly marked in red ink. These drawings/maps should also be provided as geo-referenced digital drawing files (e.g., ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. These drawings should be provided to the Agency on a separate CD-Rom containing sections B.2, B.3, B.4, B.5, C.1, D.2, E.3 and F.2.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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*: Ray Wickham, Area Engineer, Southern Area
Address: Nurney
Co. Carlow

Grid ref (6E, 6N)

Level of Treatment

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

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

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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.

<table>
<thead>
<tr>
<th>Discharge to</th>
<th>Nurney Stream which is a tributary of the River Barrow</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Discharge</td>
<td>150mm diameter PVC Pipe</td>
</tr>
<tr>
<td>Unique Point Code</td>
<td>NurSW1</td>
</tr>
<tr>
<td>Location</td>
<td>Located at North West Corner of WWTP Site.</td>
</tr>
<tr>
<td>Grid ref (6E, 6N)</td>
<td>E273339  N167640</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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.

There are no Secondary Discharges from the Nurney Agglomeration.

<table>
<thead>
<tr>
<th>Discharge to</th>
<th>Surface Water or Groundwater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of Discharge</td>
<td>E.g. Diffuser, Lunar Valve, Non-return flap valve, Point source, via Percolation area, via Soakaways etc.</td>
</tr>
<tr>
<td>Unique Point Code</td>
<td></td>
</tr>
<tr>
<td>Location</td>
<td></td>
</tr>
<tr>
<td>Grid ref (6E, 6N)</td>
<td></td>
</tr>
</tbody>
</table>

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

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

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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.

There are no storm water overflows within the Nurney Agglomeration.

<table>
<thead>
<tr>
<th>Type of Discharge</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unique</td>
<td></td>
</tr>
</tbody>
</table>

Nurney Waste Water Works

10
Attachment B.5 should contain appropriately scaled drawings/maps (≤A3) of storm water overflow point(s) associated with the waste water works, including labelled monitoring and sampling points associated with the discharge point(s). These drawings/maps should also be provided as geo-referenced digital drawing files (e.g. ESRI Shapefile, MapInfo Tab, AutoCAD or other upon agreement) in Irish National Grid Projection. This data should be provided to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, C.1, D.2, E.3 and F.2.

**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.

<table>
<thead>
<tr>
<th>Name</th>
<th>Carlow County Council</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address:</td>
<td>County Buildings</td>
</tr>
<tr>
<td></td>
<td>Athy Road</td>
</tr>
<tr>
<td></td>
<td>Carlow</td>
</tr>
<tr>
<td>Tel:</td>
<td>059 9170300</td>
</tr>
<tr>
<td>Fax:</td>
<td>059 9141503</td>
</tr>
<tr>
<td>e-mail:</td>
<td></td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>has been obtained</th>
<th>is being processed</th>
</tr>
</thead>
<tbody>
<tr>
<td>is not yet applied for</td>
<td>is not required</td>
</tr>
</tbody>
</table>

**Local Authority Planning File Reference N°:**

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.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

Nurneg Waste Water Works
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.

This does not apply to this application

<table>
<thead>
<tr>
<th>Within the SFADCo Area</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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 Service Executive  
**Address:** 11 Patrick Street  
Kilkenny

**Tel:** 056 7784742  
**Fax:** 056 7762741  
**e-mail:**

B. 8(i) Population Equivalent of Agglomeration

**TABLE B.8.1 POPULATION EQUIVALENT OF AGGLOMERATION**

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

<table>
<thead>
<tr>
<th>Population Equivalent</th>
<th>126</th>
</tr>
</thead>
<tbody>
<tr>
<td>Data Compiled (Year)</td>
<td>2008</td>
</tr>
<tr>
<td>Method</td>
<td>Property Survey</td>
</tr>
</tbody>
</table>

B.8 (ii) Pending Development

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

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

90% of the loading to the WWTP are domestic connections.

There are currently no Planning Applications granted that are still to be built and that will be connected to sewerage system.

B.8 (iii) FEES
State the relevant Class of waste water discharge as per Regulation 5, and the appropriate fee as per Columns 2 or 3 of the Third Schedule of the Waste Water Discharges (Authorisation) Regulations 2007, S.I. No. 684 of 2007.

<table>
<thead>
<tr>
<th>Class of waste water discharge</th>
<th>Fee (in €)</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Appropriate Fee Included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

B.9 Capital Investment Programme
State whether a programme of works has been prioritised for the development of infrastructure to appropriately collect, convey, treat and discharge waste water from the relevant agglomeration. If a programme of works has been prioritised provide details on funding (local or national small schemes programme) allocated to the capital project. Provide details on the extent and type of work to be undertaken and the likely timeframes for this work to be completed.

Carlow Co Co are currently installing Sludge Holding Tanks in an effort to improve the performance of the WWTP. There are no other works currently in the planning stage.

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

<table>
<thead>
<tr>
<th>Attachment Included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

B.10 Significant Correspondence

Attachment B.10 should contain a summary of any relevant correspondence issued in relation to a Section 63 notice.
There has been no Section 63 Notice issued.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

B.11 Foreshore Act Licences.

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

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

There is no Foreshore involved in this Agglomeration.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

**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.

**Nurney Waste Water Treatment Plant**

The existing WWTP had been built in 1986 for a designed capacity of 100pe. The WWTP currently is receiving a load of approximately over 120pe. The treatment works is over 30 years old and no longer providing adequate levels of treatment for the catchment it serves.

The existing works at Nurney consists of a secondary treatment works using an extended aeration process and the return of activated sludge.

The actual plant consists of an Aeration Tank, Clarifier, Sludge Drying Beds, an Inlet Pump Station and a small Control House.

The effluent flows through the WWTP via gravity. The aeration tank is aerated by a vertical shaft surface aerator.
The secondary settlement tank is hydraulically overloaded particularly as the inflow is high. This creates high flows through the works when running, which hydraulically shock loads the settling tank every time. There is also sludge drying beds, but these are not being used.

Carlow County Council are currently installing sludge holding tanks to improve the treatment process.

Flows enter the treatment works via a 225mm diameter pipe. It is then pumped into an Aeration Tank which has a capacity of 28.9m³.

Here the effluent is aerated via a surface aerator.

Effluent then flows to a clarifier which has a capacity of 13.7m³.

The clarifier has a hopper shaped bottom. Sludge is drawn off as required and returned to the aeration tank or drawn off by a sludge tanker as required.

The treated effluent then flows by gravity to the Nurney Stream.

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 DoEHLC '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.

**There are no storm water overflows in the Nurney Agglomeration.**

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.

**There are no pump stations in the Nurney Agglomeration**

**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.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

For inspection purposes only.
Consent of copyright owner required for any other use.
SECTION D: DISCHARGES TO THE AQUATIC ENVIRONMENT

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

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

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

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

D.1(i) Discharges to Surface Waters

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

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

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

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>
D.1(ii) Discharges to Groundwater

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

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

Supporting information should form Attachment D.1(ii)

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

D.1 (iii) Private Waste Water Treatment Plants

Provide information on all independently owned/operated private waste water treatment plants operating within the agglomeration. Submit a copy of the Section 4 discharge licence issued under the Water Pollution Acts 1977 to 1990, as amended for each discharge.

D.2 Tabular Data on Discharge Points

Applicants should submit the following information for each discharge point:

**Table D.2:**

<table>
<thead>
<tr>
<th>PT_CD</th>
<th>PT_TYPE</th>
<th>LA_NAME</th>
<th>RWB_TYPE</th>
<th>RWB_NAME</th>
<th>DESIGNATION</th>
<th>EASTING</th>
<th>NORTHING</th>
</tr>
</thead>
<tbody>
<tr>
<td>NurSW1</td>
<td>Primary</td>
<td>Carlow Co Co</td>
<td>River</td>
<td>River Barrow</td>
<td>River Barrow is cand SAC</td>
<td>273339</td>
<td>167640</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Barrow Via Nurney Stream</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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](http://www.epa.ie). This data should be submitted to the Agency on a separate CD-Rom containing sections B.1, B.2, B.3, B.4, B.5, C.1, E.3 and F.2.
SECTION E: MONITORING

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

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

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

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

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

E.2. Monitoring and Sampling Points

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

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

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

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

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a) River Monitoring Programme EPA

The Nurney Waste Water Treatment plant discharges into the Nurney Stream which flows into the River Barrow. The EPA Kilkenny Regional Laboratory carries out the chemical monitoring at 9 locations on the River Barrow in County Carlow. The downstream monitoring station is No. 2900 at the Royal Oak Bridge. Biological monitoring (Q value) is also carried out and is shown for 2008. The chemical parameters sampled are for:

- Temperature
- D.O.
- BOD

Nurney Waste Water Works
• Colour
• PH
• Conductivity
• Salinity
• Orthophosphate
• Ammonia
• Un-ionised ammonia
• Nitrite
• Nitrate
• Chloride
• Coliforms at some stations.

These are summarised in the 2008 report contained in Attachment E.2.

b) Urban Wastewater Regulations Monitoring

In 2009 7 monitoring runs were carried out at Nurney Wastewater Treatment Works as follows:

- Inlet (7), outlet (7), upstream (7), downstream (7).
- BOD, COD, Suspended Solids, Ammonia, Nitrate, Nitrite, Orthophosphate, Total Nitrogen, Total Phosphorus.
- The data in relation to the inlet and outlet monitoring is shown in Attachments E.3 and E.4.
- The data in relation to upstream and downstream monitoring is shown in Tables F.1(i).

c) Dangerous Substances Monitoring

For the purposes of the application dangerous substances monitoring will be carried out at the following locations:

- Outlet, upstream, downstream.

d) Drinking Water Abstraction Monitoring.

There are no drinking water abstraction points downstream.

e) Freshwater Fish Monitoring

The River Burrin is not a designated Salmonid river and therefore there are no designated locations to be monitored.

f) Bathing Water Monitoring.

No monitoring of bathing water designated locations was carried out in the 12 months preceding the application date. There are no designated locations.
E.3. Tabular data on Monitoring and Sampling Points

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

<table>
<thead>
<tr>
<th>PT_CD</th>
<th>PT_TYPE</th>
<th>MON_TYPE</th>
<th>EASTING</th>
<th>NORTHING</th>
<th>VERIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>NurSW1</td>
<td>Primary</td>
<td>M</td>
<td>273339</td>
<td>167640</td>
<td>N</td>
</tr>
<tr>
<td>Inlet</td>
<td>Primary</td>
<td>S</td>
<td>273357</td>
<td>167631</td>
<td>N</td>
</tr>
<tr>
<td>Upstream</td>
<td>Primary</td>
<td>S</td>
<td>273378</td>
<td>167631</td>
<td>N</td>
</tr>
<tr>
<td>Downstream</td>
<td>Primary</td>
<td>S</td>
<td>273325</td>
<td>167764</td>
<td>N</td>
</tr>
</tbody>
</table>

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

E.4 Sampling Data

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

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

Attachment E.4 should contain any supporting information.
SECTION F: EXISTING ENVIRONMENT & IMPACT OF THE DISCHARGE(S)

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

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

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

**F.1. Impact on Receiving Surface water or Groundwater**

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

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

- For discharges from secondary discharge points Tables 'Monitoring Details', 'Monitoring Test Details', 'Dangerous Substances Monitoring Details' and 'Dangerous Substances Monitoring Test Details' should be completed.
There are no secondary discharges in the Nurney Agglomeration.

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

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

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

There are no drinking water abstraction points downstream of the Nurney Agglomeration.

- Indicate whether or not emissions from the agglomeration or any plant, methods, processes, operating procedures or other factors which affect such emissions are likely to have a significant effect on -
  
  (a) a site (until the adoption, in respect of the site, of a decision by the European Commission under Article 21 of Council Directive 92/43/EEC for the purposes of the third paragraph of Article 4(2) of that Directive)
    
    (i) notified for the purposes of Regulation 4 of the Natural Habitats Regulations, subject to any amendments made to it by virtue of Regulation 5 of those Regulations,
    
    (ii) details of which have been transmitted to the Commission in accordance with Regulation 5(4) of the Natural Habitats Regulations, or
    
    (iii) added by virtue of Regulation 6 of the Natural Habitats Regulations to the list transmitted to the Commission in accordance with Regulation 5(4) of those Regulations,
    
  (b) a site adopted by the European Commission as a site of Community importance for the purposes of Article 4(2) of Council Directive 92/43/EEC in accordance with the procedures laid down in Article 21 of that Directive,
    
  (c) a special area of conservation within the meaning of the Natural Habitats Regulations, or
an area classified pursuant to Article 4(1) or 4(2) of Council Directive 79/409/EEC;


The Nurney Agglomeration discharges into the River Barrow upstream of Leighlinbridge, EPA Station 2700, and the River Barrow is part of the Barrow/Nore river catchment Site, which is a candidate SAC selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive — Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Nore Freshwater Pearl Mussel, Crayfish, Twaite Shad, Atlantic Salmon, Otter, Vertigo moulinisiana and the plant Killarney Fern.

The site passes through eight counties — Offaly, Kildare, Laois, Carlow, Kilkenny, Tipperary, Wexford and Waterford. The larger of the many tributaries include the Lerr, Fushoge, Mountain, Aughavaud, Owenass, Boherbaun and Stradbally Rivers of the Barrow and the Delour, Dinin, Erkina, Owveg, Munster, Arrigle and King’s Rivers on the Nore. Both rivers rise in the Old Red Sandstone of the Slieve Bloom Mountains.

The site is very important for the presence of a number of EU Habitats Directive Annex II animal species including Freshwater Pearl Mussel (Margaritifera margaritifera and M. m. durrovensis), Freshwater Crayfish (Austropotamobius pallipes), Salmon (Salmo salar), Twaite Shad (Alosa fallax fallax), three Lamprey species — Sea (Petromyzon marinus), Brook (Lampetra planeri) and River (Lampetra fluviatilis), the marsh snail Vertigo moulinisiana and Otter (Lutra lutra). This is the only site in the world for the hard water form of the Pearl Mussel M. m. durrovensis and one of only a handful of spawning grounds in the country for Twaite Shad. The freshwater stretches of the River Nore main channel is a designated salmonid river. The Barrow/Nore is mainly a grilse fishery though spring salmon fishing is good in the vicinity of Thomastown and Inistioge on the Nore.

Nurney WWTP is not currently producing a good quality effluent. However due to the small size of the Agglomeration and the fact that the Nurney WWTP is producing secondary treatment the effect of the WWTP on the candidate SAC will not be impactive.
This section should also contain details of any modelling of discharges from the agglomeration. Any other relevant information on the receiving environment should be submitted as Attachment F.1.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
</table>

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

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

There are no Drinking Water Abstraction Points downstream of the Nurney Agglomeration.

<table>
<thead>
<tr>
<th>ABS_CD</th>
<th>AGG_SERVED</th>
<th>ABS_VOL</th>
<th>PT_CD</th>
<th>DIS_DS</th>
<th>EASTING</th>
<th>NORTHING</th>
<th>VERIFIED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abstraction Code</td>
<td>Agglomeration served</td>
<td>Abstraction Volume in m³/day</td>
<td>Point Code</td>
<td>Distance Downstream in meters from Emission Point to Abstraction Point</td>
<td>6E-digit GPS Irish National Grid Reference</td>
<td>6N-digit GPS Irish National Grid Reference</td>
<td>Y = GPS used</td>
</tr>
</tbody>
</table>

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

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

Attachment F.2 should contain any supporting information.
SECTION G: PROGRAMMES OF IMPROVEMENTS

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

G.1 Compliance with Council Directives

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

- Dangerous Substances Directive 2006/11/EC,

The village of Nurney is serviced by a waste water drainage system and wastewater treatment works (WWTW). The original WWTW was constructed in the 1986 and was designed for a population equivalent of 100PE. The treatment works consists of an extended aeration treatment process with settlement and sludge drying beds. The WWTP has and there is no storm-water overflow in the inlet. There are also disused sludge drying beds. By late 2009 the contributing load to the WWTP was determined as about 120PE.

- Water Framework Directive 2000/60/EC,

The objectives of the Water Framework Directive (WFD) are to protect all high status waters, prevent further deterioration of all waters and to restore degraded surface and ground waters to good status by 2015. A major programme is under way to achieve this target.

For Carlow County Council to achieve this target the existing WWTP at Nurney will need to be upgraded.

- Birds Directive 79/409/EEC,

The Directive relates to the conservation of all species of wild birds naturally occurring in the Member States, and there is a strong emphasis on maintaining a favourable conservation status for these species and their various habitats. Annex I of the Directive lists species which, because of their rarity or vulnerability, require special conservation measures concerning their habitat. Article 4 of the Directive requires that Member States establish a network of Special Protection Areas (SPAs) for the needs of these species.

There are no SPA's in Carlow under the Birds Directive and the SERBD has coastal SPA's defined which the Draft Management Plan will make recommendations for management.

- Groundwater Directives 80/68/EEC & 2006/118/EC,

The effluent from the Nurney Agglomeration discharges to Surface Water and there is no discharge to groundwater.
• Drinking Water Directives 80/778/EEC,

There is no abstraction of drinking water from the River Barrow downstream of the Nurney Agglomeration.

• Urban Waste Water Treatment Directive 91/271/EEC,

The WWTP at Nurney provides secondary treatment. However results on the final effluent are not in compliance with the UWWT Directive.

• Habitats Directive 92/43/EEC,

The Nurney WWTP discharges into the River Barrow and the River Barrow is part of the Barrow/Nore river catchment Site, which is a candidate SAC selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Nore Freshwater Pearl Mussel, Crayfish, Twait Shad, Atlantic Salmon, Otter, Vertigo moulini and the plant Killarney Fern.

Given the poor performance of the Nurney WWTP, the discharge from this new works, even with secondary treatment will not enhance the quality of water in the Barrow.

• Environmental Liabilities Directive 2004/35/EC,

The Environmental Liabilities Directive is about preventing and remedying environmental damage. It aims to make operators whose activities have caused environmental damage strictly liable to pay to remedy that damage. It also aims to force remedied action where an imminent threat of damage is imposed.

Carlow County Council will need to upgrade the Nurney WWTP to achieve the above objectives.

• Bathing Water Directive 76/160/EEC, and

There are no bathing waters downstream of the Nurney Primary Discharge.


There are no shellfish waters downstream of the Nurney Primary Discharge.

Attachment G.1 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.
G.2 Compliance with the European Communities Environmental Objectives (Surface Waters) Regulations 2009

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

There are no Phosphorus Removal Facilities at the Nurney WWTP.

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

G.3 Impact Mitigation

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

Carlow County Council are currently installing Sludge Holding Tanks at Nurney WWTP.

There are currently no other plans in place for upgrade works.

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

G.4 Storm Water Overflows

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

There are presently no Storm Water Overflows within the Nurney Agglomeration.
Attachment G.4 should contain the most recent programme of improvements, including a copy of any approved funding for the project and a timeframe for the completion of the necessary works to take place.

<table>
<thead>
<tr>
<th>Attachment included</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
SECTION H: DECLARATION

Declaration


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

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

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

Signed by: [Signature]
Date: 21/12/09

Print signature name: SEAN LAFFEY

Position in organisation: SENIOR ENGINEER

Nursey Waste Water Works
SECTION I: JOINT DECLARATION

Joint Declaration


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

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

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

Lead Authority

Signed by: ___________________________ Date: ____________
(on behalf of the organisation)

Print signature name: ___________________________

Position in organisation: ___________________________

Co-Applicants

Signed by: ___________________________ Date: ____________
(on behalf of the organisation)

Print signature name: ___________________________

Position in organisation: ___________________________

Signed by: ___________________________ Date: ____________
(on behalf of the organisation)

Print signature name: ___________________________

Position in organisation: ___________________________

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

Nurney Waste Water Works
Carlow County Council

NURNEY WASTEWATER WORKS

WASTEWATER DISCHARGE CERTIFICATE OF AUTHORISATION APPLICATION

NON-TECHNICAL SUMMARY

December 2009
Introduction

The purpose of a Waste Water Discharge licence is to make provision for the protection of the environment and the protection of human, animal and plant life from harm or nuisance caused by the discharge of Dangerous Substances to the aquatic environment as well as to ensure compliance with National Law. Waste Water Discharge Licensing encourages the use of advanced waste water treatment technologies, the regularisation of waste water discharges from primary and secondary discharge points and storm water overflows, improved efficiency and effectiveness of pollution control, and allows for a more streamlined regulatory system that is open and transparent.

The licensing process is a quasi-judicial process, the detail of which is set out in the Waste Water Discharge (Authorisation) Regulations, 2007.

The Regulations detail in the Second and Third Schedules the deadlines for the various sizes of wastewater treatment plants and the associated fees for the applications.

Overview

The Dangerous Substances Directive (76/464/EEC) – Council Directive of 4 May 1976 on pollution caused by certain dangerous substances discharged into the aquatic environment of the Community - has the objective of reducing pollution caused or induced by certain defined dangerous substances discharged into the aquatic environment.

The Dangerous Substances Directive (DSD) requires Member States to take:

- Appropriate steps to eliminate pollution (of the aquatic environment) by the dangerous substances in the families and groups of substances in List I of the Annex and to reduce pollution of the said waters by the dangerous substances in the families and groups of substances in List II of the Annex to the DSD.

Among the requirements of the DSD are provisions for reducing pollution from List II substances. Member States are required to establish programmes for implementation within defined deadlines. These programmes must contain provisions for:

- Prior authorisation of discharges to waters, and
- Emission Limit Values for discharges based on quality objectives for water in accordance with existing Directives.

A Waste Water Discharge licence shall supersede licences/permits issued under the following legislation:

- Foreshore Act, 1933.
- Planning and Development Act, 2000.
The waste water discharge licence regulates all discharges of waste water from a waste water works. It is important to note that the licence does not regulate the following:

- Waste water treatment plants.
- Odours from waste water treatment plants.
- Sludge disposal from waste water treatment plants.
- Noise from waste water treatment plants.

Discharges are classed in three distinct types:

- Primary Discharge Point refers to the largest volumetric flow from the works.
- Secondary Discharge Point refers to discharges other than the primary discharge or storm water overflows.
- Storm Water Overflows are overflows designed for the purpose of relieving stresses in the collection network usually caused by excessive flows that result from heavy rainfall in the catchment.

Nurney and the Catchment Area

Nurney is located 8 kms south of Carlow Town. The WWTP is located down an agricultural access road at a location to the north of the village. Effluent from the existing treatment works discharges to the Nurney Stream which flows in a westerly direction before discharging into the River Barrow 2km upstream of Leighlinbridge.

The catchment area consists of the village of Nurney. No areas outside of the village of Nurney are pumped or transferred to this WWTP.

Nurney Waste Water Treatment Plant

The existing WWTP had been built in mid 1986 for a designed capacity of 100pe. The WWTP currently is receiving a load of approximately over 120pe. The treatment works is over 30 years old and no longer providing adequate levels of treatment for the catchment it serves.

The existing works at Nurney consists of a secondary treatment works using an extended aeration process and the return of activated sludge.
The actual plant consists of an Aeration Tank, Clarifier, Sludge Drying Beds and a small Control House.

Carlow County Council are currently installing sludge holding tanks to assist in improving the activated sludge process.

The incoming effluent flows into the aeration tank. The aeration tank is aerated by a vertical shaft surface aerator.

The secondary settlement tank is hydraulically over loaded particularly as the inflow is high.

**Operation of the Works**

The Nurney Waste Water Plant is operated by the following staff:

- 1 No Caretaker.

The Caretaker also operates and manages two other waste water plants.

The caretaker reports to the Area Engineer for the Central Area. The Area Engineer is the Budget Holder for the plant and arranges all works pertaining to the plant.

The caretaker is also responsible for the sewer network. The Area Engineer supplements the caretaker with additional resources as required.

All sampling is done by the County Council Technician responsible for testing and sampling county wide. Testing is done by an accredited laboratory.

The plant is manned between the hours of 08.00 and 12.00 Monday to Friday with the plant being also manned between the hours of 08.00 and 12.00 on Saturday and between the hours of 10.00 and 12.00 on Sunday.

Call out systems are in place whereby staff are notified of malfunctions in the plant operation and are in a position to get to the plant and address the problems immediately. A contract is in place with a service provider to carry out maintenance to the plant on a regular basis. The contract is awarded through a tendering process. The contract includes rates for rapid response to emergency situations and call out rates for breakdowns.

Carlow County Council are presently setting in place the PMS (Performance Management System).

This will involve each caretaker compiling a monthly report on the Plant Operations. The caretakers report will be approved by his line manager and by a Senior Engineer in Water Services.
The caretaker will receive extensive training in the operations of a WWTP. This training will be refreshed as required.

Carlow County Council is committed to operating and maintaining the WWTPs within the County to a level necessary to produce an effluent to the required standards and to achieve this consistently.

Sources of Emissions from the Waste Water Works

The WWTW discharges final effluent and treated storm water into the Nurney Stream, about 3km upstream from where the Nurney Stream joins the River Barrow. There are no other emissions to the environment except for a minimal level of odour associated with a secondary treatment waste water works, there is no primary treatment and therefore no odours associated with primary sludges.

The effluent being transferred to the WWTP is a typical municipal sewage with no industrial or agricultural type discharges such as food processing.

The treated effluent entering the Nurney Stream is consistent with the type of effluent associated with an activated sludge type process. There are no loadings coming to the WWTP that would be radically different from typical municipal sewage.

The potential loadings to the receiving waters are BOD, COD, Suspended Solids, Phosphorus, Nitrates and Ammonia.

The Nurney WWTP is currently struggling to come within the general parameters for BOD and S.S. of 25mg/l and 35mg/l as set out in the Urban Waste Water Regulations.

The Urban Waste Water Regulations would specify "appropriate treatment" for a WWTP the size of Nurney.

Currently the Nurney WWTP does not have storm water treatment facilities.

Water Framework Directive (WFD):

The objectives of the Water Framework Directive (WFD) are to protect all high status waters, prevent further deterioration of all waters and to restore degraded surface and ground waters to good status by 2015. A major programme is under way to achieve this target.

In order to comply with the requirements of the Water Framework Directive (WFD, the WWTP at Nurney will need to be upgraded to a WWTP that will produce a good quality effluent to comply with all National and European Legislation.
Urban Waste Water Treatment Directive (UWWTD)

The Nurney Waste Water Treatment Plant is currently not in compliance with all requirements under the UWWTD.

There are no facilities for the treatment of stormwater at the WWTP at present.

The current results for the Effluent are also well outside even the standard parameters of 25mg/l/35mg/l. We have included results in the application.

Habitat Directive

The Nurney Waste Water Works discharges the Nurney Stream which discharges into the River Burren and the River Barrow is part of the Barrow/Nore River Catchment Site, Site No 002162 which is a candidate SAC selected for alluvial wet woodlands and petrifying springs, priority habitats on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for old oak woodlands, floating river vegetation, estuary, tidal mudflats, Salicornia mudflats, Atlantic salt meadows, Mediterranean salt meadows, dry heath and eutrophic tall herbs, all habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Nore Freshwater Pearl Mussel, Crayfish, Twaitte Shad, Atlantic Salmon, Otter, Vertigo moulinisiana and the plant Killarney Fern.

Receiving Waters

The primary discharge point from Nurney Waste Water Treatment Plant discharges into the Nurney Stream which flows into the River Barrow.

The Nurney Stream rises to the northeast of Nurney Village and flows west into the River Barrow 2km upstream of Leighlinbridge.

Conclusion

Carlow County Councils WWTP in Nurney is currently overloaded and producing a very poor quality effluent.

A new proposed WWTP will be required to allow Carlow County Council to achieve the objectives and programmes set out under the SERBD Management Plan and under the Dangerous Substances Directive.