



Annual Environmental Report (AER) 2023

Company Name: : Clare Co. Co. Monitoring

Licence Number: W0109-02

Address: THE CENTRAL WASTE MANAGEMENT FACILITY
(CWMF), BALLYDUFFBEG, INAGH, CO. CLARE

Class of Activity¹: Class 11

¹ See Appendix I

Purpose of this Report

One of the functions of the Environmental Protection Agency (EPA) is to licence and regulate the activities² of large scale industrial (e.g. chemical, food processors, power plants) and waste facilities. Submitting an Annual Environmental Report (AER) is a requirement of all EPA licences.

An AER is a public document. To this end, this format has been developed for industrial and waste licence holders (other than the intensive agriculture sector) to use as a template. This is to assist any member of the public to interpret and understand the environmental performance of the licensed facility.

The AER is a **summary** of environmental information for a given year. It includes:

- Details of the licence holder's environmental goals achieved, goals to maintain compliance and/or improve their environmental performance;
- Answers to questions regarding their facility's activities;
- Tables of results from monitoring emissions such as air, water, noise, and odour; and
- Details of waste generated, accepted and treated.

An AER does **not** provide detailed technical data. Such information is available in three ways:

- 1) Contacting the licence holder directly. The Contact Us section of this template enables the licence holder to provide details of where a member of the public can obtain further information on topics reported in this document.

² See Appendix I

- 2) Some documents³ are available on the EPA website via the licence details page for each individual licence. This can be found by browsing either the <http://www.epa.ie/licensing/> or <http://www.epa.ie/enforcement/> pages of the EPA website.
- 3) All formal enforcement correspondence exchanged between the EPA and a licence holder during the regulatory process is available for public viewing by appointment at any EPA Office.

If you have a question or query about an AER or an individual EPA licensed facility see the EPA's website or contact the relevant EPA office. See <http://www.epa.ie/about/contactus/> for contact details.

³ This includes EPA site inspection and compliance monitoring reports, licence holders' self-monitoring reports, AERs and special reports

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Glossary

Abatement Equipment	Technology used to reduce pollution
AER	Annual Environmental Report.
Beyond Compliance	Beyond compliance is concept to help deliver greater organisational performance and long-term value for the environment, society and the economy.
CRAMP	Closure, Restoration and Aftercare Management Plan.
ELRA	Environmental Liability Risk Assessment.
Emission Limit Value	Limits set for specified emissions, typically outlined in Schedule B of an EPA licence.
EMS	Environmental Management System.
Environmental Goal	An objective or target set by a licensee as part of an environmental management system (EMS).
Environmental Pollutant	Substance or material that due to its quantity and/or nature has a negative impact on the environment.
Facility	Any site or premises that holds an EPA industrial or waste licence.
FP	Financial Provision.
GJ	Giga joules, an international unit of energy measurement.

Groundwater	All water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil.
Incident	As defined by an EPA industrial or waste licence.
Inert Waste	Is waste that will not undergo physical, chemical or biological change thereby, is unlikely to cause environmental pollution or harm human health.
List of Wastes (LoW)	A list of wastes drawn up by the European Commission and published as Commission Decision 2014/955/EU.
Noise Sensitive Location	Any dwelling house, hotel or hostel, health building, educational establishment, place of worship or entertainment, or any other installation or area of high amenity which for its proper enjoyment requires the absence of noise at nuisance levels.
Non-Renewable Resource	A resource of economic value that cannot be replaced at the same rate it is being consumed e.g. coal, peat, oil and natural gas.
Oil Separator	Separator system for light liquids (e.g. oil and petrol).
PRTR	Pollutant Release and Transfer Register.
Renewable Resource	Wind, solar, aerothermal, geothermal, hydrothermal and ocean energy, hydropower, biomass, landfill gas, sewage treatment plant gas and biogases.
Sanitary Waste	Waste water from toilet, washroom and canteen facilities.

Storm Water	Rain water run-off from roof and non-process areas.
Surface Water	Lakes, rivers, streams, estuaries and coastal waters.
Trigger Level	A value set for a specific parameter, the achievement or exceedance of which requires certain actions to be taken by the licence holder.
Volatile Organic Compounds	Gases produced from solids or liquids that evaporate readily in ambient conditions.
Waste	Any substance or object which the holder discards or intends or is required to discard.

Disclaimer

These are **not** legal definitions. Legal definitions can be found in the corresponding legislation.

Declaration

I, Pat Baker, Landfill Manager, confirm that by ticking the box below, all information in this report is truthful and accurate to the best of my knowledge and belief.

In addition, I confirm that all monitoring and performance reporting required by our EPA licence and summarised herein is available for inspection by the EPA.

Tick here



1) Introduction

See below a brief description of our facility and a summary of our environmental performance this year.

Landfilling commenced at the site on the 30th September 2002 and ceased on the 26th November 2011 on completion of filling of the last constructed cell (cell 13). The Civic Amenity (CA) site provides recycling receptacles for the collection and recycling of various recyclable waste streams. The Civic Amenity Site was in operation in 2023 and small quantities of municipal waste were accepted from householders in the civic amenity site during the year. The waste was removed from site by a third party waste contractor and brought to their facility for further processing prior to offsite landfill and/or diversion to waste-to-energy facilities. A composting facility was developed in 2006 to accept and treat green waste from domestic customers only. The green waste is composted in an aerated static pile and the mature compost is used within the site as a soil conditioner. The facility has diverted over 8,000 tonnes of garden green waste from landfill between 2006 and the end of 2023 (751.54 tonnes in 2023). The site received no complaints and had no reported incidents in 2023. Any exceedances that were recorded during licenced monitoring have been outlined in the annual reports which have been uploaded to EDEN.

Contact Us

If you have any questions or would like further information on any aspect of our licensed activity, please contact us directly.

See below details:

Clare County Council
Central Waste Management Facility
Ballyduffbeg,
Inagh,
Co. Clare
Telephone: 065 6836960

2) How we Manage our Facility

Environmental Management System

Explanation

To ensure our facility's activities do not cause environmental pollution we are required to have detailed documentation systems in place to help us manage and track our environmental performance. These systems are referred to as Environmental Management Systems (EMS). We review our EMS every year and set up-to-date **environmental goals** to continually improve our environmental performance.

The information below sets out the environmental goals for our facility to help us prevent environmental pollution and reduce our impact on the environment. Target dates for completing each goal and progress towards achieving the goal are outlined in Table 1.

Table 1 Environmental Goals

Environmental Goal	Target Date	Progress
Forestry management – Continued replanting of the felled areas surrounding the site	Replanting and Improvement and replacing of fenceline due March 2022 – Completed in Feb 23	100%
Further optimising gas management for cells with poor quality landfill gas	Constant monitoring of Flare run time and adjustments if required due to insufficient quality gas	ongoing
Continued environmental monitoring to be completed on site for compliance with EPA Licence.	End of 2024	25%
Grassland and scrub management undertaken on site for the purpose of enhancing biodiversity.	Wetland (3,300m ²) created as part of CRAMP project	100%
Site assessment with a view to preparation of CRAMP draft design, including wetland areas on phase 4/5 and on the interface between phase 3 and 4/5	Detailed Design Complete May 2021	100%

CRAMP- go to tender for construction works on site including capping and creation of new wetland area- weather permitting construction works to begin at end of 2021	Completed in May 2022	100%
Forestry- continue felling and replanting	Review in 2023	50%
Attempt to produce good quality compost by way of screening to be used within the capping project to promote grass growth along with the provision of same to Clare Co Co gardening section.	Compost stored for use by Clare Co Co Gardening Section during planting season for 2023. Also used as a soil nourisher as part of the capping works for the CRAMP	100%
Reduce energy consumption on the site	Energy Audit completed in Q4 of 2022. Solar PV panel proposal being submitted to finance by Q2 of 2024 with a view to install if funding available.	Ongoing

Add rows as necessary

Comment

- Solar PV panel proposal being submitted in Q2 of 2024 with a view to installing renewable energy source if funding available.
- Continue to compost green waste for production for mulch for landscaping purposes.
- Continue to complete environmental monitoring and sampling as required by the site licence.

Beyond Compliance

Explanation

We are legally required to comply with our environmental licence. However, the EPA realise that some sites go further than just complying with their environmental licence requirements. Some projects carried out at facilities can have long term positive impacts on the environment and local communities.

The EPA's beyond compliance initiative is encouraging us to identify and report on these environmental and sustainability projects. For example, the project could involve renewable energy, biodiversity, water conservation or exemplar community engagement.

Did any project completed on your site in the reporting year go beyond your licence requirements?

Yes

No

If yes, provide details of one case study in Appendix III that demonstrates how the project went beyond compliance of your licence.

3) Energy & Water

Energy

Explanation

Fossil fuels such as coal, gas and oil are non-renewable resources. As a result, our EPA licence requires that we measure our energy use and set targets to improve the energy efficiency of our activities and reduce our overall use, where possible. Where we have the means and technology on-site to generate energy, this is also captured in this report.

The information below summarises the energy used this year compared to the previous year and includes renewable and non-renewable energy types.

Table 3 Energy Used

Energy Used	Quantity (GJ)	% Increase/ decrease on previous year
Electricity	411.12	2% Increase
Heavy Fuel Oil		
Light Fuel Oil	223.24	78% Increase
Natural Gas		
Coal / Solid Fuel		
Peat		
Renewable Biomass		
Renewable Energy Generated On-site		
Total Energy Used	634.36	19.96% Increase

Comment

In 2023 the site used 114,200 kWh of electricity which equates to 411.12 GJ (1 kWh = 0.0036GJ). The electricity used in 2022 was 112,050 kWh (403.38 GJ). The slight increase in 2023 may be due to slightly higher site usage of equipment and office lighting etc. In 2023 the site used 5,552 litres of diesel for operating equipment and backup generator. The GJ energy was calculated from the Tonnes of Oil Equivalent (TOE) conversion (i.e., 1 GJ = 24.87 litres of industrial diesel). This equates to 223.24 GJ of energy and was higher than the 2022 usage due to increased equipment usage.

The information below summarises the energy we generated on our site this year with specific focus on renewable energy generation.

Table 4 Energy Generated

Energy Generated	Quantity (GJ)	% Increase/ decrease on previous year
Fossil Fuel	17.85	43% Increase
Renewable Energy	N/A	N/A
Total Energy Generated	17.85	43% Increase

Comment

The only energy generated was from an on-site backup generator using diesel as a fuel. The total volume of diesel used on site in 2023 was 5,552 litres (4,805 litres green diesel and 747.14 litres white diesel) which was mainly used for fuelling on-site equipment (e.g., tractors /JCB etc.) with only approximately 8% of the diesel (i.e.,444 litres) used for energy generation (i.e., 17.85 GJ) and was slightly higher than the generation in 2022.

Water

Explanation

Water is a natural resource and we are required by our EPA licence to identify ways to reduce our use where possible. Water used in industry can be extracted from groundwater, rivers and lakes (surface water), taken from public water supplies (Irish Water), recycled from the facility's processes or harvested from rainwater.

The information below summarises and compares the quantity of water used this year compared to the previous year.

Table 5 Water Used

Source of Water Used	Quantity (m³/year)	% Increase/ decrease on previous year
Groundwater	62	3% Increase
Surface Water	0	0
Public Supply	0	0
Recycled Water	0	0
Rainwater	0	0
Total Water Used	62	3% Increase

Comment

Water used on-site from the groundwater well is for yard washing and office toilets and cleaning purposes only and is sourced from an on-site well located at the northwest corner of the site. All drinking water is provided by a bottled water supplier. Water usage is consistent year to year at the site.

4) Environmental Complaints

Explanation

Our EPA licence requires that activities do not cause environmental nuisance such as odour, dust or noise. Our licence also requires that we have procedures in place to record, investigate and respond to environmental complaints if or when they arise.

We have an environmental complaints procedure in place where you can contact us⁴ directly. You can also contact the EPA⁵ if you wish to make an environmental complaint, confidentially or not.

See the information below for a summary of **all** the environmental complaints relating to our activities made directly to us and to the EPA this year.

Table 6 Summary of All Environmental Complaints Received in

Type of Complaint	Number of Complaints	Number Closed
Odour / Smells	0	0
Noise	0	0
Dust	0	0
Water Quality	0	0
Air Quality	0	0
Waste	0	0
Litter	0	0
Vermin/Flies/Birds	0	0
Soil Contamination	0	0
Vibration	0	0
Other	0	0

Comment

There were no complaints received at the CWMF facility in 2023.

⁴ See Section 1, Introduction – Contact Us

⁵ If you wish to contact the EPA to make an environmental complaint about an EPA licenced facility, please go to <https://lema.epa.ie/complaints>

5) Environmental Incidents

Explanation

It is our responsibility as an EPA licensed facility to ensure we have systems in place to prevent incidents that have the potential to cause environmental pollution. If an incident occurs, we are required to report it to the EPA, investigate the cause and fix the problem.

The EPA classify environmental incidents into 5 categories based on the potential impact on the environment:

- Minor
- Limited
- Serious
- Very Serious
- Catastrophic

See Table 6 for the number of the environmental incidents we reported to the EPA this year.

Table 7 Number of Environmental Incidents

Incident Category	Minor	Limited	Serious	Very Serious	Catastrophic
Abatement Equipment Offline	0	0	0	0	0
Breach of Ambient ELV	0	0	0	0	0
Breach of Emission Limit	0	0	0	0	0
Explosion	0	0	0	0	0
Fire	0	0	0	0	0
Monitoring Equipment Failure	0	0	0	0	0
Odour	0	0	0	0	0
Spillage	0	0	0	0	0
Breach of trigger Level	0	0	0	0	0
Uncontrolled Release	0		0	0	0
Other	0	0	0	0	0

Comment

There were no incidents reported in 2023 for the CWMF site.

6) Our Environmental Emissions

Explanation

We are required to ensure the emissions from our activities do not cause environmental pollution.

We are required to monitor any of the following emissions that we make:

- Storm water
- Waste water
- Air
- Groundwater
- Noise

We regularly test any such emissions for specific pollutants and materials to ensure they do not contain levels of pollution that exceed emission limit values (ELVs) or cause environmental pollution. If monitoring of an emission indicates an ELV is exceeded, we are required to report this to the EPA⁶.

The next sub-sections of this report summarise our compliance with any ELVs set in our EPA licence. Some emissions monitored do not have specific ELVs, but we still carry out monitoring and report all incidents that may give rise to environmental pollution.

⁶ See section 5, Incidents

Storm Water

Explanation

Storm water is rain water run-off from roof and non-process areas of a facility, e.g. car parks, and generally shall not contain any pollution. Storm water is usually released into a local water body after a basic form of treatment. Our EPA licence requires that we manage storm water to ensure no polluting substances or materials are released into the environment.

The information below summarises how the storm water from our facility is treated, where it is released and the results of monitoring this year.

1. Storm water from our facility is managed prior to release by;

Diversion to settlement lagoons 1 & 2 prior to discharge.

2. Storm water from our facility is released into the following water bodies:

Surface water from the site discharges at the outlets from Settlement Ponds 1 & 2. Settlement Pond 1 discharges to the Carrowkeel Stream and Settlement Pond 2 discharges to the Maghera Stream and then to the Inagh River.

Table 8 Summary of Storm Water Monitoring

Parameter measured	No. of Samples	% Compliant ⁷	Comment
Outlet pond 1: NH ₃ -N (mg/l)	12	100	All compliant
Outlet pond 1: BOD (mg/l)	12	91.6	Only 1 slightly elevated BOD above 2009 SW Regulation Limits in April but all other samples in 2023 were less than that limit. No emission limit values or trigger levels for BOD are set in site licence.
Outlet pond 1: Ortho-P (mg/l)	12	100	All compliant
Outlet pond 1: Suspended solids	12	100	All compliant
Outlet Pond 1: COD (mg/l)	4	100	All compliant
Outlet pond 2: NH ₃ -N (mg/l)	12	100	All compliant
Outlet pond 2: BOD (mg/l)	12	100	All compliant
Outlet pond 2: Ortho-P (mg/l)	12	100	All compliant
Outlet pond 2: Suspended solids	12	100	All compliant
Outlet Pond 2: COD (mg/l)	4	100	All compliant
Inlet Pond 1: NH ₃ -N (mg/l)	12	91	Elevated in March but treated in Lagoon
Inlet Pond 1: BOD (mg/l)	12	66	Elevated in March, September, October & November but treated in Lagoon
Inlet Pond 1: Ortho-P (mg/l)	12	100	All compliant
Inlet pond 1: Suspended solids	12	100	All compliant

⁷ % compliant = [(number of samples compliant) / (number of samples taken)] x 100. Compliance could refer to emission limit values or trigger levels. The EPA commonly use trigger levels on stormwater discharges.

Inlet pond 1: COD (mg/l)	4	75	Elevated in Q4
Inlet pond 2: NH ₃ -N (mg/l)	12	91	Elevated in March but treated in lagoon
Inlet pond 2 BOD (mg/l)	12	91	Elevated in April but treated in lagoon
Inlet pond 2: Ortho-P(mg/l)	12	100	All compliant
Inlet pond 2: Suspended solids	12	100	All compliant
Inlet pond 2: COD (mg/l)	4	100	All compliant
Inlet pond 1: Boron, calcium, cadmium, chromium, copper, iron, lead, magnesium, manganese, orthophosphate, TON, sulphate, mercury, potassium, sodium, zinc	1	100	All compliant
Outlet Pond 1: Boron, calcium, cadmium, chromium, copper, iron, lead, magnesium, manganese, orthophosphate, TON, sulphate, mercury, potassium, sodium, zinc	1	100	All Compliant
Inlet Pond 2 Boron, calcium, cadmium, chromium, copper, iron, lead, magnesium, manganese, orthophosphate, TON, sulphate,	1	100	All compliant

mercury, potassium, sodium, zinc			
Outlet pond 2: Boron, calcium, cadmium, chromium, copper, iron, lead, magnesium, manganese, orthophosphate, TON, sulphate, mercury, potassium, sodium, zinc	1	100	All compliant

Add rows as necessary

Comment

The outlets from the settlement ponds at CWMF are sampled monthly, quarterly and annually for various chemical parameters to assess storm water discharged from the site as required under schedule C of the IE licence. Only 1 sample showed elevated BOD at Outlet 1 in April. This was an isolated result and all other samples from discharged storm water in 2023 were less than the applicable ELVs.

Waste Water

Explanation

There are two types of waste water that can be produced:

- Process waste water produced from the activities and;
- Sanitary waste water from toilets, washrooms and canteens.

Our EPA licence requires us to manage our waste water on or off-site and ensure that it does not cause environmental pollution when discharged into the environment.

The information below summarises how we treat the waste water produced from our activities, where it is released and the results of monitoring this year.

1. Waste water produced by our activities is treated as follows before discharge to a receiving waterbody;

Waste water associated with the landfill (i.e., leachate) is pumped from the landfill to Tank 2 where it is stored pending transfer off site to a licensed Waste Water Treatment Plant (WWTP). Water runoff from the green waste composting process is collected in tank 1 (lagoon) and is then transferred to Tank 2 for storage and then transferred off site to a licensed WWTP.

Sanitary waste water is transferred to an on-site septic tank and then to a percolation area. No sanitary waste water is directly discharged to a surface water body.

2. Treated waste water from our facility is released into the following water bodies:

No waste water from the site is discharged to a water body.

Table 9 Summary of Waste Water Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
BOD	24	N/A	Typical concentration for Non-Haz landfill
COD	24	N/A	Typical concentration for Non-Haz landfill
Ammonia	24	N/A	Typical concentration for Non-Haz landfill
Heavy Metals	2	N/A	Typical concentration for Non-Haz landfill
Chloride	8	N/A	Typical concentration for Non-Haz landfill
Sulphate	2	N/A	Typical concentration for Non-Haz landfill
Fluoride	2	N/A	Typical concentration for Non-Haz landfill
Sodium	2	N/A	Typical concentration for Non-Haz landfill

Add rows as necessary

Comment

Leachate collected in tanks 1 and 2 at the site are sampled on a monthly, quarterly and annual basis. There is no ELV attached to the parameters analysed as all leachate is transferred off site to a WWTP for treatment. All samples collected and analysed in 2023 were typical of leachate produced at a non-hazardous landfill site.

Air

Explanation

Generally, three types of air emissions are monitored from industry in Ireland: gases, dust (particulates) and odour. Our EPA licence requires us to ensure that any air emissions from our activities do not cause air pollution or create an odour nuisance.

The information below details the number of air emission points we monitor, the results from testing the air emissions and any odour assessments carried out by us and the EPA this year.

1. We monitor air emissions from the following number of emission points at our facility.

2. Dust Deposition - ST1, ST2, ST6, ST7

3. Flare Stack – F1

Table 10 Summary of Air Emissions Monitoring

Parameter measured	No. of Samples	% Compliant	Comment
Dust Deposition	4	100%	All Annual sample results were less than the licence ELV of 350 mg/m ² /day
Nitrous Oxide (NO _x)	2	100%	Biannual sample results were less than the licence ELV
Carbon Monoxide	2	100%	Biannual sample results were less than the licence ELV
Sulphur Dioxide	2	100%	Biannual sample results were less than the licence ELV
TA Luft	1	100%	Annual sample results were less than the licence ELV
HCL	1	100%	Annual sample results were less than the licence ELV
HF	1	100%	Annual sample results were less than the licence ELV

Add rows as necessary

Comment

All annual dust deposition samples collected in 2023 were less than the licence ELV of 350 mg/m²/day. The site is closed for landfilling and is largely vegetated with very little areas that could be a source for airborne dust.

The flare monitoring completed in 2023 at CWMF indicated that all regulated parameters in the IE licence were less than the licence ELVs.

Table 11 Summary of Odour Assessments Carried Out

Assessment Conducted By	No. of Odour Assessments	% Compliant⁸	Comment
Licence Holder	N/A	N/A	
EPA	N/A	N/A	

Add rows where necessary

Comment

Odour is not an issue at the site and is not regulated by the IE Licence. Odour assessments are not completed.

⁸ A compliant odour assessment is based on EPA Odour Impact Assessment Guidance available at [Air Enforcement | Environmental Protection Agency \(epa.ie\)](#)

Fugitive Solvent Emissions

Are you required to monitor fugitive solvent air emissions from your facility?

Yes

No

Explanation

The use of solvents is regulated under Irish and European Union (EU) Regulations⁹. Solvents are chemicals that, by their nature, are volatile (evaporate readily under ambient conditions). Solvents can be found in many inks, glues and cleaning agents. Due to the volatility of solvents some emissions may be released into the atmosphere during our activities before being captured in our air treatment system. This type of emission is called a **fugitive solvent emission**.

The information below summarises the quantity of solvents used this year, the percentage of fugitive solvent emissions (% of total quantity used) and whether the percentage complied with the targets set in the EU Regulations.

Table 12 Summary of Fugitive Solvent Emissions

Quantity of Solvents Used (Kg)	% Fugitive Solvent Emissions	Compliant
N/A	N/A	N/A

Comment

No Solvent used at the Central Waste Management Facility.

⁹ See Annex VII of the Industrial Emissions Directive

<https://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>

Groundwater

Explanation

Groundwater is an important and sensitive resource in Ireland. Our EPA licence requires that we monitor groundwater to ensure our activities do not cause groundwater pollution.

Understanding how groundwater flows through soil and rock layers and eventually into surface and coastal waters is a complex science. Sometimes groundwater pollution that occurred in the past can take years and even decades to disappear. Therefore, it is important that experts help us monitor and interpret results from groundwater monitoring and testing.

The information below is a basic summary of the condition of the groundwater this year.

1. Do you have a groundwater monitoring programme in place?

Yes

No

2. Have the groundwater monitoring results over the last 5 years indicated the presence of groundwater pollution?

Yes

No

Table 13 List of Groundwater Pollutants Identified

Pollutants
<p>BH1a: Total coliforms- Q2 & Q4 Manganese- Q4</p>
<p>BH2: Total coliforms- Q1, Q2, Q3 & Q4 Manganese- Q4</p>
<p>BH3: Total coliforms- Q1, Q2, Q3 & Q4 E.coli- Q1, Q2 Manganese- Q4</p>
<p>BH4: Total coliforms- Q1, Q2, Q3 & Q4</p>

E.coli- Q1, Q2, Q3 & Q4
<u>BH5</u> Total coliforms- Q1, Q2, Q3 & Q4 E. Coli – Q1
<u>BH6aS:</u> Total coliforms- Q1, Q2, Q3 & Q4 E. Coli – Q2, Q3
<u>BH8D</u> Total Coliforms – Q1, Q2, Q4
<u>BH6aD</u> Iron- Q1,
<u>BH9c:</u> Total coliforms- Q2, Q3 & Q4 Manganese- Q4
<u>BH12D:</u> Total coliforms- Q1, Q3, Q4
<u>BH12S:</u> Total coliforms- Q4
<u>BH13:</u> Total coliforms- Q1, Q2, Q3, Q4 Manganese- Q4 Iron- Q1
<u>BH14:</u> Total coliforms- Q1, Q3
<u>BH15:</u> Total coliforms- Q2, Q3, Q4 E. Coli – Q4
<u>OL1:</u> Total coliforms- Q1, Q2, Q3, Q4 E.coli- Q2, Q3 Potassium – Q2 Manganese- Q4
<u>M1:</u> Total coliforms- Q1, Q2, Q3, Q4 E.coli- Q1, Q3,Q4
<u>M2:</u> Total coliforms- Q1, Q2, Q3, Q4 Iron- Q1, Q3, Q4 Manganese – Q4 E.coli- Q1, Q2, Q4
<u>MC1:</u> Total coliforms- Q1, Q2, Q3, Q4 E.coli – Q1, Q3, Q4

Add rows as necessary

3. Give details of the investigations and subsequent actions taken, where applicable, to manage the groundwater pollution.

In 2016 a groundwater risk screening assessment was completed for the CWMF site to investigate the slightly elevated ammonia concentrations in groundwater as certain areas of the site. The investigation found that groundwater samples collected prior to the landfill development (2002) indicated ammonia concentrations greater than the current ELVs. The ammonia concentrations in groundwater have been consistent since the site development and may be due to the peaty nature of the soils surrounding the site rather than to leachate from the landfill body. The risk screening report was submitted to the EPA. An investigation related to all groundwater parameters was completed in late 2020 as part of a trigger level assessment submission that was submitted to the Agency in April 2021 and the final trigger levels were approved in 2022.

Comment

The concentrations of ammonia in groundwater is generally consistent from month to month and year to year. The results show no significant increase or decrease trend from the baseline ammonia concentrations identified in 2002 prior to the site development. There are some wells that have elevated iron and manganese concentrations, the ELVs associated with these parameters is an aesthetic objective rather than a health or environmental limit. There is evidence of naturally occurring manganese and iron in the geology of Clare and the results may be a reflection of that. The site has set trigger levels for these parameters going forward that will better reflect if a significant pollution event is taking place rather than reflecting groundwater quality that has naturally occurring elevated parameters due to site geology (i.e., iron) or soils (e.g., peaty soils for ammonia).

Noise

Explanation

Our EPA licence requires that we monitor noise emissions from our facility. Noise monitoring can be conducted at the boundary of our facility and/or at locations beyond the boundary referred to as “noise sensitive locations”. Noise monitoring requires the use of special noise monitoring equipment. Our EPA licence requires that noise produced by our facility shall not exceed the noise limit values and/or give rise to nuisance.

The information below gives a summary of when and where we conducted noise monitoring this year and if results complied with our EPA licence limits.

1. We conducted noise monitoring on the following dates this year:

October 3rd and October 10th 2023

2. Where was the noise monitoring carried out?

- i. the boundary of our facility;
- ii. noise sensitive locations off-site; or
- iii. both.

both

3. Were measured noise levels compliant with your EPA licence limits?

Yes

No

If No, we took the following actions to address the noise level exceedances?

3 monitoring locations (NS1, NS2 and NS3) are situated at residences along the N85 National Road and the readings are heavily influenced by traffic movement on the road and are greater than the daytime limit. The site activities are not audible at any of the monitoring locations. The 3 locations to the north of the site on Meaghra Road (away from the N85) are significantly quieter and are less than the licence limits.

Comment

The monitoring completed at NS1, NS2 and NS3 does not reflect the noise impact from the CWMF site, only the traffic movements on the N85. There is no audible noise from the site at sensitive locations to the north. The landfill site is closed and there are no activities at the waste body that would constitute a noise source that would impact receptors to the north.

7) Waste

Waste Generated

Explanation

Our EPA licence requires us to manage the waste we generate in a manner that does not cause environmental pollution.

We manage, store and record hazardous, non-hazardous and inert waste we generate in accordance with our licence. We ensure that this waste is subsequently treated or disposed of in accordance with the relevant waste Regulations.

The information in Table 14 is a summary of waste we generated this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste generated that was reused, recycled or recovered.

Table 14 Waste Generated

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	6,021.44	7.7% Increase	100%
Non-Hazardous	0	0	
Inert	0	0	
Total Tonnes	6,021.44	7.7% Increase	100%

Comment

The only waste produced on site is leachate from the waste body at the site and from the yard around the green waste processing area. All leachate collected was transferred off site to water treatment plants for final treatment. The volume of leachate transferred off site in 2022 was 5,589 tonnes and in 2023 it was 6,021 tonnes. The volume of leachate will vary with rainfall volumes on site.

Waste Accepted

Did you accept waste onto your facility for storage, treatment, recovery or disposal this year?

Yes

No

Explanation

Our EPA licence requires us to manage the waste we accept in a manner that does not cause environmental pollution.

We manage, store and record all incoming and outgoing hazardous, non-hazardous and inert waste. The waste we accept may be treated, recovered, disposed or stored at our facility depending on our licence requirements.

The information in Table 15 provides a summary of waste we accepted this year and the percentage increase or decrease on the previous year. The percentage recovery is the amount of total waste accepted that was reused, recycled or recovered.

Table 15 Waste Accepted

Type	Quantity (Tonnes)	% Increase/ decrease on previous year	% Recovery
Hazardous	10.24	5% Increase	50%
Non-Hazardous	3,218.02	16% Increase	100%
Inert	0	0	0
Total Tonnes	3,228.26	16% Increase	99.5%

Comment

Non-hazardous wastes are collected at the civic amenity site. Some household hazardous wastes (e.g., fluorescent tubes, batteries, waste oil etc.) are also collected and transferred from the site. There was a hazardous waste collection day in August 2023 that may account for the increased hazardous waste volume when compared to 2022. All wastes are transferred by appropriately permitted hauliers to licensed waste facilities for further treatment pending recycling or recovery. Mixed municipal and bulky wastes are typically physically processed and the materials used for heat recovery and the organic fraction recovered by biological treatment. There was a higher tonnage of waste received at the site in 2023 than in 2022.

8) Financial Provision

Explanation

Our EPA licence requires us to assess the risk our activities pose to the environment if we cease our activities or if an incident occurred. If we are identified as a high risk facility¹⁰ by the EPA, we are required to put provision in place such as a financial bond or insurance to cover the cost of restoring our site to a satisfactory condition. This financial provision can then be used to cover the cost of managing the restoration or clean up should such an event occur.

1. Are you required to have an agreed financial provision in place?

Yes

No

2. What year was your Closure, Restoration and Aftercare Management Plan (CRAMP) last agreed by the Agency?

Clare County Council submitted revised closure costs as part of the interim CRAMP submitted to the Agency in December 2011. The final capping of the landfill was completed in 2022.

3. What year was your Environmental Liability Assessment Report (ELRA) agreed by the Agency?

An environmental liability risk assessment was carried out for the facility during 2009. The report was submitted to the EPA during 2009. Clare County Council submitted a revised costs as part of the interim report submitted to the Agency in December 2011.

4. Has there been any significant changes on your site since the last agreements?

Yes

No

If yes, have you submitted details to the EPA?

Yes

No

N/A

¹⁰ See Appendix II

Appendix I

Class of Activity

Industrial and waste facilities are classed into different sectors depending on the nature of their activity and its potential impact on the environment. The EPA Act 1992 as amended, outlines these as follows:

Class 1	Minerals and other materials
Class 2	Energy
Class 3	Metals
Class 4	Mineral fibres and glass
Class 5	Chemicals
Class 6	Intensive Agriculture ¹¹
Class 7	Food and drink
Class 8	Wood, paper, textiles and leather
Class 9	Fossil fuels
Class 10	Cement, lime and magnesium oxide
Class 11	Waste
Class 12	Surface Coatings
Class 13	Other Activities

Appendix II

¹¹ This reporting template is not applicable to the **intensive agriculture sector**. Their annual environmental reporting structure is different and can be found at [Compliance & Enforcement: Licensees: Reporting Publications | Environmental Protection Agency \(epa.ie\)](#)

High Environmental Risk Categories

If an industrial or waste licence falls into one of these categories it is deemed, by the EPA, as a high environmental risk. As a result, the licence holder is required to have financial provision in place. See section 8, Financial Provision.

1. Landfills
2. Non-Hazardous Waste Transfer Station
3. Incineration and Co-Incineration Waste Facilities
4. Category A – Extractive Waste Facilities
5. Upper and Lower Tier Seveso Facilities
6. Hazardous Waste Transfer Stations
7. High Risk Contaminated Land
8. Exceptional Circumstances

NOTE:

This list is subject to change.

See the link below for further information.

[Compliance & Enforcement: Financial Provisions Publications | Environmental Protection Agency \(epa.ie\)](#)

Appendix III

Beyond Compliance

The case study below shows how we went beyond the requirements of our licence in the reporting year.

250 word limit