

Acmhainní Daonna Human Resources 047 30586

Airgeadas Finance 047 30589

Na Bóithre Roads 047 30597

Clár na dToghthóirí Register of Electors 047 30547

> Comhshaol Environment 047 30593

Deontals Ardoideachals Higher Education Grants 047 30550

> Na hEalaíona Arts 047 71114

lasachtaí /Deontais Tithíochta Housing Loans/Grants 047 30527

Leabharlann an Chontae County Library 047 74700

> Mótarcháin Motor Tax 047 81175

Músaem an Chontae County Museum 047 82928

> Pleanáil Planning 047 30532

Pobal & Fiontar Community & Enterprise 047 73719

Rialú Dóiteáin/Foirgnimh Fire/Building Control 047 30521

> Seirbhísí Uisce Water Services 047 30504

Comhairle Contae Mhuineacháin Monaghan County Council

Administration, Environmental Licensing Programme, Office of Climate, Licence and Resource Use, Environmental Protection Agency, Headquarters, P.O. Box 3000, Johnstown Castle Estate, Co. Wexford.

2nd October 2013

Re: Annual Environmental Return (AER) 2012 for the agglomeration Inniskeen D0348, revised ELRA attached.

Dear Sir/Madam,

I refer to the above licensed agglomeration in County Monaghan. Enclosed is the revised Annual Environmental Return paper copy as required for 2012 for the Inniskeen agglomeration, with an amended signed ELRA attached.

Yours Sincerely,

Mark Johnston,

Senior Executive Engineer, Water Services Section, Monaghan County Council. 047 30513

Fáiltíonn an tÚdarás Áltiúil rolmh chomhfhreagras i nGaeilge.

Comhairle Contae Mhuineacháin, Oifigí an Chontae, An Gleann, Muineachán, Éire.

Monaghan County Council, Council Offices, The Glen, Monaghan, Ireland.

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Comhairle Contae Mhuineacháin **Monaghan County Council**

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Rialú Dóiteáin/Foirgnimh Fire/Building Control 047 30521

> Seirbhfsf Uisce Water Services 047 30504

Administration, Environmental Licensing Programme, Office of Climate, Licence and Resource Use, Environmental Protection Agency, Headquarters, P.O. Box 3000, Johnstown Castle Estate,

7th February 2013

Re: Annual Environmental Return (AER) 2012 for the agglomeration Inniskeen D0348.

Dear Sir/Madam,

Co. Wexford.

I refer to the above licensed agglomeration in County Monaghan. Enclosed is the Annual Environmental Return paper copy as required for 2012 for the Inniskeen agglomeration.

urs Sincerely

Mark Johnston, Senior Executive Engineer, Water Services Section, Monaghan County Council. 047 30513

Comhairle Contae Mhuineacháin, Oifigí an Chontae, An Gleann, Muineachán, Éire. Monaghan County Council, Council Offices, The Glen, Monaghan, Ireland.

Monaghan County Council, Inniskeen Waste Water Treatment Plant – Annual Environmental Report 2012

MONAGHAN COUNTY COUNCIL



WASTE WATER DISCHARGE LICENCE REGISTER NUMBER: D0348 AGGLOMERATION: Inniskeen Town ANNUAL ENVIRONMENTAL REPORT 1st JANUARY 2012 - 31st DECEMBER 2012

A/County Manager: D Fallon Director of Services: D Fallon Senior Engineer: M Murray

Inniskeen Waste Water Treatment Plant - Annual Environmental Report 2012

Document Amendment Record

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Section 1. Introduction & background to 2012 AER

1.1 Introduction.

This is the third Annual Environmental Report (AER) for Inniskeen Town WasteWater Treatment Plant.

The Environmental Protection Agency granted a Waste Water Discharge Licence (Register No. D0348) in respect of the agglomeration named, to Monaghan County Council on the 10th Feb 2010.

The purpose of this Annual Environmental Report (AER) is to provide a summary of activities relevant to the discharges from 1st January 2012 to the 31st December 2012 as required by Condition 6.11. The Annual Environmental Report (AER) for Inniskeen Agglomeration includes the information specified in Schedule D of the Wastewater Discharge Licence D0348.

The AER content and has been prepared in accordance with the Environmental Protection Agency (EPA) publications: - "Guidance on the Preparation & Submission of the Annual Environmental Report (AER) for Waste Water Discharge Licences"

And

'A Step-by-Step Guide to reporting by EPA licensed facilities of AER/PRTR Emissions Data and the Annual Environmental Report'.

1.2 Site Information.

Inniskeen is located near the County Louth border in the extreme south eastern corner of County Monaghan. It is approximately 10.5 km from the nearest large town of Carrickmacross and is 16 km west of Dundalk in County Louth. The population equivalent of Inniskeen village was last estimated at approximately 1,010 persons. This figure is based Census 2011 data. The domestic population growth rate and population projection over the period of the licences are based on the population change between 2006 and 2011 (Census 2011) of 3.2%. The duration of the licence is 6 years therefore based on the latter; a growth rate of 4.8% is predicted, giving a predicted population of 1058 (excluding pending planning permissions).

1.3 Description of Wastewater Treatment Works

The Waste Water Works comprises a network of gravity sewers, a pumping station and associated rising main and a Waste Water Treatment Works with a design capacity of 1750 P.E. The current load is approximately 1,010 PE (based on Census data 2011). The plant provides tertiary treatment with nutrient removal (phosphorus reduction) for the effluent. The Waste Water Treatment Plant (WWTP) which provides treatment for a design load of 1,750 population equivalent comprises aeration by mechanical aerators followed by settlement and clarification and tertiary treatment to reduce phosphate levels. The plant is designed to produce a fully nitrified effluent of 10:10mg/l BOD:

Suspended Solids. Sludge dewatering is provided by thickening the sludge in a picket fence thickener followed by dewatering on a sludge belt press.

1.4 Brief summary of monitoring results

For the year 2012, the treated effluent had an average BOD concentration of 3.43mg/l and average suspended solids concentration of 6.2mg/l. Average concentrations of nutrients are as follows; Total Phosphorus 1.953mg/l (P) and Total Nitrogen 15.95mg/l (N), (refer table 2.1, appendix 1) the plant is therefore operating efficiently producing effluent under the 10:10mg/I BOD:SS parameter design limits. There were 7 exceedances of ELV's throughout the year which will be discussed in more detail under section 2.2. It should be noted that the results for Ortho P prior to March 2012 are considered to be inaccurate (limits of detection not low enough) as they were being reported by the external laboratory as <6 values, a different laboratory was employed after March 2012 for analyses and results are accurate from then. Exceedances were reported to the EPA as incidents since March 2012. The exceedance of the ELV's were primarily for total phosphorus and Ortho Phosphorus and can be attributed to the malfunction of a dissolved oxygen sensor in the aeration unit and dosing pump failure, remedial works were carried out at the time and there were no further exceedances since May 2012.

The outfall from the Inniskeen Waste Water Plant discharges to the River Fane at National Grid Reference 293963E 306678N in the Town land of Lacklom, Co Monaghan. The associated Waste Water Treatment Plant is located at 293924E 306661N also in the town land Lacklom, Co Monaghan. The River Fane is not designated Salmonid water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988) nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. However, it is a valuable salmonid river and contains good stocks of wild brown trout and salmon throughout. The river Fane is in the Neagh Bann river basin district with it's overall status classified as poor and at risk of not meeting good status by 2015, with overall objective to restore it to good status by 2021, however, the 'point risk source' and potential for impact from the Inniskeen WWTP discharge on the river is categorised as '2b - not at risk' it is therefore not identified as impacting on the poor river quality status, (ref: WFD Ireland maps/website & reports.).

Monaghan County Council's upstream monitoring results for 2012 (refer table 2.3, appendix 1) for the receiving river Fane, indicate relatively good quality water in the river Fane with average BOD levels of 1.322mg/l, average Ortho Phosphorus levels at 0.03mg/l and average ammonia level at 0.016mg/l. The downstream monitoring results (refer table 2.4, appendix 1) detail slightly higher results of average BOD levels at 1.478mg/l, average Ortho Phosphorus levels at 0.046mg/l and average ammonia level at 0.023mg/l. These results concur with the 'poor' status of the river Fane for Ortho P. A new proposed downstream monitoring location for the Inniskeen WWTP has been submitted to the EPA for approval, (by email 11th December 2012) as the existing one is too close to the effluent discharge point and therefore not achieving an adequate mixing zone for the effluent in the river.

There are no specified improvement requirements under schedule C of the licence required, there are therefore no major projects or improvements planned for the Inniskeen WWTP.

Section 2. Monitoring Reports Summary

2.1 Summary report on monthly influent monitoring

Monaghan County Council's summary on influent monitoring for Inniskeen WWTP is tabulated in table 1 attached in appendix 1. As required under condition 4.15 of the licence, monthly monitoring of the influent stream to the WWTP for BOD, COD, Total Nitrogen and Total Phosphorus measuring mass loadings and removal efficiencies has been calculated and tabulated in the aforementioned table. The removal efficiencies for BOD and COD within the treatment plant are adequate achieving averages over 86% for both parameters. There is one set of influent results considered erroneous (laboratory error) as the values are too low for influent wastewater, they are therefore omitted from consideration. There are some results missing for Ortho P and TSS for both influent and effluent in 2012, these were not reported by the laboratory. There are variations in the percentage removal efficiencies for Total Nitrogen and Total Phosphorus within the treatment plant, some of these can be attributed to the replacement of a faulty dissolved oxygen unit in the aeration unit and malfunction of the ferric dosing pump in April and May 2012.

2.2 Discharges from the agglomeration

A summary presentation of monitoring results for the primary discharge (National Grid Reference 293963E 306678N) is tabulated in table 2.1 attached in appendix 1. The ELV's where applicable are included in the heading columns. Under Schedule B of the licence, sampling is required bimonthly, there were 11 sample analyses carried out in 2012 for the effluent, some parameters were not tested due to laboratory error with each sample analyses, however there are 6 or more results for all parameters. The parameters, flow, temperature, PH and conductivity are being monitored on site and recorded. As stated in section 1.4, the results for Ortho P prior to March 2012 are considered to be inaccurate (limits of detection not low enough) as they were being reported by the external laboratory as <6 values, a different laboratory was employed after March 2012 for analyses and results are accurate from then. These < than values were not reported as incidents to the EPA, an EPA audit in April 2012 highlighted these values and a different laboratory has been employed since then to undertake sample analyses. From April to the end of May 2012, there were 9 no. exceedances of ELV's in the effluent as highlighted in table 2.1 in red text. These 9 exceedances were reported as incidents to the EPA (2 incident reports) on the 10/05/2012 and 20/08/2012.

The causes of these exceedances for Ortho P, Total P and Ammonia are attributed to malfunction of the dissolved Oxygen unit in the aeration tank and dosing pump failure (as reported to EPA). Corrective actions were undertaken to replace the dissolved Oxygen unit membrane and service the dosing pump

There has been no further exceedances of ELV's since May 2012 in the effluent.

The impact of these failures on the receiving waters appeared to be negligible from examining the downstream results in the river on the date and subsequent dates, for ammonia and Ortho P, with no increase from previous downstream results prior to the exceedances.

2.3 Ambient monitoring summary

A summary presentation of the ambient monitoring results for the upstream (National grid reference 293947E 306689N) and downstream (National grid reference 293979E 306669N) receiving waters is tabulated in tables 2.3 and 2.4 attached in appendix 1. Under Schedule B of the licence, 10 samples are required per year, there were 9 sample analysis carried out in 2012, with only 7 results for Total Nitrogen. This is attributed to a mix up with licence requirements as effluent is required bi monthly and ambient 10 times per year, from 2013, all monitoring will be carried out 10 times per year to avoid any confusion. Laboratory changes were made in March 2012, it appears Total Nitrogen was omitted from the first few samples with the new laboratory. From 2013, all parameters will be monitored and reported as per licence requirements. A report on an SSRS assessment carried out by the Environment Section of Monaghan County Council is tabulated in appendix 1. The river Fane is not a designated Salmonid water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988) nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. The impact of the discharge from the agglomeration on the river Fane is assessed with regard to the Environmental Quality Standards (EQS), (Surface Water Regulations 2009) for BOD and total Ammonia in the following calculations:

Assimilative Capacity of Receiving Water:

The nearest flow monitoring data available on the Fane River is at the Moyles Mill (NGR 292049E, 307808N) (OPW Station 06011) located upstream of the discharge point. The OPW 95-percentile flow of 0.2m3/s from the Moyles Mill Station is used in these calculations. The river Fane's overall status is classified as poor and at risk of not meeting good status by 2015, with overall objective to restore it to good status by 2021.

The assessment has been undertaken on the basis of an average discharge flow to the receiving water from the Wastewater Treatment Plant and the measured average upstream BOD and Total Ammonia concentrations from Monaghan County Council results.

BOD Assimilative Capacity

95-percentile Flow Conditions

The BOD assimilative capacity of the river under 95-percentile flow conditions is calculated by:

$$AC = (C_{max} - C_{back}) \times 86.4 \times F$$

where,

AC = Assimilative capacity

 C_{max} = maximum permissible concentration (EQS) in the river (mg/l) (in this case taken as a maximum of 2.6mg/l) (SW Reg's 2009 - good status (use good status as river is poor status))

C_{back} = background upstream concentration (mg/l) (1.322mg/l - M.C.C. Upstream 2012 data)

86.4 = constant to correct units to kg/day

 $F = \text{flow in the river (m}^3/\text{s)} 95\% \text{ile flow (0.2m}^3/\text{s or 17,280,000l/d)}$

Therefore,

$$AC = (2.6-1.322) \times 86.4 \times 0.2$$

AC = 22.08 kg/day

Total Amount Discharge to River:

With an average effluent discharge volume of 211m3/day, and average BOD 3.427mg/l (refer table 2, appendix 1), the total amount of BOD discharged to the Fane River:

 $(211,000l/day \times 3.427mg/l)/1,000,000 \text{ (mg to Kg)} = 0.723kg/day$

This constitutes 3.27% of the assimilative capacity of the Fane River.

The Mass balance formula is used to calculate the resulting BOD concentration in the river resulting from the effluent discharge:

$$T = \frac{FC + fc}{F + f}$$

Where:

T = resultant concentration due to the discharge (mg/l)

 $\mathbf{F} = 95\%$ ile flow of receiving water (m³/s) (95% flow of 0.2m³/s = 17,280,000l/d)

c = average concentration in discharge (3.427mg/l)

C = mean background concentration in receiving water u/s of discharge (1.322mg/I - M.C.C. Upstream 2012 data)

f = discharge volume 211,000l/d

 $1m^3/s = 86,400,000 I/d$

Therefore:

 $T = [(17,280,000 \times 1.322) + (211,000 \times 3.427)] / [17,280,000 + 211,000]$

T = 1.347 mg/l

Summary Result - BOD

BOD	95-Percentile Flow
Assimilative Capacity of River	22.08kg/day
Total Amount Discharged	0.723kg/day
% of Assimilative Capacity Absorbed	3.27%
Existing Average Background Upstream	1.322mg/l - M.C.C. Upstream 2012 data, (table 2.3 app. 1)
Resultants Conc In River	1.347mg/l
Standard EQS - S.W. Regs 2009	2.6mg/I (Good Status)

Headroom (mg/I) = Cmax - C

Cmax = maximum permissible concentration (EQS) (mg/l)C = background upstream concentration (mg/l)

Headroom = 2.6 - 1.322 = 1.278mg/l Percentage Headroom utilised (%) = $(T-C) \times 100$ Headroom

T = resultant concentration due to the discharge (mg/l)

Percentage Headroom utilised = $(1.347 - 1.322) \times 100$ = 1.96%

The discharge alone is using <25% of the headroom available.

The above calculations indicate the discharge, in terms of BOD concentration, is not impacting on the water quality of the river and the resultant concentration is within the EQS of <2.6mg/l for 95%ile flow conditions (Surface water regs 2009) and using less than 25% of the headroom available in the river for BOD assimilation.

Total Ammonia Assimilative Capacity

95-percentile Flow Conditions

The Total Ammonia assimilative capacity of the river under 95-percentile flow conditions is calculated by:

$$AC = (C_{max} - C_{back}) \times 86.4 \times F$$

where,

AC = Assimilative capacity

 \mathbf{C}_{max} = maximum permissible concentration (EQS) in the river (mg/l) (in this case taken as a maximum of 0.14mg/l) (SW Reg's 2009 - good status (use good status as river is poor status))

 $C_{back} = background$ upstream concentration (mg/l) (0.016mg/l - M.C.C. Upstream 2012 data)

86.4 = constant to correct units to kg/day

 $F = \text{flow in the river (m}^3/\text{s)} 95\% \text{lle flow (0.2m}^3/\text{s or 17,280,000l/d)}$

Therefore,

 $AC = (0.14-0.016) \times 86.4 \times 0.2$

AC = 2.142 kg/day

Total Amount Discharge to River:

With an average effluent discharge volume of 211m3/day, and average total ammonia of 0.737mg/l (refer table 2, appendix 1), the total amount of ammonia discharged to the Fane River:

 $(211,000l/day \times 0.737mg/l)/1,000,000 \text{ (mg to Kg)} = 0.155kg/day$

This constitutes 7.26% of the assimilative capacity of the Fane River.

The Mass balance formula is used to calculate the resulting Total Ammonia concentration in the river resulting from the effluent discharge:

$$T = \frac{FC + fc}{F + f}$$

Where;

T = resultant concentration due to the discharge (mg/l)

F = 95%ile flow of receiving water (m³/s) (95% flow of 0.2m³/s = 17,280,000l/d)

c = average concentration in discharge (0.737mg/l)

C = mean background concentration in receiving water u/s of discharge (0.016mg/I - M.C.C. Upstream 2012 data)

f = discharge volume 211,000l/d

 $1m^3/s = 86,400,000 I/d$

Therefore:

 $T = [(17,280,000 \times 0.016) + (211,000 \times 0.737)] / [17,280,000 + 211,000]$ T = 0.025 mg/l

Summary Result - Total Ammonia

Total Ammonia	95-Percentile Flow
Assimilative Capacity of River	2.142kg/day
Total Amount Discharged	0.155kg/day
% of Assimilative Capacity Absorbed	7.26%
Existing Average Background Upstream	0.016mg/l (MCC upstream 2012 data)
Resultants Conc in River	0.025mg/l
Standard EQS - S.W. Regs 2009	0.14mg/l (Good Status)

Headroom (mg/I) = Cmax - C

Cmax = maximum permissible concentration (EQS) (mg/l) C = background upstream concentration (mg/l)

Headroom = 0.14 - 0.016 = 0.124mg/l Percentage Headroom utilised (%) = $(T-C) \times 100$ Headroom

T = resultant concentration due to the discharge (mg/l)

Percentage Headroom utilised = $(0.025 - 0.016) \times 100$ = 7.25% 0.124

The discharge alone is using <25% of the headroom available.

The above calculations indicate the discharge, in terms of Total Ammonia concentration, is not impacting on the water quality of the river and the resultant concentration is within the EQS of <0.14mg/l for 95%ile flow conditions (Surface water regs 2009) and using less than 25% of the headroom available in the river for Total Ammonia assimilation.

2.4 Data Collection and reporting requirements under the UWWT Directive.

This information will be submitted separately to the EPA through EDEN.

2.5 Pollutant Release and Transfer Register (PRTR) – report for 2012. This information is submitted electronically via the EPA website. Both the AER/PRTR Emissions Data information and the Excel calculation toolset are printed out and included at the end of this AER in Appendix 2.

Section 3. Operational Reports Summary

3.1 Complaints Summary

There were no complaints of an environmental nature related to the discharge from Inniskeen WWTP in 2012.

3.2 Reported Incidents Summary

A summary presentation of monitoring results for the primary discharge (National Grid Reference 293963E 306678N) is tabulated in table 2.1 attached in appendix 1. The ELV's where applicable are included in the heading columns. Under Schedule B of the licence, sampling is required bimonthly, there were 11 sample analyses carried out in 2012 for the effluent, some parameters were not tested due to laboratory error with each sample analyses, however there are 6 or more results for all parameters. The parameters, flow, temperature, PH and conductivity are being monitored on site and recorded. As stated in section 1.4, the results for Ortho P prior to March 2012 are considered to be inaccurate (limits of detection not low enough) as they were being reported by the external laboratory as <6 values, a different laboratory was employed after March 2012 for analyses and results are accurate from then. These < than values were not reported as incidents to the EPA, an EPA audit in April 2012 highlighted these values and a different laboratory has been employed since then to undertake sample analyses.

From April to the end of May 2012, there were 9 no. exceedances of ELV's in the effluent as highlighted in table 2.1 in red text. These 9 exceedances were reported as incidents to the EPA (2 incident reports) on the 10/05/2012 and 20/08/2012.

The causes of these exceedances for Ortho P, Total P and Ammonia are attributed to malfunction of the dissolved Oxygen unit in the aeration tank and dosing pump failure (as reported to EPA). Corrective actions were undertaken to replace the dissolved Oxygen unit membrane and service the dosing pump in April and May 2012. There has been no further exceedances of ELV's since May 2012 in the effluent.

The impact of these failures on the receiving waters appeared to be negligible from examining the downstream results in the river on the date and subsequent dates, for ammonia and Ortho P, with no increase from previous downstream results prior to the exceedances.

Section 4. Infrastructural Assessment & Programme of Improvements

4.1 Treatment Capacity

As per condition 1.7 of the licence, an annual assessment of the remaining hydraulic and organic treatment capacities of the waste water works is required. This assessment is tabulated in table 1.2, appendix 1, as stated in the table there is hydraulic remaining capacity of 33% and Organic remaining capacity of 82% at the treatment works based on the current loading, it is therefore concluded that the capacity will not be exceeded in the next three years, based on the predicted population growth rate as outlined in section 1.2 of this report.

4.2 Storm water overflow identification and inspection report As per condition 4.12.1 of the licence, a report on the investigation and assessment of storm water overflows was submitted as part of the second AER for Inniskeen in January 2012. An assessment of the storm water overflows in therefore not required as part of this AER (further assessment to be submitted by 2015).

4.3 Report on progress made and proposals being developed to meet the improvement programme requirements.

As per condition 5 of the licence, a programme of infrastructural improvements to maximise the efficiency and effectiveness of the licence is required as part of the second AER.

There is no specified improvement programmes required under schedule A3 or C of the Inniskeen licence.

Under condition 5.1 and 5.2(a) of the licence, there are no infrastructural improvement works planned for the Inniskeen WWTP as the quality of the discharges are within the licence ELV's for 2012 with the exception of some exceedances during April and May when plant/pumps malfunctioned, as outlined in section 3.2. Total Phosphorus loadings in the discharge are meeting the ELV of <2 mg/l with the exception of pump malfunction of the Ferric Sulphate dosing unit at the plant during April/May 2012. The obligations of condition 1.7 are being met as outlined in section 4.1 and table 1.2, (appendix 1) of this AER, concluding that there is adequate remaining hydraulic and organic treatment capacities within the Inniskeen treatment plant.

The designation and water quality objective of the receiving waters are previously discussed in section 2.3 of this AER, with assimilative capacity calculations concluding that the discharge from the WWTP can be assimilated into the river. There is a drinking water abstraction point downstream (approx. 10km) of the discharge point at Stephenstown bridge (30115E 301607N), EPA water quality monitoring data for 2001-2003 at Castlering Bridge (d/s of discharge point & u/s of abstraction point) would indicate that the discharge does not significantly impact on the water environment. The assimilative capacity calculations also conclude that the discharge can be assimilated into the river over long distances.

There are no industries licensed to discharge to the waste water works.

Under condition 5.2(b) of the licence there are no infrastructural improvements planned with regard to an assessment of the integrity of the waste water works as the capacity of the plant is adequate as outlined in section 4.1, repair works were carried to the network in 2010. A CCTV of the Inniskeen agglomeration network was carried out in 2010 by a private contractor, there were a number of leaks in the network repaired to prevent infiltration of surface water into pipes and 14 manholes were sealed and repaired over a period of months in 2010 by the same contractor. There are no misconnections between foul sewers and surface water drains. Under condition 5.2(c) the storm water overflow within the waste water works does not require any improvements.

Section 5. Environmental liability and Financial Provisions

5.1 Statement of measures

Appendix 2 details this item.

5.2 Environmental Liabilities Risk Assessment

Appendix 2 details this item.

Section 6. Licence Specific Reports

There are two licence specific reports required under the Inniskeen licence:

Priority Substance Assessment

Under condition 4.11 of the licence, a representative sample from the effluent shall be screened for the presence of organic compounds and metals as required by the Agency. This assessment was submitted as part of the previous 2011 AER to the Agency.

Drinking Water Abstraction Point Risk Assessment

Under condition 4.17 of the licence 'a risk assessment for the protection of the downstream drinking water abstraction point' is required. This risk assessment is assessing the impact of the Inniskeen waste water treatment plant and it's discharges on the receiving water, the River Fane, as there is a drinking water abstraction point (Cavan Hill water supply scheme) approximately 10km downstream of the primary discharge supplying Dundalk town and parts of County Louth.

Cavan Hill water supply scheme abstracts water from the River Fane at Stephenstown in County Louth and treats the water at a treatment plant located approximately 2km from the intake at 'Cavan Hill'. Cavan Hill water treatment plant is a large modern treatment plant using rapid gravity filtration. Dundalk Town Council have a Water Order for abstraction of 36,400m3/day

from the River Fane, they are presently abstracting half of this amount producing an average of 18,000m3/day treated water for it's consumers.

Inniskeen WWTP discharge has the potential to impact on the downstream water abstraction point at Stephenstown in relation to pollutant loading into the River Fane. The risk from the Inniskeen WWTP will be assessed under four separate headings with an overall risk ranking applied in a conclusion:

(1) Level of treatment and capacity of WWTP.

(2) Discharge compliance.

(3) River Fane quality and monitoring data.

(4) Discharges impact during periods of normal and abnormal operation and control measures.

(1) Level of treatment and capacity of WWTP:

Inniskeen WWTP provides tertiary treatment with nutrient removal (phosphorus reduction). The plant is operated and maintained to a good standard with a caretaker 8 hours per day Monday to Friday and 2 hours Saturdays and Sundays. The plant runs automatically with monitors and meters linked to a SCADA system on site. The design P.E. of the plant is 1750, with it currently treating 1,010 P.E. An assessment of the remaining capacities at the plant is outlined in section 4.1 of this AER, (tabulated in table 1.2, appendix 1). The conclusion of this is that there is remaining hydraulic capacity of 33% and Organic capacity of 82% at the treatment works based on the current loading.

The level of treatment and capacity of the treatment works is adequate to cater for the loading into the plant and to produce effluent compliant with licence requirements, thus the risk ranking for this element of the WWTP is

applied as low risk.

(2) Discharge Compliance:

Under Schedule B and condition 2 of the licence (ref. table 2.1, appendix 1 and section 2.2 of this AER report) the Inniskeen WWTP discharge is compliant for the majority of parameters. A regular monitoring and sampling program is in place for analysis of the discharge at the Inniskeen WWTP thus minimising the risk of pollution to the River Fane. There were 2 reported incidents to the EPA in 2012 in relation to exceedances of Phosphorus and ammonia parameters, the causes of the failures are attributed to equipment breakdown/malfunction as outlined in section 3.2 of this report. The impact of these failures on the receiving waters appeared to be negligible from examining the downstream results in the river on that date and subsequent dates and no increase from previous downstream results before the exceedances. For assimilative capacity calculations for the impact of the 2012 discharge on the receiving River Fane, the existing status of the River Fane is 'poor' (WFD website and reports) Monaghan County Council's recorded average BOD upstream levels in the river Fane were used in the assimilative calculations to assess the impact of the BOD loading from the plant effluent on the receiving water. The assimilative capacity calculations for BOD and total Ammonia from the plant to the receiving River Fane (ref. section 2.3 of this AER report) conclude that they are under the EQS applicable for each

parameter in the river and are therefore not impacting upon the existing river Fane quality. There are other factors causing pollution to the river Fane upstream of Inniskeen WWTP such as agricultural activities. The risk ranking for this element of the discharge from the WWTP is therefore applied as 'low risk'.

(3)River Fane quality and monitoring data.

The River Fane is not designated Salmonid water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988) nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. The river Fane is in the Neagh Bann river basin district with it's overall status classified as poor and at risk of not meeting good status by 2015, with overall objective to restore it to good status by 2021, however, the 'point risk source' and potential for impact from the Inniskeen WWTP discharge on the river is categorised as '2b - not at risk' therefore it is not identified as impacting on the poor river quality status, (ref: WFD Ireland maps/website & reports.). Monaghan County Council's upstream monitoring results for 2012 (refer table 2.3, appendix 1) indicate relatively good quality water in the river with average BOD levels of 1.322mg/l, average Ortho Phosphorus levels at 0.03mg/l and average ammonia level at 0.016mg/l. The downstream monitoring results (refer table 2.4, appendix 1) detail slightly higher results of average BOD levels at 1.478mg/l, average Ortho Phosphorus levels at 0.046mg/l and average ammonia level at 0.023mg/l. These results concur with the 'poor' status of the river Fane for Ortho P. A new proposed downstream monitoring location for the Inniskeen WWTP has been submitted to the EPA for approval, (by email 11th December 2012) as the existing one is too close to the effluent discharge point and therefore not achieving an adequate mixing zone for the effluent in the river.

Assimilative capacity calculations for BOD and total Ammonia from the plant to the receiving River Fane (ref. section 2.3 of this AER report) conclude that they are under the EQS applicable for each parameter in the river and are therefore not impacting upon the existing river Fane quality.

EPA monitoring designates the river Fane as Q3-4 downstream of Inniskeen discharge location near the abstraction point at Stephenstown indicating 'good status' in the river at this location. The quality of the River Fane water downstream and the distance downstream of the drinking water abstraction point from the discharge point would indicate that the river can assimilate the discharge adequately and will not have a pollution effect over long distances. The risk ranking for this element of the discharge from the WWTP is therefore applied as 'low risk'.

(4) Discharges impact during periods of normal and abnormal operation and control measures.

The impact of the Inniskeen discharge to the drinking water abstraction point at Stephenstown is considered minimal as discussed in points 1 to 3 above. Periods of abnormal operation at the plant would be considered to occur due to extreme storm conditions, equipment malfunction or breakdown, Power cut, or dumping of toxic waste e.g. diesel wash into the network. The impact to the treatment plant and discharge to the River Fane from these events occurring

is minimised by having a plant operator on site every day at the plant, therefore identifying any abnormal events that occur and implementing control measures as necessary to alleviate them. There are is a storm tank on site, which has a storage capacity of 1.1 times the DWF of the plant, this means that the storm water overflow rarely activates, once per year or less which minimises the risk of any untreated effluent entering the River Fane. The controls and monitors at the treatment works are linked to a SCADA system on site, which is continually monitored by the plant operator, which would highlight any problem with the treatment plant equipment or treatment process. The risk of a chemical spill or overdose into the treatment system at the plant is minimised as the storage tanks for all chemicals are bunded and regular maintenance and calibration of the dosing pumps is undertaken. The dosing pumps setting are reviewed by the plant operators and technician over the plant in conjunction with assessment of the effluent parameters. Regular monitoring of the effluent also ensures that any deviations in the effluent parameters resulting from problems with the treatment process are addressed. In the event of a power cut, the electricity supply company will be contacted and a diesel generator on standby at the WWTP will be employed to enable the treatment plant to continue to operate. From past experience a power cut occurs twice per year and usually lasts 2 to 3 hours. There has been no incidents of illegal waste being dumped into the sewer network at Inniskeen, however given the proximity of the plant to the border of Northern Ireland and that the dumping of illegal diesel wash is prevalent in the Monaghan/Louth border area, consideration is given to this event occurring. If this event occurred, it may lead to a worst case scenario of the Inniskeen WWTP being effectively 'shut down' while a clean up of the treatment plant is undertaken and removal of the toxic material and effected plant media to a licensed disposal facility in Germany. While the WWTP is unable to operate and treat the influent from the agglomeration, the influent could be tankered by a licensed haulier to a WWTP elsewhere in Monaghan with available capacity to treat it, until the WWTP is up and running again. If there is an event at the plant that leads to a pollution incident in the River Fane, Monaghan County Council will immediately notify the downstream drinking water source, Dundalk town council who are responsible for the downstream water abstraction water supply scheme, the EPA and the Inland Fisheries Board and implement any control measures and necessary works to address the incident.

From the occurrence of these periods of abnormal operation and the control measures in place to deal with them should they occur, the risk ranking for this element of the discharge from the WWTP is applied as 'low risk'.

Conclusion:

From the risk ranking applied to the impacts of the Inniskeen WWTP discharge on the downstream drinking water abstraction point in county Louth in the four situations addressed previously in this section, it is concluded that the overall risk is low.

Appendix 1

Table 1 & 1.1	Influent monthly monitoring summary
Table 1.2	Remaining Hydraulic & Organic treatment capacities
Table 2	Monitoring results for Inniskeen WWTP
Table 2.1	Effluent monitoring results
Table 2.2	Influent monitoring results
Table 2.3	Upstream monitoring results
Table 2.4	Downstream monitoring results
SSRS Assessmen	nt on River Fane at Inniskeen Bridge

Tab	le 1	

nniskeen	Influent mo	nthly monit	oring temp	iale - as p	per condit	ion 4.15 of	licence.	No. of Lot, House, etc., in such		COD			Total P	1		TotalN
location	Daily Flow	Influent/ Effluent	Date of Sampling	Sample Type (C or G)	c800 mg/l	c800 Loading (Kg'day)	Remoral Efficiency *	COD mg1	COD Leading (Kg/day)	Removal Efficiency %	mg1P	Total P Loading (Kg'day)	Removal Efficiency %	Total N mg/1N	Total N Loading (Kg/day)	Removal Efficiency %
Inniskeen	397.00	STATUS CO.		G	49,00	19.45		90.00			1.81			19.49		72.02
muskeen	306.00		02/02/2012	C			93.71	11,00	3.37	90.58	1.00			7.00	2.14	
Inniskeen	154.00		24/02/2012	G	23.00	3.54		51.00			1.79			18.25		
nniskeen	206.00			C	2 00			13.00	2.68	65.90	1.01					
1.1	-			G	320.00	18.88		570.00	33.63		11.97			92.91		
Inniskeen	59.00		30 03/2012		5.00			28.00	221	93.42	3.69	0.29	58.72	33.02		
	79.00	_	18/04/2012			0.00			0.00			0.00			0.00	
Inniskeen	70.00							37.00	2.85			0.00			0.00	
	77.00		-					700.00	44.80			0.00		96.32	6.16	
Inniskeen	64.00	-	30/05/2012		-						5	0.00		37.01	4.07	33.96
	110.00				-			5.00	1.15		0.79	0.18		9.10	2.03	
Inniskeen	229.00		20/07/2012		0.80			5.00			1.12			9.19	2.93	
	324.00		20.07/2012	-				113.00			1.96	0.46		18.48		
Inniskeen	232.00		21/03/2012		-									10.44	3.35	21.83
	321.00		21/08/2012					167.00			1.80			19.60	4.19	
Inniskeen	214.00		27/03/2012		44.00									10.93	2.82	32.7
	258.00		27/03/2012					91.00			1.44	_		16.24	2.91	
Inniskeen	179.00		01/11/2012													44.43
	165.00		01/11/2012		2.00						1.03			8.39	3.39	
Inniskeen	404.00		21/11/2012					67.00								
	460.00	Effluen	21/11/2012	C	3.00									18.22		
Inniskeen	181.00	Influen	11/12/2012	G				43.00			1.73					
	133.00	Effluen	11/12/2012	C	2.00	0.27	97.00	5.00	0.6	91.4	1.0	0.1	04.0	10.4	1	

Table 1 1

Table 1.1						-
Influent mo	nitoring st	uniniary ta	ble		Volumetric	
	BOD mg/l	COD mg1	Total P.mg/l		Loading ml/day	Loading PE/day
flumber of samples	10	10	9	10	n/a	n/a
Maximum result	320.00	700.00	11.97	96.32	404.00	2244.44
Annual Mean	91.66	189.70	2.70	31.70	211.00	1172.22

Note: Storm conditions on this date - heavy rainfall.

Table 1.2

10010 1.6						4		
Remaining Hy	draulic & Org	anic treatment	capacities .	s per cond	tion 1.7.1 of	icence.		
	Design	Current Flowfloading to plant 2012			Remaining	Remaining capacity of plant %		
Design PE	1750							
Hydraulio loading M3/day	315.00	211.00	1172	PE equiv.	104.00	33.02		
Organic loading BOD kg/day	105.00	19.34	322	PE equiv.	85.66	81.58		

BOD kg/day | 105.00 | 19.34 | 322 | FE equiv. | 85.60 | 81.85 | Monaghan County Council predict a demestic population growth rate and peopulation projection over the period of the Icence based on the population change between 2008 and 2011 (Census 2011) of 3.25. The duration of the Icence is 6 years therefore based on the alter, a growth rate of 4.85 is predicted, girking a predicted population of 1053 (excluding pending planning permissions), the remaining capacity of the Ireatment works is more than adequate to cope with this growth rate

Table 2 Monitoring	Results for Inni	skeen WY	ИЬ									Total			-	A STATE OF	Sel M
location	How Makesy		Date of Sampling	Sample Type (C or G)		(800 mg)	C00 =91	Suspended Solids regit	Ammoráa (as h)	Total Phosphorus mg/I(as P)	Ortho P mg/(as P)	Ntrogen regil (as h)	Nitrate (as N)	None (as N)	Faecal Colifornia cfuri@mi	E Coll is pn/160m I	Enterococ impn/100m
wiskeen		Had	62023012	G		49 000	90 000	21,000	15 960	1 810	1 2	19 490	_				
misteen		Effect	62023012	C		<4	11 000	2000	<1	<1_		`'					
misteen		CONSTRUCT CONSTRUCT Door	62622017	G		-2	1VA	18A	<01	IVA	<0.5			_			
		frand Wods	62023012	G		2000	18A	R/A	<01	N/A	<05	<7	19A	19/A	N/A	12A	12A
hriskeen Hriskeen	_	Post	24022012	G		23 000	51.000	7.000		1790		18 250					
holskeen		[Cet	24022012	C		<2	13,000	2000	<1	1.010	<2	12.490					
troisteen		COVE-15	24022012	G		<2	18 000		<1		<6		_				
		Divid STEATE				100			·		46	1 1					1
rnisteen		Wast	24022012	G		<2	22 600	163 000	15/V	11.970	IVA	92910	NA	IVA	IVA	N/A	12A
reisteen		Het	30/9373112	G	_	320 000 5 000	23 (00)	6000	<1	3690	3 500	33 020	<31 55	<0.01	11000	9530	4106
misten	-	Up Steam	32033313	С		100000000000000000000000000000000000000	20000				<2	<7	N/A	NVA	N/A	17A	ASI
misteen		COWNE	30/93/2017	G		2000	IVA	IVA	<1	IVA		- 1	117	IVA			
hoisteen		Wests	35/93/2012	G		2 000	12A	NA	<1	IVA	<2	<7	It/A	1UA	N/A	N/A	AVA
misteen		10.41				9000	37,000	9000	3 950	4760	4.400	27.690					
restein	-	Uplican	18642011	С		8000	37.000	300	2 650	3.163	1						
mistern		Dan	-				1										
holskeen		Wals									-	55 320		-	-		
troisteen		Ifat	30559913	G		275 000	700 000	173 000	<001	5 794	5 652	37.010	34.710	<0.003	_		-
trästeen		EFAIL	30152013	C		1400	35 000	15000		3754	-		0.111	1111			
roisteen		CANNY?	\$2552212	G		1000			0 023	-	0.022	4 900		_	-		
		Dovn distant	30 (5 2312	0		1600			0.020		0 118	4 110					
trastern	-	15et	20072312	0		0.600	<5	2 000		0.790		9 100	2500	<0.003	-		-
roskeen		E0.41	20 07 2912	C		0 300	<5	5 000	<001	1.123	1013	9.190	7.500	10003	1		
traisteen		COWNER TO	20072012	G		0 200			<0.01		0.027	3330		1		1	-
		Steamed.	25972612	0		0200			<0.01	1	0.028	1670					
reisteen		Wats	21562012	0		70 000	113 000	34 000	18 090	1 953	1 655	18 450		100			-
raisteen		Effect	21562512	c		5 000	10 000	3 000	0 0 1 9	0.954		10.440	8 760	<0.003	-		
misteen misteen		CONST	21582512	G		0 800			0 0 1 7		0017	2 160		_			-
TO STATE 1		Dun				30000000			CHARACTER							1	
resteen		Wate	21562012	G		0.800			0.017	1.799	0.023	19 600		-	-	_	_
misteen		HART	27 59 29 12	G		44 000	167.000	34 000	18 390	0.793	0.133	10 930	9760	0 0 3 4			
reisteen		Up Sector	31563311	c		4 000	25 000			0.715	-			1	1		
irriskeen		COWSA	27 (9 2312	G		2000	-		0011	-	0 045	1280			1		
A SECTION OF SECTION		Steamel	27 09 2312	0		1600	25 000	6,000		0.068		1210					
hristeen		Vista 15-41	61112312		_	30 000	91000	27,000		1.435		16 240		1	-	****	193 00
hniskeen hniskeen	-	Effect	61112212			2 000	15 000	3 000	0.030	0 641	0.605	9750	8 670	<0.003	270 00	30.00	19300
rniskeen Irriskeen		CONSAS		1		0 700			0.019		0.033	1570		_	-	-	-
1124501		Down Streamed		88					0 031		0 033	2 130					
kniskeen		Works	61112312		-	55 000	67,000	23 000	0071	1.032	1	8390	i –				
tristeen		Hart	21112312		-	3000	<5	8,000	<0.01	0 644	0 633	7.500	6 350	<0.000	3		
triskeen		Up Shart COWorks	21/11/2012			2900	1		<0.01		0.045	2,000					
rniskeen	-	Don	20113016	+ *								0.015					
hoiskeen		Works	21-11-2512			3 100	1000		0.015	1,733	0.044	18 220	-	-	1		
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reisteen	1	Efficial		C		12	5 000	9 000		10/2	111.0004	1000000	1	1			
restini		C(Works	15.12.2012	G		1 200		-	0.018		0.040	1280	-	-	-		
miskeen		Dona Steard Wate	11.12.2012			1200			0 043		0.025	1310					

Table 2.1																	
Effluent monitoring re	sults: Note El	V's In re	d test										The same of the sa	Notrite	Faccal	E Coll	Enterococo
Lecation	Daily Flow Milestry	Efford	Date of Sampling	Sample Type (Coor G)	PH Pm.0	dECO popt	600 mg/l MSI mil	T65 mg/l Sensi	Armounia (ask)	Total Phosphorus (as F) mg1 (mg)	Otho Pingl (ast P) selection	Tetal Nitrogen mgl (as No	Nitrate (as N)	(ash)	Colforms charlooms		mpor Wilmi
rnisteer	306	E/Art	62 62 2312	c		<4	11 000	2000	<1	<۱	<27	7.000	nottesled	not tested not			
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roisteen	79	25.41	30932312	¢		5 (00)	28 000	6 000	3950	3 690 4 760	4 400	27.690	20 600	2690	11112		
miskeen Seit Samele	77	15.01	11542312	C	_	9 000	37,000 36 (0)	9 000	0 010	5794	5 6 5 2	37.010	34.710	0.003		V === 5	
misteen	110	Efiet	30052312	c		0.300	45	5,000	<01	1.123	1013	9 190	7.500	<0.003			
reiskeen	324	Effect	20072012	CO		5.000	10 000	3 000	0.019	0 954	Not tested	10440	8760	<0.003			
roisteen	321	Effect.	21 05 2012	C	_	4 600	25 000	Mattested	0 920	0.793	Not tested	10 930	9760	0.034			400.00
reisteen	258	Enail	61-11-2012	c	_	2000	15 000	3.000	0.050	0 641	0 605	9 790	8 670	<0.003	270 00	30(0)	193 (0)
inisteen	165	teat	21112012	č		3000	<5	8 000	<001	0 644	0 6 3 3	7.500	6 350	<0.003			_
rniskeen	460	Effect	11/12/2012	- c	_	-2	5 000	9 000	0 072	1.072	1.063	10 430	9 870	<0.003			
rriskeen Aurage	133	Enan	11/2/14			3.427	17.273	6.200	0.737	1.953	2.411	15.954	15.313	0.309			
Constant Ukeres								gles tiben - maj	na surcles Di	at may exceed	ELV=2no Ec	ed.'e B 3					
riegretion					1	Co-bacera	33.012381	-	1								
Condition 1 Literate: Interpretation									Soutef 10	Sout of 10 consecutive	Sout of 10 consecutive						
(COPTESSO)					1		1 alouable		consecutive	14"0"11 1"21	12" g'es s'al	_					
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					deviation allowed		GECV GEOTATI	ELV (SECO)	>20% = 24mg1	24-31	=16-91						
Tetal incidents:					1					-		-	-				
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Table 2.2									-			-		-		_	
Influent monitoring r	esults			1							100	No. of Contract of		1			
Location	How Mikiny	Location	Date of Sampling	Sample Type (Coord)		(800) 191	600 mg/l	Suspended Solids mg/l	(as h)	Total Phosphoru mg/l(as P)	Ontro P mg/l(as P)	Nitrogen ingst (as h)	Nitrate (4)	(as N)	Faccal Colforni chirlioon		Enteroco impril 100
			-			49 000	50 000	21000	15 560	1 810	-2	19 490					
imisteen	397	Hart	61 62 52315	0	1-	23 (9)	51,000	7.600	1	1760		18 250		_			-
misten	154	PA-et	30000012			320 000	570 000	168 000	N/A	11 970	NVA	92910		-	-	_	-
inniskeen	59 64	15.41	30052012	0	1	275 000	700 000	173 000				\$6 320	-		-	-	-
makkeen	229	1541	23272012	G		0 600	<5	2000		0.790	1	9 100	-	-	-	-	-
inniskeen inniskeen	232	15.41	21 08 2012	G		70 000	113 000	34 000	18 690	1 563	1 665	18 480	-	-	_		1
misteen	214	tra-t	27552012	0		44 000	167.000	34 600	18 390	1.799	0.135	19 600	1	1-	_	1	1
roisteen	179	Mort	61/11/2012	G		30 000	91.000	27,000	-	1 435		8 390	1	1			
roisteen	404	Mort	21/11/2012	G		55 000	67.000	23 000		1733	-	18 220		1			
Imisteen	181	tf.ed	11/12/2012	G		91,660	189,70	77.000		2,702		31.702		1		1	

Instrugyorenton 00040 Hostologian As 2012

Table 2.3																	
Upstream monitoring	results																
Location	Flow Mikely	Location	Date of Saloping	Sample Type (Coor G)		£800 mg/l	COO mgt	Suspended Solids mg/l	Ammonia (as h)	Total Phosphorus mgl (ss P)		Total Altregen mg/l (as h)	(Notrate (as ls)	Nitrite (as N)	Faccal Coliforms cN/100ml	ECol mpn100m I	Enterococi mpn/100m
roisteen		CONSAS	62 02 2012	a		<2			<0.1		<0.5						
misteen		() \$1017 ((W))	2402/2012	G		<2	18 000		<1		<6						
miskeen		COWSAs	30032612	G		2,000			<1		-2	<7				-	
misteen		CO Stream	30052012	G		1 000			0 023		0.022	4 900		_			-
restus		COWets	20070012	G		0 200			<0.01		0 027	3 330					
misteen		じょうちゃっつ CCW5/45	21552212	G		0.600			0 0 1 7		0017	2 160					
makeen		CONSAS	27 (9 2312	G		2000			0.011		0.045	1280					
roiten		COWels	61 112312	G		0.700			0 0 1 9		0.033	1570					9 - 1 - 1
reinferen		CONSTR	11 12 2212	G		1200			0 0 1 8		0 040	1280					
Lavage						1.322			0.016		0.030						
														-			
															-		
Table 2.4				-													
Downstream monitor	ing results														to the same	-	
Lesation	now usuay	Location	Date of Sampling	Sample Type (Coord)		1Qm 008s	60015-21	Suspended Solids mg/l	(Americala (AssA)	Total Phosphona mg1(as P)	O:thoiP (mg)((as F)	Total Natiogen mg/l (as h)	Nitrate(as N)	Nitrite (as h)		E Coli m pri I Ocm I	Enterococ importions
rosten		Don Strand Wata	62022012	G		2000	tVA	17A	<01	R/A	<05	<7					
rvistus		Down Strand Works	2492/2012	G		<2	22 000		<1		< 6						
TO SAVE		Don Stand								l		<7			1		
rrishten		Works David	30/93/2012	G		2 000	1VA	IVA	<1	AVI	<2	<1	-				
roisteen		Steamed Works	33050012	G		1.000			0.020		0.118	4 110					
1133261		Door trund															
rniskeen		Wids	20072012	G		0.200	-		<0.01		0.059	1670					
roisteen		Frand Wats	21582512	6		0.600			0 0 1 7		0 023	1.660					
mittei		D.v.A Stead	1,1,1,1,1	1							2222						
rnisteen		Wats Down	61112512	G		1000			0 0 3 1		0 039	2 130	-	-	1		
		theand Wats	21.11.2012	G		3 100			0 0 1 5		0.044	2010					
rniskeen		Down	21.112312	-							(STORE)	3121000					
hoiskeen		Wats	11-12-2312	G		1200			0.023	-	0.025	1310		-	-		
Average		-			_	1,478			0.013		0,013				-		
						-											
			-			-					-			-			
			-	1		_					1			1	1		
			1	-			1				1	1	1	1			_
															-		

RWB_	River	Î							Map Info		Livestock Degree of	Degree of	Degree of Substratum
	Catchment Location	Location	Sampled By Date	Date	×	×	Score	Score Category	Factor Notes	Notes	ACCESS	Silvation	Constraint
		Fane ~50m d/s of Magoney								Slurry spreading on left bank on high ground	,	2	
XB O6 03 Fane	Fane	Br.: STN. 500	LB/JPMcE	24/04/2012	290934	309581		11.2 Probably not at risk	11	above scrub area	z	Moderate	Moderate Stoney Bottom
										Gammurus present. Fast flow. Algae on			5
900 90 90	000	D/c of Ease Br	IR/DMCF	18/04/2012	292036	307809		9.6 Probably not at risk	н	rocks and weed growth.	Z	Slight	Stoney Bottom
2000	ranc	0301 000								Gammarus & leeches present. Stones slippy			
		~200m d/s of Br. Inniskeen							_	with algae. Cases of larvae found but		Slight -	
XB OF 08 Fane	Eane	Village: STN.650	LB/JPMcE	24/04/2012	293248	306942		9.6 Probably not at risk	1	empty. Weed growth.	z	Moderate	Stoney Bottom

Appendix 2

Pollutant Release and Transfer Register Excel calculation toolset Flow weighted Mass emission calculations Environmental Liabilities Risk Assessment



| PRTR# : D0348 | Facility Name : Inniskeen Waste Water Treatment Plant | Filename : D0348_2012 xls | Return Year : 2012 |

Guidance to completing the PRTR workbook

AER Returns Workbook

Parent Company Name | Monaghan County Council | Parent Company Name | Inniskeen Waste Water Treatment Plant | PRTR Identification Number | D0348 | Licence Number | D0348-01 | Waste or IPPC Classes of Activity | No. | class_name | 30.4 | General | Address 1 | Water Services | Address 2 | County Offices | Address 3 | The Glen |

Address	vvater dervices
Address 2	County Offices
Address 3	The Glen
Address 4	County Monaghan
	Monaghan
Country	Ireland
Coordinates of Location	-6.56698 54.0007
River Basin District	GBNIIENB
NACE Code	
Main Economic Activity	Sewerage
AER Returns Contact Name	Siobhan Mallon
AER Returns Contact Email Address	
AER Returns Contact Position	
AER Returns Contact Telephone Number	047 30574
AER Returns Contact Mobile Phone Number	087 6679454
AER Returns Contact Fax Number	
Production Volume	
Production Volume Units	m3/day
Number of Installations	
Number of Operating Hours in Year	8736
Number of Employees	
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
5(f)	Urban waste-water treatment plants

3 SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

SOLVENTS REGULATIONS (S.I. No. 343 OF 20	
Is it applicable?	No
Have you been granted an exemption?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4. WASTE IMPORTED/ACCEPTED ONTO SITE

Guidance on waste imported/accepted onto site

6/2/2013 12:22

Sheet: Facility ID Activities AER Returns Workbook

Do you import/accept waste onto your site for onsite treatment (either recovery or disposal activities) ?

| PRTR# : D0348 | Facility Name : Inniskeen Waste Water Treatment Plant | Filename : D0348_2012.xls | Return Year : 2012 | Page 2 of 2

Link to preylous years emissions data 4.1 RELEASES TO AIR

[PRETOR DODGE] Frank Name Innoheen Waste Water Treatment Plant | Flemane IDC042_2012 yks Return Year 2012 |

80/E2/2013 12:23

Mothation (CH4)		RELEASES TO AIR		SOUTH OF STREET, STREE		Please enter all quantities in this section in KGs	TO THE SOCION IN YOU	CONTRACTOR AND	and the other plants as a way on
Mothane (CH4)		POLLUTANT		N	ETHOD			OUANTITY	
Mothane (CH4)				A COLUMN TO A COLU	Method Used				
Mothano (CH4)	No. Annex II	Namo	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year F (Fugitive) KG/Year	F (Fugitive) KGA
Methane (CH4) E ESTIMATE 5.0 0.0 0.0 0.0 Carbon monoxide (CO2) E ESTIMATE 5.0 UWW/TP Tool Version 0.0 0.0 0.0 Nitrous oxide (NZO) E ESTIMATE 5.0 UWW/TP Tool Version 0.0 0.0 0.0 Non-methane volatile organic compounds (NMVOC) E ESTIMATE 5.0 UWW/TP Tool Version 0.0 0.0 0.0 Nitrogen oxides (NDX/NO2) E ESTIMATE 5.0 UWW/TP Tool Version 0.0 0.0 0.0					EPA UWWTP Tool Version				
Carbon monoxide (CO)		Methane (CH4)	ш	ESTIMATE	5.0	0		0.0	0
Carbon monoxido (GC)					EPA UWWTP Tool Version				
Canbon dioxide (CO2)		Carbon monoxide (CO)	ш	ESTIMATE	5.0	0		0.0	0
Carbon dioxide (CO2)					EPA UWWTP Tool Version				
Nitrogen oxide (N2O)		Carbon dioxide (CO2)	tii	ESTIMATE	5.0	0		0.0	0 4445.0
Non-methano volatile organic compounds (NIAV/OC) E ESTIMATE SO 0.0 0.0 0.0 0.0 Non-methano volatile organic compounds (NIAV/OC) E ESTIMATE EPA UWWTP Tool Vorsion 0.0 0.0 0.0 0.0 Sulphur podes (NOxNO2) E ESTIMATE SO 0.0 0.0 0.0 0.0 0.0					EPA UWWTP Tool Version				
Non-methano volatile organic compounds (NMV/OC) E ESTIMATE 5.0 0.0 0.0		Nitrous oxide (N2O)	ш	ESTIMATE	5.0	0		0.0	0
Non-methane volatile organic compounds (NIM/OC) E ESTIMATE SO 0.0 0.0 0.0 Nitrogen oxides (NOX/NO2) E ESTIMATE SO 1.0 1.0 Sulphin oxides (SOV/SCO) E ESTIMATE F ESTIMATE O 0.0 1.0					EPA UWWTP Tool Version				
Nitrogon oxides (NOXNO2) Sighter axides (SOXNO2) Sighter axides (SOXNO2)		Non-methano volatilo organic compounds (NMVOC)	ш	ESTIMATE	5.0	0		0.0	0
Nitrogen oxides (NOXNO2) E ESTIMATE SO 0.0 1.0 Scholer ASOVISON F ESTIMATE SO 0.0					EPA UWWTP Tool Version				
Sulphur Address SOUNDED BY ESTIMATE SO DO		Nitrogen oxides (NOx/NO2)	ш	ESTIMATE	8.0	0		0.0	0
On O					EPA UWWTP Tool Vorsion				
	-	Sulphur oxides (SOx/SO2)	ш	ESTIMATE	9.0	0			0.0

SECTION B: REMAINING PRITR POLLUTANTS	RELEASES TO AIR		Please enter all quantities in this section in KGs
	POLLUTANT	METHOD	QUANTITY
		Method Used	
No Annex II	Name	M/C/E Method Code Designation or Description	Emission Point 1 T (Total) KG/Year A (Accidental) KG/Year F (Fuglitive) KG/Year
			000

Select a row by double-cloteng on the Pollutant Name (Column B) then click the delete button

SECTION C: REMAINING POLLUTANT EMISSIONS (As required in your Licence)

	RELEASESTOAR		Please enter all quantitie	S In this section in Kiss	School of the state of the stat	The state of the s
	POLLUTANT	METHOD	A CONTRACTOR OF THE PERSON OF		CUANTITY	The second second second
		Method Used				
Pollutant No.	Namo	M/C/E Method Code Designation or Descript	ion Emission Point 1	Emission Point 1 T (Total) KG/Year	A (Accidental) KG/Year F (F	F (Fugitive) KG/Year
			0	0.	0.0	0.0

" Select a row by double-cicking on the Polutant Name (Column B) than click the delete button

Additional Data Requested from Landfill operators

for the purposes of the National Investory on Greenhouse Cases, Inntiff a periation are requested to provide summary class on inntiffing an Uniformal Provide summary class on inntiffing the Order of the Case of

Inniskoen Waste Water Treatment Plant

Pleaso onter summary data on the quantities of methano flared and I or utilised.		Met
T (Total) kg/Year	MICIE	MICIE Method Code
Total estimated methane generation (as per site model)	0.0	
Mothano flarod	0.0	The second secon
Mothano utilisod in ongino/s	0.0	
Net methane emission (as reported in Section	0.0	
Conc		

00 (Total Flaring Capacity)

A/Z

Facility Total Capacity m3 per hour

thod Used Designation or

Sheet: Releases to Waters

Activity Continue	Name (3)		Emission Point 1 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0	In this section in Kes Coantry (Tricial) KGYear Acident (Acident	ule NOT be submitted under AER / PRTR Reporting (GS QUANTITY	norting as this on titve) KG/Year
1.2-definitional	Name Till			Total) KG/Year A (Ac	NTITY	tive) KG/Year
1,2,ddpicroptiumy (EDQ) E ESTIMATE Addrin Ambridgene E ESTIMATE Addrin Ambridgene E ESTIMATE Addrin Ambridgene E ESTIMATE Addrin Ambridgene E ESTIMATE Ambridgene E E E E E E E E E	Name (2)		6.0 0.0 0.0 0.0 0.0 0.044	o		tive) KG/Year
1,2-dethieroentyane (EDC)	Q Q		0.0 0.0 0.0 0.0 0.0 0.0 0.0	o	A (Accidental) KG/Year F (Fuglive) KG/Year	
E			Ġ Ġ		0.0	0.0
Compounds (as As)	Q G	W 47	o o	0.0	0.0	0.0
e ESTIMATE 56 and compounds (as As) e ESTIMATE 56 a.b.i)perylene mand compounds (as Cd) e ESTIMATE 56 e ESTIMATE 57 e ESTIMAT	Q g	W 47 W 47 W 47 W 47 W 47 W 47 W	o o	0.0	0.0	0.0
E ESTIMATE 5: (c) (d) (e) (e) (f) (f) (g) (g) (g) (g) (g) (g		m 4, m 4, m 4, m 4, m 4, m 4, m		0.0	0.0	0.0
E ESTIMATE 50 CONTRIBUTE 6 ESTIMATE 7 E	Q g	E 47 E 47 E 47 E 47 E		0.044	0.0	0.0
Compounds (as Cq) E ESTIMATE E ESTIMAT		W 47 W 47 W 47 W 47 W		0.001	0.0	0.0
e ESTIMATE Serior compounds (as Cd) and compounds (as Cd) and compounds (as Cd) and compounds (as Cd) be estimate serior compounds (as Cd) and compounds (as Cd) be estimate serior compounds (as Cd) cometiant (DEHP) cometiant (DCHP)			0.001	0.001	0.0	0.0
sted diphenylethers (PBDE) turn and compounds (its Cd) to cone econe			00	0.0	0.0	0.0
e ESTIMATE 5 evone evon			0.0	0.0	0.0	0,0
econe e ESTIMATE 6 econe e ESTIMATE 6 econe e ESTIMATE 6 econe e ESTIMATE 6 econocurds (as Cr) intro and compounds			0.021	0.021	0.0	0.0
econe econe fie (35 CI) fie (25 CI) field and compounds (35 CI) free (35 CI) fre		50	00	0.0	0.0	0.0
e ESTIMATE 5 for (az O) for (az onto oundo (ac O) for (az total CN) for (az total CN			0.0	0.0	0.0	0.0
E		ויטו	000	0.0	0.0	00
e ESTIMATE 5 relationes, C10-C13 e ESTIMATE 5 relation and compounds (as Cr) E ESTIMATE 5 E ESTIMATE 5 relation and compounds (ac Cu) Relation and compounds (a		n w r	4168.052	4168.052	0.0	0:0
e ESTIMATE seriounds (as Cr) rend compounds (as Cr) rend compounds (as Cr) rend compounds (as Cr) e ESTIMATE serious (Cr) e ESTIMATE serious (CR) rend compounds (as Cr) e ESTIMATE serious (CCM)		ມເດເ	0.016	0.016	0.0	0.0
intim and compounds (as Cr) F ESTIMATE 5 Sos (as total CA) F ESTIMATE 5 F ESTIMATE		ມທະ	0.0	0.0	0.0	0.0
sec (as total CN) E ESTIMATE 5 E ESTIMATE 6 E ESTIMATE 7 E ESTIMATE 8 E ESTIMATE		n w r	0.062	0.062	0.0	0.0
ses (as rotal CA) E ESTIMATE 5 Ally hexyl) phthalate (DEHP) E ESTIMATE 5 connettance (DCA) E ESTIMATE 5 In the second of t		ESTIMATE 5.0	0.231	0.231	0.0	0.0
e ESTIMATE service particulare (DCM) e ESTIMATE service particulare (DCM) e ESTIMATE service particulare (DCM) e ESTIMATE service particulare serv	W	U vo t	0.226	0,226	0.0	0.0
yr hexyl) pththalate (DEHP) restance (DCM) E ESTIMATE 5 E ESTIMATE 5 E ESTIMATE 5 E ESTIMATE 5 chan	W	II CO L	0.0	0.0	0.0	0.0
methane (QCA) E ESTIMATE 5 E ESTIMATE 5 Chan		ומינו	1.70.0	1.70.0	0.0	0.0
E ESTIMATE S E ESTIMATE S chan E ESTIMATE S		ואנו	0.004	0.004	0.0	0.0
chan E ESTIMATE S	ш	பம	0.0	0.0	0.0	0.0
E ESTIMATE	W		0.002	0.002	000	0.0
	W		0.0	0.0	0.0	0.0
Se ESTIMATE 50	ш	J 4) t	0.0	0.0	0.0	0.0
65 Entyl benzone E ESTIMATE 5.0	W	- 2/1	0.001	0.001	0.0	0.0
88 Flucianthene E ESTIMATE 5.0	8	ESTIMATE 5.0	0.0	0.0	0.0	0.0

Sheet: Releases to Waters

6/2/2013 12:23

				EPA UWWTP Tool Version				
3	Figures (as idul F)	ш	ESTIMATE	EPA UWWTP Tool Version	13,099	13,099	000	0.0
90	Halogenated organic compounds (as AOX)	ш	ESTIMATE	5.0 7.0 manufacture Tarristantes	0.184	0.184	0.0	0.0
4	Heptachlor	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0
06	Hexabromobjphonyl	ш	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
ğ	Hexachlorobetzone (HCB)	ш	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
63	Hexachlorobundlene (HCBD)	m	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	00	0.0
68	Isodrin	ш	ESTIMATE	EPA UWWTP Tool Version 5.0	0.0	0.0	0.0	0.0
5	Isopreturen	ш	ESTIMATE	EPA UWWTP Tool Version 5.0	0.001	0.001	0.0	0.0
23	Lead and compounds (as Pb)	ш	ESTIMATE	5.0	0.234	0,234	00	0'0
45	Lindane	w	ESTIMATE	5.0 5.0	0.0	0.0	0.0	0.0
7	Mercury, and compounds (as Mg)	w	ESTIMATE	5.0	0.0	0.0	0.0	0.0
97	Mirex	w	ESTIMATE	5.0 5.0 5.0	0.0	0.0	0.0	0.0
8	Naphinalene	w	ESTIMATE	5.0	00	0.0	0.0	0.0
R	Nickel and compounds (as Ni)	w	ESTIMATE	5.0	0,328	0.328	0.0	0.0
3	Nenylphenal and Nonylphenal alhoxylates (NP/NPEx)	ш	ESTIMATE	5.0	0000	900'0	0,0	0.0
5	Octy/phenois and Octy/phenoi ethoxy/lates	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0
69	Organotin compounds (as total Sn.)	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0
8	Pentachlorobenzane	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0
Q	Pentachlorophonol (PCP)	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0
F	Phenois (as total C)	ш	ESTIMATE	5.0 5.0 5.0	70.0	70.0	0.0	0.0
95	Polychlornated alphonyls (PCBs)	w	ESTIMATE	5.0	0.0	0.0	0.0	0.0
E	Polycyclic arematic hydrocarbans (PAHs)	w	ESTIMATE	5.0	0,001	0.001	0.0	0.0
.5	Simportic	ш	ESTIMATE	5.0 5.0	0.001	0.001	0.0	0.0
S	Tetrachloroothylone (PER)	ш	ESTIMATE	S.0	0.005	0.005	0.0	0.0
\$3	Tetrachlorometrane (TCM)	ш	ESTIMATE	5.0 5.0	0.0	0.0	0.0	0.0
£.	Tolumo	ш	ESTIMATE	5.0 5.0	0.038	0.038	0.0	0.0
Q	Total nitrogen	×	H O	discrete analyser	1228.389	1228,389	0.0	0.0
35	Total organic carbon (TOC) (as total C or COD/3)	w	ESTIMATE	5.0	710.061	710.061	0.0	0.0
ng.	Total phosphorus	>	H O	discrete analyser	150,41	150.41	0.0	0.0
39	Toxaphone	ш	ESTIMATE	5.0 EPA UMANTE Tool Mersion	0.0	0.0	0.0	0.0
	Tributyllin and compounds	w	ESTIMATE	5.0 Eba 1888ATB Tool Version	0.0	0.0	0.0	0.0
3	Trichlerobenzenes (TOBs)(all isomers)	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0

Trichloroethyliane E ESTIMATE 5.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		-	EPA UWWTP Tool Version				
E ESTIMATE 5.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	to		5.0	0.0	0.0	0.0	0.0
E ESTIMATE 5.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	4		5.0	0.0	0.0	0.0	0.0
E ESTIMATE 5.0 S.802 3.802 0.0	12		5.0	0.0	0.0	0.0	0.0
E ESTIMATE 5.0 0.009 0.009 0.009 0.00 0.009 0.00 0.009 0.00 0	8		5.0	0.0	0.0	0.0	0.0
E ESTIMATE 5.0 3.802 3.802 0.0	92		5.0	0000	0.009	0.0	0.0
	24		5.0	3.802	3.802	0.0	0.0

* Select a row by dauble-clicking on the Pollutant Name (Column B) then click the delete button

ON B : REMAINING PRIR POLLUIANIS	RELEASES TO WATERS			Please enter all quantit	les in this section in KG		ALCOHOL: SALES
POLLITAN						DUANTITY	
The state of the s			Method Used				The second secon
No Good II	Namo	MICIE	Method Code Designation or Design	ription Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year F (Fucitive) KG/Year	F (Fuglive) KGYes

* Solect a raw by double-clicking on the Pollutant Name (Column B) then click the delete button

Solling Spiritual	NEEDS O WALERS						COMINITIES	CONTRACTOR OF STREET	
1	ZOCIOLEN.			Method Used					
	Name Name	MICIE	Method Code	Dosignation or Description Emission Point 1	mission Point 1	T (Total) KG/Year	A (Accidental) KGYear F (Fugitive) KGYear	ear F (Fucitive) KG	Wear
				EPA UWWTP Tool Version					
370	Solenium	w	ESTIMATE	5.0		0.0	0.0	0.0	5
			Jan 19 and	EPA UWWTP Tool Version	Č	0 040	0.012	00	00
205	Antimony (ast Sb)	IJ	באוווארוב	EDA I NAVATE Tool Version	3				
200	Metablecom	ш	ESTIMATE	5.0		0.0	0.0	0.0	00
000				EPA UWWTP Tool Version					
358		ш	ESTIMATE	5.0	ď	0.011	0.011	00	0.0
			The state of	EPA UWW IP 1001 Vorsion			100	00	00
373	Butter	u	ESTIMATE	EPA UWWTP Tool Version					
120	Bacon	ш	ESTIMATE	5.0	4	4,706	4,706	0.0	0.0
			1	EPA UWWTP Tool Version	•		,,,,	0	C
355	Cobalt	ш	ESTIMATE	5.0	o i	410.0	4.0.4	2	3
	de production (u	ESTIMATE	5.0		0.21	0.21	0.0	0.0
200				EPA UWWTP Tool Version					
388	Dichlobenii	ш	ESTIMATE	5.0		0.0	0.0	0.0	0.0
				EPA UWWTP Tool Version					0
383	Linuron	ш	ESTIMATE	5.0 SANANTO TOOL VORGING		0.0	0.0	0	5
			-	בייייייייייייייייייייייייייייייייייייי	•	8000	0000	00	00
385	Mecaprop Total	n)	ESIMAIE	EPA UVVVVTP Tool Version	•			3	
-	C. in Confidence of the Confid	u	ESTIMATE	5.0	O	0.004	0.004	0.0	0.0
000		STATE OF THE PARTY		EPA UWWTP Tool Version					
200	ACC.N.	w	ESTIMATE	5.0	o	0.007	0.007	0.0	0.0
•				EPA UWWTP Tool Version			9		0
385	Cyphosate	ш	ESTIMATE	5.0	•	0,118	0.10	2	2
			COTINATE	EPA UWWIP Tool Version		0	00	0.0	0.0
398	Benzolalpyrene			EPA LIVIVITE Tool Version					
200	Benzolpillugranthene	W	ESTIMATE	5.0		0.0	0.0	0.0	0.0
				EPA UWWTP Tool Version					
391	Benzol/giluoranthene	ш	ESTIMATE	5.0 CDA LIMMATO TOOL Varion		0.0	0.0	0.0	0.0
-	The state of the s	u	ESTIMATE	50		0.0	0.0	0.0	0.0

6/2/2013 12:23

Sheet: Releases to Waters

				The state of the s	The state of the s			
				ELA DVVVI P 1001 Version				1
200	Carbon tetrachlando	w	ESTIMATE	5.0	0.0	0.0	0.0	00
				EPA UWWTP Tool Version				
100	2 C. Dichlorobsonomide	w	ESTIMATE	5.0	0,006	900'0	0.0	00
				EPA UWWTP Tool Version				
300	Direction	ш	ESTIMATE	5.0	0.0	0.0	0.0	0.0
700				EPA UWWTP Tool Version				
200	Havahammoorlogocana (HRCD)	ш	ESTIMATE	5.0	00	0.0	0.0	0.0
				EPA UWWTP Tool Version				
Loc	SCIA	ш	ESTIMATE	5.0	0.0	00	0.0	00
				SOP 114 by automated				
Dec	Semantis (ne.N.)	M	HEO	discrete analyser	56.76	56.76	0.0	0.0
200	CO CO	Σ	E	SOP 113	263.93	263.93	0.0	0.0
		Σ	HEO	SOP 107	1330,049	1330.049	0.0	00
Sono Contract of the Contract				SOP 151 by automated				
	Contact Missonian	>	H	discrete analyser	1228,389	1228,389	0.0	0.0
	Modern Micogol			SOP 103 by automated				
Too.	Nicote (9: N)	×	HLO	colorimetry	1179.331	1179.331	0.0	0.0
				SOP 118 by automated				
	Nimite DS Ni	Z	HO	discrete analyser	23.798	23,798	0.0	0.0
				SOP 117 by automated				
200	Orthophorening (se POst)	2	HO	discrete analyser	185,683	185,683	0.0	0.0
240	Suspended Solids	Σ	ОТН	SOP 105 by gravimetry	477,493	477.493	0.0	00

- Soloct a row by dauble-clicking on the Polautant Name (Column B) than click the dolote button

05/02/2013 12.24

Sheet: Releases to Wastewater or Sewer

Page 1 of 1

PRITEs: D0040 Facility Name ; Carelooen Waste Wister Treatment Plant Filename : D0048_201;	
Link to previous years emissions data	
4.3 RELEASES TO WASTEWATER OR SEWER	SECTION A: PRTR POLLUTANTS

OFFSIME	ANSFER OF POLLUTANTS DESTINED FOR WASTE-WA	WERITREAT	MENT OR SEWER	Please enter all qua	antitles in this section in KGs		
	POLLUTANT	A 111 MARIE	METHOD			TITLINADO	
			Method Used		THE PERSON NAMED IN COLUMN 1		
nnex II	Name	M/C/E Me	ethod Code Designation or Descri	ption Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year F (Fugiti	F (Fugitive) KG/Year
					0.0	0.0	0.0

* Soloct a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B: REMAINING POLLUTANT EMISSIONS (as required in your Licence)

	OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WAS	TE-WATER T	REATMENT OR SEW	JER	Ploase enter all quantitie	s in this section in KGs		
	POLLUTANT		ME	NETHOD			QUANTITY	
				Method Used				
ollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	4	Accidental) KG/Year F (Fugitive) KG/Year
						0	00	00

* Soloct a row by doublo-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

Link to previous years emissions data

PPTRB: D0048 | Facility Name : Innakeen Waste Waste Teamen Plant | Filename : D004g_2012xis | Reum Year : 2012 |

36/02/2013 12:24

	Please enter all minner	the in this saction in lifes	
POLLUTANT METHOD			OUANTITY
No. Annex II			

SECTION B: REMAINING POLLUTANT EMISSIONS (as required in your Licence) RELEASES TO LAND RELEASES TO LAND RECTION B: REMAINING POLLUTANT RELEASES TO LAND RESEARCH RELEASES TO LAND RESEARCH RELEASES TO LAND RESEARCH RELEASES TO LAND RESEARCH RELEASES TO LAND RELEASE TO LAND		Solect a row by double-clicking on the Pollutant Name (Column B) then click the delete button	then click the delete button		
LAND Please enter all quantities in this section in KGs Micros (and the section in KGs Micros (and the section in KGs Micros (and the section in KGs) Micros (and the section in KGs) Total KGV To	SECTION B: REMAINING POLLUTANT E	MISSIONS (as required in your Licence)			
Nethod Used Name Name Name Name Name Name Name Name		RELEASES TO LAND		Please enter all quantities in this section in KGs	
Name Michael Code Designation or Description Point 1 Tropall KG/Vent		POLLUTANT	METHOD		CITANTITY
Name Name Tricial Kelver			Method Used		
	Pollutant No.	Name	M/C/E Melhod Code Designation or Description		A (Acridental) KG/kaar

Soloct a raw by double-clicking on the Pollutant Name (Column B) then click the delete butten

Page 1 of 1

Page 1 of 1

Sheet: Treatment Transfers of Waste

Please onte									Hoz Worte : Name and Licence/Pormit No of Next	Hra Whate Address of Next	Name and License / Perms No. and	
			Quantity (Tonnes per Year)				Mothod Used		dame and mit No of isposer		Address of Final Recoverer / Disposer (HAZARDOUS WASTE, ONLY)	Actual Address of Final Destination Le. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
Tonefor Domination	European Waste	Horardous		Description of Waste	Waste Treatment Operation	M/C	Waste Treatment Operation M/C/E Method Used	Location of Troatmont				
				•					Euromox Ltd T/A McElvanoy's Wasto & Recogling WCPAMH200589 Corresphen Co	O nechoesta		
Within the Country 19 08 01	19 08 01	No	0.941	0.941 screenings	50	×	Woighed	Offsite in Iroland	B	MonaghanIreland		
Within the Country 19 08 05	19 08 05	No.	0.00	sludges from treatment of urban waste 60.0 water	R10	Σ	Weighed	Offsite in Ireland	BioCoro Environmental Ltd. Offsite in Ireland ,WCP-DC-11-1242-01	Road, Tallaght, Dublin 24, Iroland		

Select a row by double-clicking the Description of Works then click the delete button

Air Emission - Inputs





OUTPUT - automatically generated cell value

RELEASES TO AIR

Air: Emissions from WWTP Works

Data Entry Table: Characteristics of the VAVTP

For use where no data from on a Re monitoring of air emissions from the plant are evaluable. Nations Oxide (120) calculated directly for actual pie id data.

1 Leadings and Works	
A Facility Loadings Data for Reporting Year	Value
Total pie served	979
Designipe	1,750
Total influent BOD kg'annum (measured)	7,659
Total Studge removed of site kg Dry Matter Lannum	9,000
Total Studge digested on-site by Dry Matter Fannum	0

Erter Achasi Population Equivalent of existement Erter Design Population Equivalent of Exist by Erter Italia encusia gustaty, 108 note units: Agliunnum Erter Italia encusia gustaty, 108 note units: Agliunnum Erter Italia encusia gustaty, 108 note units: Agliunnum

For Information on	ly:
Calculated Values	(see Calculations Worksheet)

TOW = "Total Organitally bliodegradable malerial in domestic (Amunicipa) Wastewater"
Total pie served TOW equivalent
Design ple TOTAl equivalent
Quality check: p.e. of influent BOD kg/annum
BOD cortest of studye removed by favours
BOD cortest of a brigge digested by farrors
Residual BOD net of s'udge removed id gested ligiar num

B Characteristics of the Works		
Does the egrotic section of the plant contain dissolved on year?		
Altaria covered and extratted to on-stefare?		
% of Headspace biogas vill sed on site (0 - 100)		
Sichteadigate biogus fared (0 - 100)		
s utilised or fiared onsite		
	derbatted to on-site fare? as will sed on site (0 + 100)	

D2 Onsite Anseroble Digestion for shodge bestment Status
Anseroble digestion consist? It
Well Digester biographic state (0 - 100) 0
Well Digester biographic (0 - 100) 0
Total St. biographic biographic digester biographic (0 - 100) 0

Y/II (default in 'I/) — Releases will be reported as "Emission Point 1". Only required if Anastrobio digestion on sits, Calculate by it operation of engine. Default assumption in Zero utilisation Only required if Anastrobio digestion on site, Calculate by its operation of flare. Default assumption is Zero Faring

2 Estimated Fuel use at the U////IP	Diesel Usage Tornes'ennum	
Total Diesel Use on site in the year	0.038 Tonne/	annum

Releases will be reported as "Fugitive"

	PRIR No. Arnes II		ESTIVATED QUAVITITIES			
		PRTR No. Arnes II	Name	Emission Point 1	T (Total) KG/Yesi	A (Accidentel) KG/Year
The output data is presented on this mortiched in the precise format for bandler directly state in Releases to Air Westbasted byour AERPAIR Emissions Reporting Workbook	1	Methane (CH4)	0	0	0	0
	2	Carbon Monoxide (CO)	0	0	0	0
	3	Carbon Dioxide (CO2)	0	4,445	0	4,445
	5	Nitrous exide (N2O)		0	0	0
	7	Non-methane volatile organic compounds (RMVOC)		0	0	٥
	8	Nitogen oxides (NOcNOS)	0	t	0	1
	11	Sulphur oxides (SOx/SO2)		0	0	0

Wastewater Treatment Data Input





CELL	COLOUR KEY:
	INPUT - Select value from drop down list
	IMPUT - type in your facility value in cell
	OUTPUT - automatically generated cell value

Facility Hame	Inniskeen Waste Water Treatment Works	Enter Facility Delais
Address	Lacklom, Inniskeen, Co. Monaghan.	Market Section (Annual Section Co.)
Reporting Year	2012	
Licence Reg. No.	D0348	
Saline Intrusion	No saline intrusion	PRTR mass emission values
The state of the s		
Type of Treatment	Terbary Treatment - Fitration	Click on the cell and select from the drop down menu.
Nutrient Removal	Phosphorus Removal Only - Biological Chemical Welland	Refer to the Definitions below for further information.
Please enter Total Annual Flow (m¹/annu	um).	
Treated (Predominant/Main Emission):		Final efficient volume released via the main emission point
Fugitive Emissions:	0 m3/annum 4	Additional estimated volume released in storm by passes
TOTAL:	77015 m3/annum	Modernia estimated to dita telegaso in elonia passe

Definition of Input Requirements

P.E. (Actual Treated): P.E. (population equivalent) is a measurement of the average organic biodegradable load received daily at the treatment plant. A population equivalent of 1 (1 p.e.) means the organic biodegradable load having a five-day biochemical oxygen demand (BOD5) of 60g of oxygen per day. Select a P.E. band (<10,000 p.e., 10,000 - 50,000 p.e.) into which the actual operating P.E. of the treatment plant fails. (Please note: the operating P.E. is based on the existing population served and not the design population size of the UVWIP).

Salino Intrusion: Identify whether saline intrusion is known to occur within the sewage network serving the treatment plant. This will be the case for some coastally located introduces.

Typo of Treatment: Identify the type of treatment provided at the plant. Treatment options are "No Treatment," Primary Treatment Only", "Secondary Treatment - Activated Studge", "Secondary Treatment - Atlached Growth", "Terbary Treatment - Fitration", and "Terbary Treatment - Disinfection".

Nutrient Removal: Identify whether nutrient removal is employed at the treatment plant. Nutrient removal options are "Phosphorus Removal Only - Biological Chemical Wetland", "Nitrogen Removal Only", "Phosphorous and Nitrogen Removal", and "No Nutrient Removal".

Measured Values





CELL COLOUR |NPUT - hypein your facility valve in cell |OUTPUT - automaticaly government cell valve

Enter all measured values in this sheet

Note: If you do not have measured values then LEAVE THE CELL BLANK

Measured values reported in this worksheet should be the average concentration of the pollutant measured over the previous reporting year. Measured values should be used when they are available rather than estimated values from the Toolset. Measured values relate to parameters that are analysed in a laboratory. Flease enter the measured values to the crange cells in mg1 for the year.

Note: the unit of measurement must be in mg/l for all parameters entered on this sheet.

Where measured values are reported, the Method Coda must be indicated in the "Method of Measurement" column. The method coda used shall be in accordance with the internationally approved measurement methods - please refer to the UWW PRTR Electronic Toolset Guidance Document on the EPA website. The method description should also be provided as indicated below.

Note: Wastewater licensed pollutants such as BOD and COD, Oriho-P are included at the bottom of this sheet - please enter annual measured data in mg/l for these.

Method Codes

ISO/CEN Blandard - If the bit ordery is working to an ISO/CEN stocked that is on the approved lat of the darks, you should use this as the method code. Exemple for Teal Processing EMISO 11905-11905, Lesse the Description field Black in the PRIRAY/orbbook.	Example for Tolal Kitrogen	EN ISO 11903- 1:1933	Pathod Description: Blank
OTH - Etha method you are using it not an 150°C Etha tandard an does not fail under any of the other method codes than us of this This method code wood apply when using method is form the Sundard Michals for the Anylin all Whate and Washawatan suries or when using a Hoch Spectrophotmento Nethod for Total Groupes for example. Use the method code OTH and please put a description of the method in the method description field in the PATRE Emissions Reporting Workbook.	Erample for Total	нто	Pethod Description: Standard Pethods for the Analysis of Water and Wastewater - Total P Analysis

s10000 p.e., No saline intrusion, Tertary Treatment - Fitration, Presipherus Removal Only - Bological Chemical Westand

RTR Sub	tances:		Troplad Efforact	Fugitire Entission	Transact Estimat	Fugura Emission	Nethod of Manuscreek	Method Description
			Concertistion (mgf)	Concentration (mg/l)	Pass emission (kg/scm/m)	(tg'arrum)	(nsava cess)	(Analytical Method)
RIR Kr.	CAS No.	Parameter						
12	į.	Total ritrogen (s.s.N)	15 950	0000	1228 389	0.000	HTO	51 by putomated discrete and
13		Tetal phosphorus (as P)	1553	0 000	150 410	0,000	OTH	Ed by automaled decrete an
76		Total organia cartion			0.000	0.000		
79		Chizidas (us ktal Ci)		The state of the s	0000	0 000		
82	777-18-79	Cyarides (ss tatal City)			0 000	0.000		
63		Florides (in total F)			0.000	0000		
17		Arsenic and compounds (as As)			0.000	0000		
18		Cadmium and compounds (as Cd)			0.000	0 000		
15		Chromium and compounds (as Cr)			0,000	0 000		
20		Copper and compounds (as Cu)			0.000	0.000		
21		Marcury and compounds (as Hg)			0.000	0.000		
2		Nickel and compounds (s.s.Ni)			0,000	0,000		
2		Lead and compounds (ss Fb)			0.000	0000		
2		Zno and concounds (as Zn)			0.000	0000		
	85535-84-8	Chlorodisares (C10-C13)			0 000	0 000		
	15972-60-8	Abolice			0.000	0.000		
	309-60-2	Altro			0.000	0000		
	60-57-1	Detro			0.000	0 000		
	72-20-9	Entin			0.000	0000		
	73-418	Heptschlor			0 000	0 000		
	57-74-9	Chloridane			0.000	0000		
	143-500	Chlordecone			0.000	0000		
	2385-55-5	Vac			0.000	0.000		
	115-29-7	Endinalities			0.000	0 (00)		
4	58 69 9	Lindard (123.45, 6 Paraditrocycloherare)			0.000	0000		
8	455-73-6	Isodrin			0.000	0,000		
3	50-29-3	DOT - sum of all isotrors			0 000	0.000		
7	1582-09-8	Trifuralis			0.000	0 (00		
4.	118-74-1	Herachlorobenzone (HCB)			0.000	0.000		_
4	87-63-3	Havachkrisk-dadena (HCED)			0.000	0.000		
3	470-93-6	Chlorientriphos			0.000			
3	2921-63-2	Chlorpythos			0.000	70170		
2	1912-24-9	Attita			0.00			
5	122-34-9	Smazica			0.00	0.00000		
3	330-54-1	Duch			0.00			100
6	34123-53-6	Hoperchiron			0.000			
7	5	Tripherytin			000			
)	Organicăn		-	000			
7	4	Tributytin			000			
7	2	PAH, Total		-	000	100,000		
9	191-24-2	Benzo(ght)cary'una			000			
	120-12-7	A-9/8:4-9			0.00	0.000	1	

	91-20-3	Hisphitrations			0,000	0 000		
	208-440	Founters			0 000	0000		
	1332-33-3	Polychlorinate Stighten/s (FCEs) - sun of 11 congues			0 (0)	0000		
4)	1	Halogena'ed organio compounds (as AOX)			0 000	0000		
	127-18-4	Tetrationaty/ora (FER)			0 000	0 000		
	56-23-5	Teteblororetare (TCV)			0000	000		
	79-01-5	Trichitate thylere			0 (00	0 (00		T 2.
	75-01-4	Vryl O'krida			0 000	0000		
	107-09-2	1.2-dehicrotrara (EDC)			0000	0000		
	75-03-2	Dehiconetare (DCV)			0000	0000		
	108-55-2	Premis (as trial C)			0000	000		
	1600-20-4			THE RESERVE OF	0000			
61		Oct/phends and Oct/phend Effor/aris			0000	0 000		
	12002-43-1	Horyspherid and Non-Johand atterylates (NPAIPES)		100000		0.000		
200		Trichtorskenzenes (TCBs) (allisomers)			0 000	0000		
	67-66-5	Pertacking dend (FCP)			0 000	0.000		
	71-43-2	Pertadiosteraere			0 000	0.000		
		Berzere as BTEX			0 000	0 000		
	103-53-3	Tolvene as BTEX			0 000	0.000	-	
	1333-23-7	Xylenes (total mass of ortholipsia and meta-xylene) BTEX			0 000	0 000		
	100-41-4	Etyltevera (BTEX)			0 000	0.000		
	117-61-7	D(2+7)*egfst*falata			0000	0 000		
	6001-55-2	Toraphera			0 (00)	0.000		
	35355-1-8	Herabromotiphery!			0.000	0.000		
63		Brotinaled diphenyletiers (FBOE)			0.000	0.000		
n-PRTR	Substances:		_					
IR Nr.	CAS No.	Purvelu	Treated Efficient Concentration (mail)	Fugibles Emission Concentration (mg/l)	Treated Efficient Place emission (to/arcum)	Fugitive Emission Mass emission (19/annum)	(Vethod Code)	(Analytical Method)
370	CAPILE.	Selectum	1234	1.24				
					0.000	0 000		
266		Artinory (ss \$5)			0000	0(0)		
206 368		Artinory (ss 8t) Vojstanza			0000	0 (co		
206 368 358		Artinory (as \$1) Voltdarum Tri			0 (0) 0 (0) 0 (0)	0 (0) 0 (0) 0 (0)		
206 368 358 373		Astrocy (s) \$1) Vojtekova Tri Barlum			0 (00) 0 (00) 0 (00)	0 (00) 0 (00) 0 (00) 0 (00)		
206 368 358 373 374		Archery (as \$5) Well-Menors For Barbon Reven			0000 0000 0000 0000	0 (co) 0 (co) 0 (co) 0 (co)		
206 368 358 373 374 356		Anthropy (as 85) Weyldenum In Berlum Berlum Cotat			0000 0000 0000 0000 0000	000 000 000 000 000		
206 363 354 373 374 356 356		Antimory (as St) Us) Manum In Sarium Baron Cotat Vanadum			000 000 000 000 000 000	000 000 000 000 000 000		
206 363 354 373 374 356 336 333		Archrony (as St) Vily (Ashum In Barlum Baron Cobast Valandim Dichlobens			000 000 000 000 000 000	6 000 6 000 6 000 6 000 6 000 6 000 6 000		
265 363 354 373 374 365 336 333 333		Archrony (as \$5) Volutionum Tin Barlum Boron Cotast Vanadum Dichtotenii Linuxon			000 000 000 000 000 000 000	000 000 000 000 000 000 000 000		
265 363 354 373 374 355 336 333 333 333 335		Archrony (as St) US) Marine Tin Barium Baron Cotast Vasafrum Dehicteral Lincon Vasserep Tetal			000 000 000 000 000 000 000 000	0 000 0 000 0 000 0 000 0 000 0 000 0 000 0 000		
366 368 358 373 374 356 336 333 331 335 335		Actinory (as \$c) Volt Adjusts In Barlum Boron Cobat Varadium Deficient Linuxa Varadium Deficient Linuxa 24 Options Fabi 24 Options Fabi			000 000 000 000 000 000 000 000 000	0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00)		
265 363 364 373 374 356 366 333 331 335 335 336 337 348		Archrony (as Sc) Villy Marian En Barlum Baron Cobat Vasadium Dichibban Univers Vasacept Total 24.00 (Starphand (24.0) VSPA			000 000 000 000 000 000 000 000 000	0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00)		
265 363 354 373 374 356 336 333 333 335 335 337 337 337		Archrony (as \$c) Violytebrum Tin Barlum Boron Cotast Vanatum Debrotebrah Chrush Vascorip Total 240 Oddorsphend (240) VCCA Glyphousia			000 000 000 000 000 000 000 000 000 00	6 (0) 6 (0) 6 (0) 6 (0) 6 (0) 6 (0) 6 (0) 6 (0) 6 (0) 6 (0)		
265 363 354 374 374 355 356 333 333 335 355 350 324 324		Jednory (n St) Volt Marcon In Barlon Barlon Cotal Vendrom Debition Lincen Vescenty Tebl 24 Oebrophend (2 4 6) VCEA Gyptows Gyptows Benddippere			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00)		
265 363 354 374 374 355 356 333 333 335 355 350 324 392 392		Actinory (as \$c) VolyAdenum In Barlum Born Cotat Variatium Defected Linuxus Vascorery Total 2.4 Defected Gyphosis Benudofyrum Benudofyr			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00)		
265 363 354 374 374 356 333 333 335 343 355 344 392 393 393		Action (as \$c) Violation in In Barlon Both			000 000 000 000 000 000 000 000 000 00	9 (00) 9 (00)		
265 363 354 373 374 355 356 333 333 335 343 324 324 329 329 320 321		Archrony (as Sc) Violation on In Barlon Cotat Variation Detection Chines Variation Unicon Variation Unicon Variation Chines			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00)		
265 363 373 374 356 333 333 335 343 342 343 343 343 343 343 343 343 343		Action (as \$c) Voltation In Barlon Borlon Cotat Visation Deliction Union Union Union Cotat Visation Deliction Union Cotat Visation Deliction Cotat Visation Cotat Visation Cotat Cotat			000 000 000 000 000 000 000 000 000 00	9 (00) 9 (00)		
\$66 363 363 374 375 365 363 333 355 364 392 399 390 391 392 392 393 393		Action (as \$c) Violation in In Barlon Stron Cotal Vasastum Dictoria Univers Vasastum Univers Vasastum Dictoria Univers Vasastum Vasastum Strong Stro			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00) 0 (00)		
266 363 353 374 375 356 356 333 333 355 352 352 352 352 352 352 352		Jednory (n. Sc) Vol. Marcon In Barlom Born Cotal Vendrom Debition Union Union Union Debition Debitio			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00)		
265 363 354 374 355 356 333 335 335 335 324 322 323 329 329 329 329 329 329 329 329		Jednory (as 8c) Volt March Tin Barlom Born Cobat Variatiom Dehiclen Linux Dehiclen Linux Dehiclen Linux Dehiclen Linux Dehiclen Execution Cobat Linux Dehiclen Execution Cobat Linux Dehiclen Execution Cobat C			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00)		
266 363 352 373 374 566 336 333 333 335 322 324 322 329 329 329 329 329 329 329 329 329		Action (as \$c) Volytebrum In Barlum Born Cotat Variatiom Dicktora Union Usessess Total 24 0 of long text Ophorate Band Officers			000 000 000 000 000 000 000 000 000 00	0 (00) 0 (00)		
265 363 354 374 355 356 353 353 355 350 350 351 359 359 359 359 359 359 359 359 359 359		Jednory (as 85) Volt Adjourn Tin Barlom Baron Cotat Version Debtsterd Univer Univer Univer Debtsterd De	0737		0000 0000 0000 0000 0000 0000 0000 0000 0000	000 000 000 000 000 000 000 000 000 00	OTH	
266 383 392 397 397 396 393 393 393 397 399 399 399 399 399 399		Jednory (as 85) Volt March In Barlom Born Cotal Variation Detrotes Univers Variation Detrotes Linux Linux Linux Detrotes Linux Linux Linux Detrotes Linux Linx Linux Linx Lin	3 427		0000 0000 0000 0000 0000 0000 0000 0000 0000	000 000 000 000 000 000 000 000 000 00	ОТН	SOP 113
265 323 323 323 323 325 325 325 327 329 329 329 329 329 329 329 329 329 329		Action (as \$c) Volytebrum In Barlum Baron Cotat Vasatium Dichtoten Union Vasatium Vasatium Vasatium Vasatium Vasatium Vasatium Vasatium Paratility vana Baratility vana Baratility vanatium Paratility vanatium	3 427 17 270		0000 0000 0000 0000 0000 0000 0000 0000 0000	000 000 000 000 000 000 000 000 000 00	OTH OTH	SOP 113 SOP 107
265 333 344 355 356 333 333 335 335 337 339 339 339 339 339 339 339 339 339		Jednory (n. Sc) Volt Alphan In Barlom Born Cotal Vandrum Dehisteral Linuen Unscrep Tobl 24 Dehisteral Linuen Benadily and Benadil	3 427 17 270 15 960		0000 0000 0000 0000 0000 0000 0000 0000 0000	000 000 000 000 000 000 000 000 000 00	0TH 0TH 0TH	SOP 113 SOP 107 51 by automated discrete an
265 333 331 331 333 333 333 333 333 332 332		Jednory (as 85) Volt Marun Tin Barlum Baron Cotal Varadium Detroteen Chronia Linuxa Detroteen Chronia Linuxa Detroteen Chronia Chron	3 427 17 270 15 950 15 313		0000 0000 0000 0000 0000 0000 0000 0000 0000	0 (00) 0 (00)	0TH 0TH 0TH	SOP 113 SOP 107 S1 by automated discrete and P 103 by automated colorine
265 333 344 355 353 353 353 353 353 353 35		Jednory (n. Sc) Volt Alphan In Barlom Born Cotal Vandrum Dehisteral Linuen Unscrep Tobl 24 Dehisteral Linuen Benadily and Benadil	3 427 17 270 15 960		0000 0000 0000 0000 0000 0000 0000 0000 0000	000 000 000 000 000 000 000 000 000 00	0TH 0TH 0TH	

Note: There are no user input requirements in this worksheet

These values are generated in the Toolset based on the data filled in on the Waste Water Treatment Data Input Sheet (i.e. Generated by the Estimation Toolset)

UWWT Facility Details: <10000 p.e., No saline Intrusion, Tertiary Treatment - Fitration, Phosphorus Removal Only - Biologica/Chemica/Walland

	tances estimat		Treated Effluent Concentration (mg/l)	Fugitive Emission Concentration (mg/l)	Treated Effluent Mass emission (kg/annum)	Fugitive Emission Mass emission (kg/annum)	Total Mass Emission (kg/annum)
PRTR Nr.	CAS No.	Parameter Table Manager (as NI)	14.455	23.480	1113.252	0.000	1113.252
12		Total nitrogen (as N)	0.878	4,295	67,606	0.000	67.606
13		Total phosphorus (as P)	9.220	13,102	710.061	0.000	710.061
76		Total organic carbon	54.120	64.800	4168.052	0.000	4168,052
79		Chtorides (as total Ci)	0.003	0.003	0.226	0.000	0.226
82		Cyanides (as total CN)	0.235	0.221	18,099	0.000	18.099
83		Fluorides (as total F)	0.001	0.001	0.044	0.000	0.044
17		Arsenic and compounds (as As)	0.000	0.000	0.021	0.000	0.021
18		Cadmium and compounds (as Cd) Chromium and compounds (as Cr)	0.001	0.000	0.062	0.000	0.062
19			0.003	0.003	0.231	0.000	0.231
20		Copper and compounds (as Cu)	0.000	0.000	0.000	0.000	0.000
21		Mercury and compounds (as Hg)	0.004	0.004	0.328	0.000	0.328
22		Nickel and compounds (as Ni)	0.003	0.011	0.234	0,000	0.234
23		Lead and compounds (as Pb)	0.049	0.122	3.802	0.000	3,602
24		Zinc and compounds (as Zn)	500 SW 500	0.000	0.016	0.000	0.016
	85535-84-8	Ch'oroa'kanes (C10-C13)	0.000	0.000	0.000	0.000	0.000
-	15972-60-8	Alach'or	0.000	0.000	0.000	0.000	0.000
	309-00-2	Aldrin	0.000	0.000	0.000	0.000	0.000
	60-57-1	Dieldrin	0.000	0.000	0.000	0.000	0.000
	72-20-8	Endrin		0.000	0.000	0.000	0.000
41	76-44-8	Heplach'or	0.000	0.000	0.000	0.000	0.000
	57-74-9	Chlordane		0.000	0.000	0.000	0.000
29	143-50-0	Ch'ordecone	0.000	0.000	0.000	0.000	0.000
	2385-85-5	Mrex	0.000	0.000	0.000	0.000	0.000
	115-29-7	Endosulphan	0.000	0.000	0.000	0.000	0.000
45	58-89-9	Lindane (1,2,3,4,5, 6 -hexachlorocyclohexane)	0.000	0.000	0.000	0.000	0.000
	465-73-6	Isodrin	0.000	0.000	0.000	0.000	0.000
33	50-29-3	DDT - sum of all isomers	0.000	0.000	0.000	0.000	0.000
	1582-09-8	Triflura'in	0.000	0.000	0.000	0.000	0.000
	118-74-1	Hexach'orobenzene (HCB)	0.000	0.000	0.000	0.000	0.000
43	87-68-3	Hexachlorobutediene (HCBD)	0.000	0.000	0.000	1000	0.000
30	470-90-6	Ch'orienvinphos	0.000	10.096.00	0.000		0.00
32	2921-88-2	Ch'orpyrifos	0.000	0.000	0.001	0.000	0.00
27		Alrazine	0.000	0.000	0.001	0.000	0.00
51	122-34-9	Simazina	0.000	0.000	0.002		0.00
37	330-54-1	Diuron	0.000	0.000	0.001	0.000	0.00
67	34123-59-6	Isoproturon	0.000	0.000	0.000		0.00
75		Triphenyitin	0.000	0.000	0.000	8,000	0.00
69		Organotin	0.000	0.000	0.000		0.00
74		Tributy/fin	0.000	0.000	0.00	200	0.00
72		PAH, Total	0.000	0.000	0.000	1.00	0.00
91	191-24-2	Benzo[ghi]perylene	0.000	0.000	0.000		0.00
	120-12-7	Anthracene	0.000		0.000		0.00
	91-20-3	Nachthalene	0.000	0.000	0.00	11110	0.00
	206-44-0	Flouranthene	0.000	0.000	0.000		0.00
	1336-36-3	Polychiorinated biphenyls (PCBs) - sum of 11 con			0.18		0.18
40		Halogenated organic compounds (as AOX)	0.002	0.002	0.00	10000	
_	127-18-4	Tetrach'oroethy/ene (PER)	0.000	0.000	0.00		
-	56-23-5	Tetrach'oromethane (TCM)	0.000	0.000		25 (400.5)	1000
57	79-01-6	Trich'oroethylene	0.000	0.000	0.00		
60	75-01-4	Vinyl chloride	0.000	0,000	0.00		
34	107-06-2	1,2-dichloroethane (EDC)	0.000	0.000	0.00	and the second	

71	108-95-2	Phenois (as total C)	0.001	0.031	0.070	0.000	0.070
87	1806-26-4	Octylphenols and Octylphenol Ethoxylates	0.000	0.000	0.000	0.000	0.000
64		Nonyiphenol and Nonyiphenol ethoxylates (NP/NPi	0.000	0.001	0.006	0.000	0.006
54	12002-48-1	Trich'orobenzenes (TCBs) (a'l isomers)	0.000	0.000	0.000	0.000	0.000
49	87-86-5	Pentachtorophenol (PCP)	0.000	0.000	0.000	0.000	0.000
48	608-93-5	Pentach'orobenzene	0.000	0.000	0.000	0.000	0,000
62	71-43-2	Benzene as BTEX	0.000	0.000	0.001	0.000	0.00
73	108-88-3	Toluene as BTEX	0.000	0.014	0.038	0.000	0.038
78	1330-20-7	Xylenes (total mass of ortho, para and meta-xylene	0.000	0.002	0.009	0.000	0.009
65	100-41-4	Ethyl benzene (BTEX)	0.000	0.000	0.001	0.000	0.00
70	117-81-7	Di(2-ethylinexyf)phthatate	0.001	0.003	0.071	0.000	0.07
59	8001-35-2	Toxaphene	0.000	0.000	0.000	0.000	0.000
90	36355-1-8	Hexabromobiphenyl	0.000	0.000	0.000	0.000	0.000
63		Brominated diphenylethers (PBDE)	0.000	0.000	0.000	0.000	0.000
non PRTR	substances es	timated by tool:					
PRTR Nr.	CAS No.	Parameter	Treated Effluent Concentration (mg/l)	Fugiliye Emission Concentration (mg/l)	Treated Effluent Mass emission (kg/annum)	Fugitive Emission Mass emission (kg/annum)	Total Mass Emission (kg/annum)
N/A		Total Hardness (mg/l CaCO3)	201.750	291.000	15537.776	0.000	15537.776
N/A		Selenium	0.000	0.000	0.000	0.000	0.000
N/A		Antimony	0.000	0.000	0.012	0.000	0.012
N/A		Molybdenum	0.000	0.001	0.000	0.000	0.000
NVA		Tin	0.000	0.000	0.011	0.000	0.011
N/A		Banum	0.013	0.036	1.020	0.000	1.020
N/A		Boron	0.061	0.089	4.708	0.000	4.706
NVA		Cobait	0.000	0.000	0.014	0.000	0.014
N/A		Vanadum	0.003	0.005	0.210	0.000	0.210
N/A		Dich'oben1	0.000	0.000	0.000	0.000	0.000
N/A		Linuron	0.000	0.000	0.000	0.000	0.000
N/A		Месоргор	0.000	0.000	0.008	0.000	0.008
NVA		2.4·D	0.000	0.000	0.004	0.000	0.004
N/A		MCPA	0.000	0.000	0.007	0.000	0.007
N/A		Glyphosate	0.002	0.000	0.118	0.000	0.116
N/A		Benzo[a]oyrene	0.000	0.000	0.000	0.000	0.000
N/A		Benzo(b)fluoranthene	0.000	0.000	0.000	0.000	0.000
N/A		Benzo(k)fluoranthene	0.000	0.000	0.000	0.000	0.000
N/A		Indeno[1,2,3-c,d]pyrene	0.000	0.000	0.000	0.000	0.000
N/A		Carbon tetrach'orida	0.000	0.000	0.000	0.000	0.000
N/A		2,6-Dich'orobenzamide	0.000	0.000	0.006	0.000	0.006
N/A		Dicofol			#VALUE!	#VALUE!	#VALUE!
N/A		Hexabromocyclododecane (HBCD)	0.000	0.000	0.000	0.000	0.000
VA VA		PFOS	0.000	0.000	0.000	0.000	0.000

Facility Name:	Inniskeen Waste Water Treatment Works	
Address:	Lecklom, Inniskeen, Co. Monaghan.	
Reporting year:	2012	

Treated: Final effluent volume released via main emission point	77,015
Fugitive: Estimated additional volume released in storm bypasses	0
Total Annual Flow (m'/annum):	77015

SECTION A: WWTP SPECIFIC PRTR POLLUTANTS

Extr WALVER encourassigns will disappear when bounded are extend about

	POLLUTAVIT		-				E-PRTR		
				Kethod Used	5W-1				reporting
No. Innex II	Name	IV/E	Method of Measurement	Designation or Description	Emission Point 1	F (Fugitive) kg/year	A (Accidental) kg/year (Enter site specific data)	T (Total) kg/year	threshold kg'annum
12	Total n'trogen	1.1	отн	SOP 151 by automated discrete analyses	1,228 359	0.000	0.000	1 228 283	60,000
13	Total phosphorus	М	OTH	EOP 165 by automated discrete analyses	150.410	0.000	0000	150 410	5,000
76	Total organic carbon (TOC) (as total C or CODG)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	710 061	0.000	0.000	710 051	60,000
79	Chlorides (as total Ci)	E	ESTIMATE	EPAUWWIP Tool Version 5.0	4,153 652	0 000	0000	4 163 052	2,000,000
62	Cyanides (as total CN)	E	ESTIMATE	EPA UNIVITP Tool Version 5.0	0 226	0000	0000	0 226	2,000
63	Fluorides (as total F)	E	ESTIMATE	EPAUWWIP Tool Version 5.0	18 099	0 000	0000	18 099	5
17	Arsenic and compounds (as As)	E	ESTIMATE ESTIMATE	EPA UWWTP Tool Version 5.0 EPA UWWTP Tool Version 5.0	0 021	0000	0 600	0 021	5
18	Cadmium and compounds (as Cd) Chromium and compounds (as Cr)	Ē	ESTIMATE	EPA UWW/TP Tool Version 5.0	0.062	0 000	0000	0 662	50
19	Copper and compounds (as Cu)	Ē	ESTIMATE	EPA UWWTP Tool Version 5.0	0 2 3 1	0.000	0600	0 231	50
21	Mercury and compounds (as Ha)	Ε	ESTIMATE	EPA UWWTP Tool Version 5.0	0 000	0.000	0000	0.000	1
22	Nickel and compounds (as N)	E	ESTIMATE	EPA UWW/TP Tool Version 5.0	0 328	0 000	0(0)	0 323	20
23	Lead and compounds (as Pb)	E	ESTIMATE	EPA UWWIP Tool Version 5.0	0234	0000	0000	0 234 3 802	100
24	Zino and compounds (as Zn)	E	ESTIMATE	EPAUWWIP Tool Version 50	3 602	0.000	0 000	0 016	1
31	Chicros varies (C10-C13)	E	ESTIMATE	EPA UWWTP Tool Version 5.0 EPA UWWTP Tool Version 5.0	0000	0 000	0 000	0 000	- 1
28	Alachior Alachion	Ē	ESTIMATE	EPAUWWIP Tool Version 5.0	0000	0.000	0.000	0 000	1
3-5	0 ÷ 3/n	E	ESTIMATE	EPA UNWITP Tool Version 5.0	0.000	0.000	0.000	0.000	. 1
39	Endrin	E	ESTIMATE	EPA UNWITP Tool Version 5.0	0.000	0.000	0000	0.000	1
41	Hectech/or	Ε	ESTIMATE	EPA UWWTP Tool Version 5.0	0000	0.000	0 000	0 000	
23	Chlordane	E	ESTIMATE	EPA UNWIP Tool Version 5.0	0 000	0.000	0 000	0 000	1
29	Chlordecone	E	ESTIMATE	EPAUMWIP Tool Version 5.0	0.000	0 000	0000	0 000	
43	Mrec	E	ESTIMATE	EPA UNWIP Tool Version 5.0	0 000	0 000	0000	0.000	
33	Endosvishan	E	ESTIMATE	EPA UMWIP Tool Version 5.0 EPA UWWIP Tool Version 5.0	0 000	0000	0.000	0.000	1
45 89	Undara	E	ESTIMATE	EPAUMWIP Tool Version 5.0	0000	0000	0000	0.000	1
33	Isodrin DOT	E	ESTIMATE	EPAUMVIP Tool Version 5.0	0000	0.000	0000	0 000	1
77	Trifura'n	Ē	ESTIMATE	EPAUWW/IP Tool Version 5.0	0.000	0.000	0000	0 000	1
42	Herach/orobenzene	E	ESTIMATE	EPA UWW/TP Tool Version 5.0	0000	0 000	0000	0 000	
43	Havachforobutadiena	Ε	ESTIMATE	EPA UNWIP Tool Version 5.0	000	0.00	0000	0 000	- :
30	Chloden/nehos	E	ESTIMATE	EPA UWWIP Tool Version 5.0	0 000	0 000	0000	0 000	1
32	Chlorpyrifos	E	ESTIMATE	EPA UWW/TP Tool Version 5.0 EPA UWW/TP Tool Version 5.0	0001	0 000	0000	0 001	1
27 51	Alrazina	E	ESTIMATE	EPAUWWIP Tool Version 5.0	0 001	0 000	0000	0.601	- 1
37	Smazina	Ē	ESTIMATE	EPA UNWITP Teel Version 5.0	0 002	0.000	0000	0 692	1
67	Disren Isperoluten	E	ESTIMATE	EPA UMW/TP Tool Version 6.0	0 001	0.000	0000	0.001	1
75	Triphenytin and compounds	E	ESTIMATE	EPA UWWIP Tool Version 5.0	0.000	0.000	0000	0.000	1
63	Organotin compounds/as total Snl	E	ESTIMATE	EPAUWWIP Tool Version 5.0	0.000	0.000	0000	0 000	69
74	Tributytin and compounds Pelyeyetic aromatic hydrocartions	E	ESTIMATE	EPAUMWIP Tool Version 5.0 EPAUMWIP Tool Version 5.0	0.000	0 000	0000	0 (0)	5
91	(PAHs)	E	ESTIMATE	EPAUMVIP Tool Version 5.0	0.000	0 000	0000	0 000	1
61	Benzola hilicentere	E	ESTIMATE	EPA UMVTP Tool Version 5.0	0 000	0 000	0 000	0 000	1
68	Anthracena Hachthalena	Ē	ESTIMATE	EPAUWWIP Tool Version 5.0	0 000	0000	0000	0 000	10
£3	Fluoranthene	Ε	ESTIMATE	EPA UWW/TP Tool Version 5.0	0.000	0.000	0(0)	0.000	
60	Polychlorinated bigheryls (PCBs) Halogenated organic compounds (as	E	ESTIMATE	EPAUWWTP Tool Version 5.0 EPAUWWTP Tool Version 6.0	0000	0.000	0.000	0 (00)	1,000
40 52	AOXI Tetrachicroethylene (PER)	E	ESTIMATE	EPA UMWIP Tool Version 5.0	0.005	0.000	0000	0 184	10
53	Tetrachicromethane (TCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0.000	0.000	0.000	0.000	1
57	Trich/crosthy/ene	E	ESTIMATE	EPA UMWTP Tool Version 5.0	0 000	0 000	0 000	0.000	10
60	Vinyl chloride	E	ESTIMATE	EPA UMWIP Tool Version 6.0	0.000	0 000	0000	0 000	10
34	1.2-6'ch'orcethana (EDC)	E	ESTIMATE	EPA UWWIP Tool Version 5.0	0 (0)	0 000	0 000	0.000	10
35	DicMoromethane (DCM)	E	ESTIMATE	EPA UWWTP Tool Version 5.0 EPA UWWTP Tool Version 5.0	0 070	0 000	0000	0 070	20
87	Pheno's (as total C) Octylpheno's and Octylphenol	E	ESTIMATE ESTIMATE	EPAUNWIP Tect Version 5.0	0000	0000	0000	0 600	1
61	ethorn/ates Hony/phenol and Hony/phenol	E	ESTIMATE	EPA UNIVITP Tool Version 5.0	0.008	0.000	0000	0.006	1
64	ethoxylales (NPANPEs) Trichlorobenzenes (TCBs) (all isomers)	E	ESTIMATE	EPA UMWTP Tect Version 5.0	0.000	0.000	0.000	0,000	1
49	Partick's see hand (PCP)	E	ESTIVATE	EPA UNWIP Tool Version 6.0	0.000	0000	0000	0 (00)	1
43	Pentach/orochenol (PCP) Pentach/orochenzene	E	ESTIMATE	EPAUWWIP Tool Version 5.0	0000	0000	0.000	0 000	1
62	Benzene	Ē	ESTIMATE	EPA UMWTP Tool Version 5.0	0.001	0 (00)	0 000	0.001	200
73	Tobera	E	ESTIMATE	EPA UWWIP Tool Version 5.0	0.033	0.000	0 (00	0 033	200
78	Xylenes	E	ESTIMATE	EPAU/AVTP Tool Version 5.0	0 009	0000	0.000	0 000	200
65	Ethyl benzene	E	ESTIMATE	EPA UMWTP Tool Version 5.0	0 001	0 (0)	0 000	0 001	1
75	Did2-ethilhenii (Nhaiste (DEHP)	E	ESTIMATE	EPA UMM/TP Tool Version 6.0 EPA UMM/TP Tool Version 5.0	0 071	0 000	0 000	0 (0)	i
59 60	To stickers	E	ESTIMATE ESTIMATE	EPA UNWIP Tool Version 5.0	0000	0000	0 000	0 000	0,1
5.1	Harabromobiphenyl Brominated diphenylethers (PBDE)	E	ESTIMATE	EPA UWWTP Tool Version 5 0	0 000	0 (00)	0 000	0.000	1

SECTION C : REMAINING NON-PRIR SUBSTANCES AND POLLUTANT EMISSIONS AS REQUIRED IN YOUR LICENCE

	POLLUTAIT				YITIMUP					
				Method Used	SW 1					
No. Annex E	Hame	li.e	Method Code	Designation or Description (Note: replace with site- specific data if applicable)	Emission Point	F (Fugitive) kg/year	A (Accidental) kg/year (Enter site specific data)	T (Total) kg/year		
370	Se'en'um	E	ESTIMATE	EPA UWW/TP Tool Version 5.0	0.000	0.000	0000	0.000		
205	Artimony (as Sb)	E	ESTIMATE	EPAUWWIP Tool Version 5.0	0.012	0000	0.000	0.012		
358	Molybdeoum	E	ESTIMATE	EPA UWW/TP Tool Version 5 0	0 000	0 000	0.000	0 (00)		
353	In	E	ESTIMATE	EPA UWW/TP Tool Version 5.0	0 0 1 1	0000	0000	0011		
373	Brive	E	ESTIMATE	EPA UNWITP Tool Version 5.0	1 020	0000	0000	1 020		
374	Boron	E	ESTIMATE	EPA UWWIP Tool Version 5.0	4 705	0 000	0000	4703		
356	Cobat	E	ESTIMATE	EPA UMWIP Tool Version 5.0	0 014	0000	0000	0014		
316	Vanadum	E	ESTIMATE	EPA UMWTP Tool Version 5.0	0210	0000	0.000	0210		
253	Dich/ober.1	E	ESTIMATE	EPA UNWIP Tool Version 5.0	0 000	0.000	0.000	0 000		
233	Linuron	E	ESTIMATE	EPA UMWTP Tool Version 5.0	0 (0)	0000	0.000	0.000		
335	Mecocico Total	E	ESTIMATE	EPA UWWTP Tool Version 5.0	0 003	0000	0000	0.003		
350	2.4 Dichlorophenol (2.4 D)	E	ESTIMATE	EPA UNWIP Tool Version 5.0	0.004	0000	0000	0.004		
334	MCPA	E	ESTIMATE	EPAUMWTP Tool Version 5.0	0 (-)7	0.000	0.000	0 007		
332	Glyphosale	E	ESTIMATE	EPA UMWIP Tool Version 5.0	0 118	0 000	0000	0.118		
359	Benzola/pyrena	E	ESTIMATE	EPA UMWIP Tool Version 5.0	0.000	0.000	0.000	0000		
370	Banzolo Yuoranthana	E	ESTIMATE	EPAUWWIP Tool Version 5.0	0 000	0.000	0 600	0 000		
391	BenzolkYupranthene	E	ESTIMATE	EPA UMWIP Tool Version 5.0	0000	0.000	0.000	0 000		
392	Indencia 23 c d'outere	E	ESTIMATE	EPA UMWIP Tool Version 5.0	0.000	0000	0.000	0.000		
393	Carton tetrachlorida	E	ESTIMATE	EPA UWWIP Tool Version 5.0	0.000	0.000	0 0000	0000		
324	2 6-Dichieretenzamida	E	ESTIMATE	EPA UMWIP Tool Version 6.0	0006	0.000	0000	0.006		
395	Dice'el	E	ESTIMATE	EPA UMW/TP Tool Version 5.0	0.000	0000	0.000	0.000		
376	Haratronocyclodecare (HBCO)	E	ESTIMATE	EPA UMWTP Tool Version 5.0	0.000	0.000	0.000	0.000		
397	PFOS	E	ESTIMATE	EPA UMWITP Tool Version 5.0	0000	0.000	0.000	0.000		
233	Ammon's (as fil)	n	НТО	SOP 114 by automated discrete analyser	66760	0 000	0 000	£6760		
303	BOD	M	OTH	SOP 113	263 930	0(0)	0.000	263 930		
303	COD	N.	OTH	SOP 107	1,330,049	0000	0.000	1.330 049		
352	Kye'dahi Nitrogen	М	ОТН	SOP 151 by automated discrete ahalyser	1,228 359	0 000	0 000	1 228 353		
327	Nitrate (as N)	м	ОТН	SOP 103 by automated colormatry	1,179.331	0.000	0000	1,179 331		
372	Novice (as N)	п	OTH	SOP 118 by automated discrete analyser	23.723	0 000	0 000	23 793		
332	Ortho-phosphate (as PO4)	1.1	ОТН	SOP 117 by automated discrete snafyser	165 683	0.000	0 000	185 683		
240	Suspended Solids	1.1	OTH	SOP 106 by gravimetry	477.493	0.000	0 000	477.493		

Inniskee	n	Flow Welg	hted Mas	s Emissi	on Calcul	lations			T	1	1		_	
Effluent			В	OD		OD		rss	T	otal P	Y	otal N	A	1
Location	Date of Sampling	Dally Outflow M3	ВОD mg/I	r-Ny ar-ar-land r-N-A	COD mg/l	Bry mark Keed British	TSS mg/l	Day	Total P	Daly Facilities	Total N	Interest	Ammonia	nonla
Inniskeen	02/02/2012	306	4.000	1.22	11.000	3,37		0.61		0.31	7.000	0.44	NH4	REALEST
Inniskeen	24/02/2012	206	2.000	0.41	13.000	2.68		0.41		0.31		2.14		0.0
Inniskeen	30/03/2012	79	5.000	0.40	28.000	2.21	6.000	0.47		0.29			1.000	0.2
Inniskeen	18/04/2012	77	9.000	0.69	37.000	2.85		0.69		0.29			1.000	0.0
Inniskeen	30/05/2012	110	1.400	0.15	36.000	3,96		1.65		0.64	27.690	2.13		0.3
Inniskeen	20/07/2012	324	0.300	0.10	5.000	1.62	5.000	1.62		0.64		4.07	0.010	
Inniskeen	21/08/2012	321	5.000	1.61	10.000	3.21	3.000	0.96	A STANDING OF STANDING			2.98		
Inniskeen	27/09/2012	258	4.000	1.03	25.000	6.45	0.000	0.00	0.798	0.31	10.440	3.35		0.0
Inniskeen	01/11/2012	165	2.000	0.33	15.000	2.48	3.000	0.50	7.77	0.21	10.930	2.82	0.920	0.2
Inniskeen	21/11/2012	460	3.000	1.38	5.000	2.30	8.000			0.11	9.790	1.62		0.0
Inniskeen	11/12/2012	133	2.000	0.27	5.000			3.68		0.30	120000000000000000000000000000000000000	3.45	0.010	0.0
	Total	2439	2.000	0.27	5.000	0.67	9.000	1.20	1.072	0.14	10.430	1.39	0.072	0.0
A - Sum of	Daily Mass	Loads (Kg/da	у)	7.59		31.79		11.80		3.23		29.13		1.1
B - Sum of	Daily Flows	for which		2439.00		2439		0101						
Mass loadir	ngs are avai	able (m3/day)	2400.00		2439		2181		2439		2439		200
C - Flow we (A/B) -kg/m	ighled avera	age concentra	ation	0.00311		0.013032		0.00541		0.00132		0.01194		0.0005
O - Total an	nual Flow M	3		77015.00		77015.00		77015.00		77015.00		77015.00		77015.00
- Flow we 012 (CxD)	lghted Mas -kg/annum	s emmission	for	239.61		1003.66		416.54		101.99		919.76		44.9
				BOD		COD		TSS		Total P	-	Total N		Ammonia

Monaghan County Council

Environmental Liability Risk Assessment & Statement of Measures for Inniskeen & Environs

2012

Urban Waste Water Discharge Licence D0348

Document Amendment Record

Client: Monaghan County Council Plant: Inniskeen Waste Water Treatment Plant Title: ERLA Report 2012

Ref No.: D0348

DATE	Issue Purpose:	originated	Checked:	Authorised:
January 2013	A Document for Submission:	M. Johnston S.E.E.	M. Johnston S.E.E.	C.Mc Crossan S.E./D. Fallon D.O.S.
20th March 2013	'Signed ' statement of measures added and completion dates amended to 2013.	M. Johnston S.E.E.	M. Johnston S.E.E.	arhe

Inniskeen AER D0348		

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1 Introduction

This Environmental Liability Risk Assessment relates to the agglomeration of Inniskeen and Environs. This report has been prepared in compliance with Condition 7.2 of Licence No. DO348 which requires the submission of:

- An annual statement as to the measures taken or adopted in relation to the prevention of environmental damage,
- The financial provisions in place in relation to the underwriting of costs for remedial actions following anticipated events (including closure) or accident/incidents, as may be associated with discharges or overflows from the waste water works.
- Environmental Liabilities Risk Assessment (ELRA) to address the liabilities from present or planned discharges within twelve months of the

date of grant of this licence.

1.1 Background

Inniskeen is located near the County Louth border in the extreme south eastern corner of County Monaghan. It is approximately 10.5 km from the nearest large town of Carrickmacross and is 16 km west of Dundalk in County Louth. The population equivalent of Inniskeen village was last estimated at approximately 1010 persons.

The Waste Water Works comprises a network of gravity sewers, a pumping station and associated rising main and a Waste Water Treatment Works with a design capacity of 1750 P.E.

The outfall from the Inniskeen Waste Water Plant discharges to the River Fane at National Grid Reference 293963E 306678N in the Town land of Lacklom, Co Monaghan. The associated Waste Water Treatment Plant is located at 293924E 306661N also in the town land Lacklom, Co Monaghan.

The River Fane is not designated Salmonid water (under the European Communities (Quality of Salmonid Waters) Regulations, 1988) nor is it identified as sensitive water in terms of the Urban Waste Water Treatment Regulations 2001. The river is not designated as an SPA, SAC or NHA. However, it is a valuable salmonid river and contains good stocks of wild brown trout and salmon throughout. The river Fane is in the Neagh Bann river basin district with it's overall status classified as poor and at risk of not meeting good status by 2015, with overall objective to restore it to good status by 2021, however, the 'point risk source' and potential for impact from the Inniskeen WWTP discharge on the river is categorised as '2b – not at risk' therefore it is not identified as impacting on the poor river quality status, (ref: WFD Ireland maps/website & reports.)

2 Environmental Sensitivity and Risk Assessment

The main considerations in relation to the receiving waters for the primary discharge have been identified and given a designated score through the risk enforcement methodology developed by the EPA.

The Dynamic Risk Enforcement Assessment Methodology (DREAM) uses a decision making framework and toolset to assess the risk posed by the primary discharge from waste water agglomerations.

DREAM allocated an enforcement category to waste water agglomerations based on five environmental attributes:

- · Level of treatment,
- · Discharge compliance,
- · Observed impact,
- · Possible impact, and
- · Enforcement record.

The DREAM map and pivot application may be accessed through the following link: https://www.edenireland.ie

Inniskeen Waste Water Treatment Plant agglomeration has been assigned an enforcement category of C1-LOW- one of the best results possible. The DREAM enforcement categories have been assigned the following site specific risk categories:

DREAM Risk Category	Site Specific Risk Categories
A1	Category 3
A2	Category 2
B1	
C1	Category 1

Table 2: Risk Assessment Form

Risk	Process*	Potential Hazards	Environmental	Severity	Basis of severity	Occurrence	Basis of	Risk Score
□			effect	Weighting		Rating	Occurenec	(Severity *
								Occurrence)
_	Operation of STW without	Inundation of plant	High BOD;	4	Potential for fish kill		1:150 year storm	4
	adequate flood alleviation		ammonia			100 100 100	will breach existing	
	measures along river bank						defence dams	
=	Ferric dosing tank	Overdose of ferric	High iron/ toxicity	S	Potential for fish kill; down stream	2	Dose pump mal	10
			content in		10km abstraction point		functions	
			discharge					
Ξ	Overhead pipelines rupturing	Spillage of	River and ground	4	Distance from river would render	-		4
		contents	water		pollution likelihood as 'low'			
			contamination					
2	Above ground tanks rupturing	Spillage of	River and ground	4	Would be quickly noticed	-		4
		contents	water					
			contamination					
>	aeration	Power failure	High BOD;	co	Would be quickly noticed	1	Generator fails to	က
			ammonia into river				start or unfuelled	
							when ESB power	
							cut	
5	Tertiary treatment fails	High P or BOD	High BOD;	2	Potential for mild pollution levels	4	Sand wash out	œ
		leaving WWTP	ammonia into river		or ELV breach			

Table 3 Risk Matrix:

V.High	5	D-RAY				
High	4		VI	NAME OF THE OWNER, OWNE		
Wedium	3		E CALL			
Low	2				Parties and	Н
V Low	1		The same	V	I, III,IV	
		Trivial	Minor	Moderate	Major	Massive
		1	2	3	4	5

These are considered to be high level risks requiring priority attention. These risks have the potential to be catastrophic and as such should be addressed quickly.
These are medium level risks requiring action, but are not as critical as a rede coded risk.
Green (light and dark green) – These are lowest level risks and indicate need for continuing awareness and monitoring on a regular basis. Whils they are currently low or minor risks, some have the potential to increase to medium or even high level risks and must therefor be monitored and if costs effective mitigation can be carried out to reduce the risk even further this should be pursued,

3 Risk Prevention / Mitigation

The risk matrix above indicates that there are no high levels of risk classification for the site. The overdose of ferric chloride or sulphate could be a problem so improvement works to be completed

4 Statement of Measures

The measures to be taken and their progress to date by Monaghan County Council are outlined in Table 4 below. Measures are in place within Inniskeen Waste Water Plant that are adequate to maintain the discharge at a quality that complies with the licence conditions and does not significantly impact on the conservation objectives of the Fane River.

Table 4: Statement of Measures

Risk I.D.	Risk Score	Mitigation Measure to	Outcome	Action	Date for	Progress	Owner/
I.D.	Score	be taken			Competition		Contact Person
1	4	None recommended as plant built on elevated ground	safe	safe	n/a	n/a	M Johnston
II	10	Install new dosing pumps	More control	Fit pumps	March 2012	Pumps fitted	MJohnston
111	4		Reduced risk of spillage	Write SOP for delivery of chemicals and oblige contractors to use	May 2013	To be done	M Johnston
IV	4	Improve containment	Reduced risk of spillage				M Johnston
V	3	Ensure caretaker services and fuels generator	No power outtages	Diesel drum on site	May 2013	Diesel drum bunded	M Johnston
VI	8	Monitoring of sand levels in filter	Clean discharge	SOP for sand filter - Weekly check list	May 2013	Carctaker monitors sand filters regularly	M Johnston

I confirm the above are the measures which will be taken in the local Authority in 2013.

Signed: Job Title: 855
Name: MARK Other of Date: 2 Nd OCT 2013

5 FINANCIAL PROVISIONS

5.1 Estimation of remediation costs

Table 5 below outlines the estimated costs of remediation for different categories of events

Table 5: Risk Classification Table

Rating	Severity					
	Category	Description	Cost of Remediation			
1	Trivial		€1,500			
2	Minor					
3	Moderate		€15,000			
4	Major					
5	Extreme		€100,000			

5.2 Details of Financial Provision / Insurance

In order to off set the risk to the environment, the Council submitted an enquiry proposal form for an Environmental Insurance Policy to IPB Insurers. Following a meeting with the company, the cost of the premium is deemed too high at €10,000 per waste water treatment plant, this is not deemed value for money and financially not possible in the current economic climate.