



Environment, Health and Safety Review for the year to 31st December 2023

Prepared by Mick Schilling CMIOSH
Environment, Health and Safety Advisor

The Coventry and Solihull Waste Disposal Company Ltd
Bar Road,
Coventry
CV3 4AN

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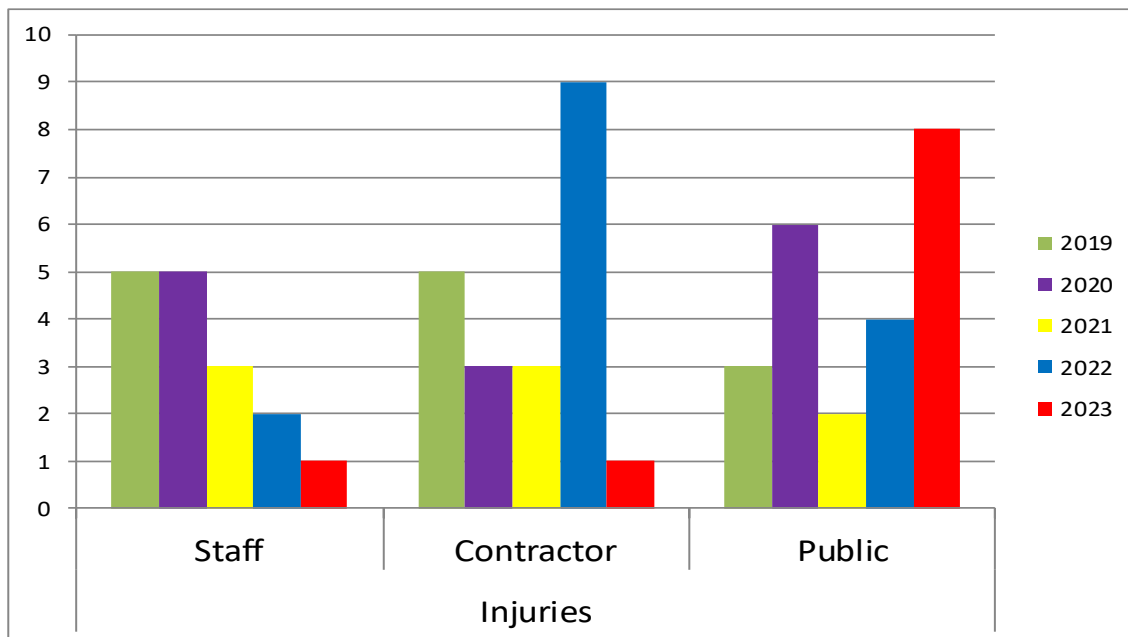
1. Introduction

This report provides a review of Environment, Health and Safety for CSWDC from 1st January to 31st December 2023 inclusive and addresses four principal areas;

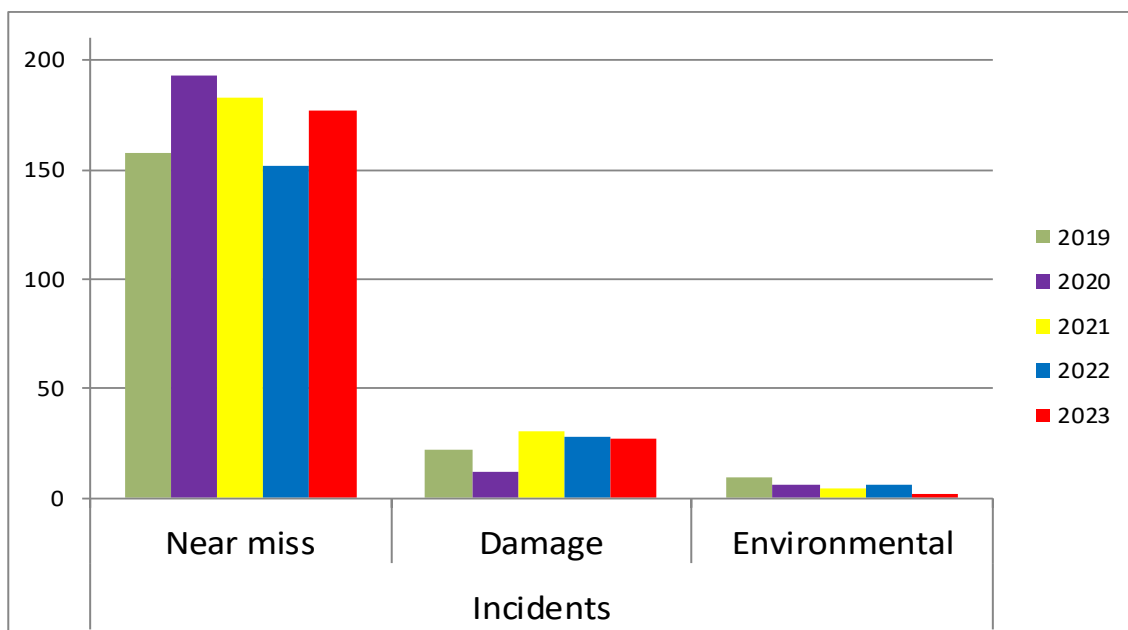
- Health & Safety Performance
- Environmental Performance
- Contacts with Regulatory and Other Bodies
- The Environment Health and Safety Improvement Programme

2. Management Summary

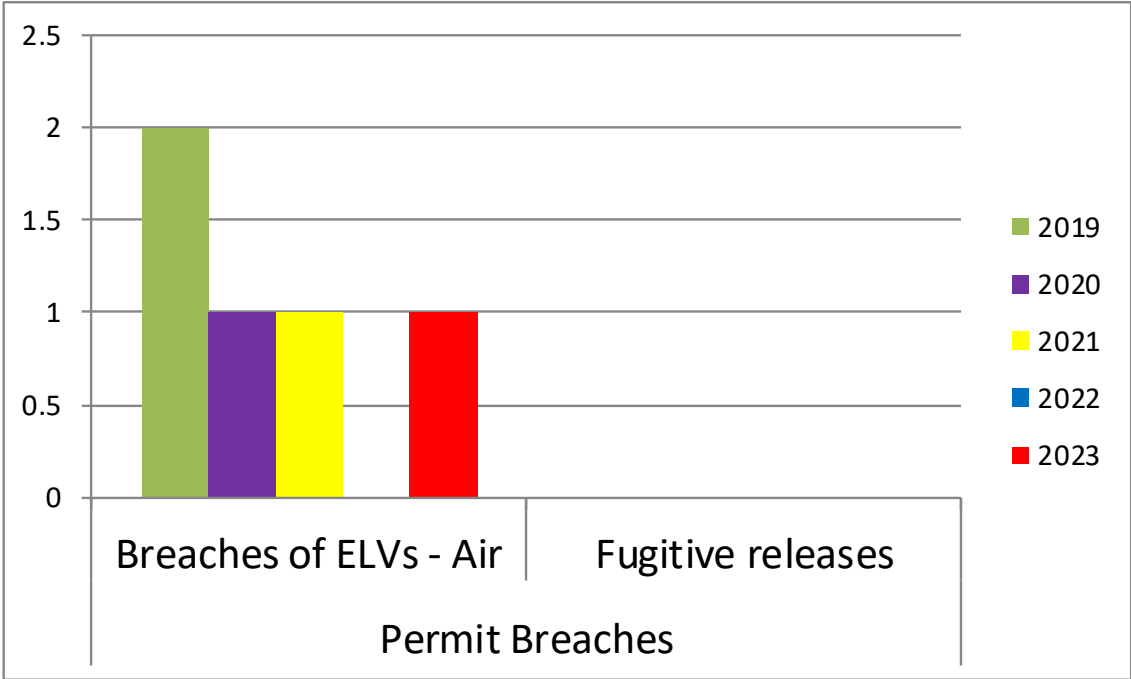
Injuries to Persons



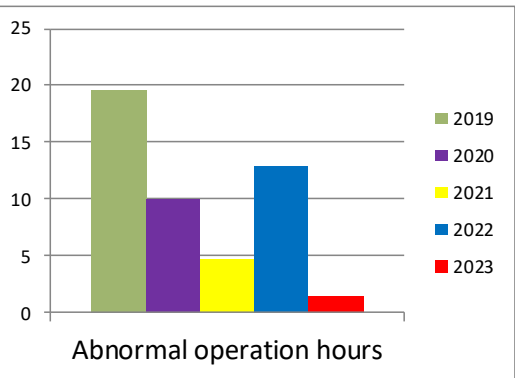
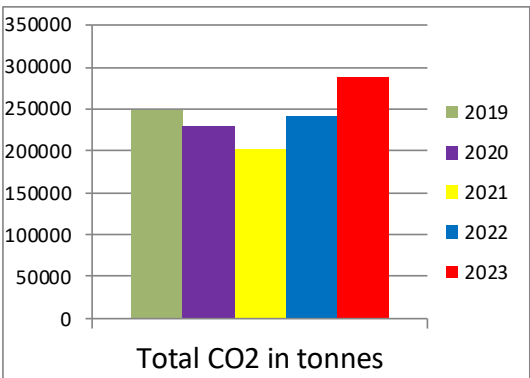
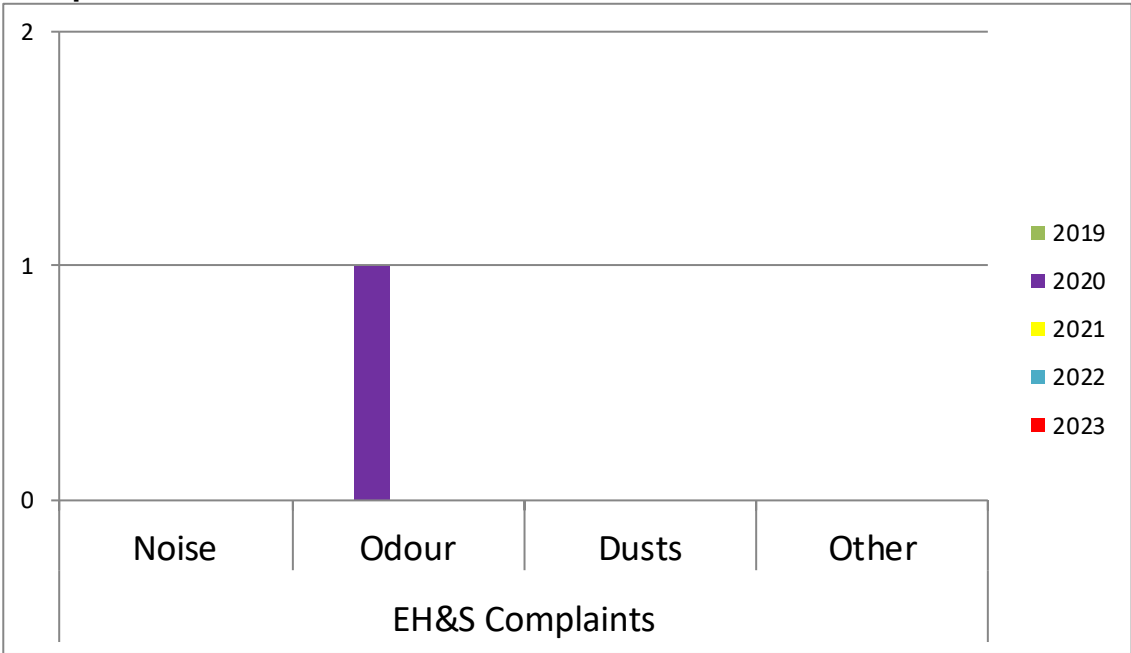
Incidents, Hazards and Near misses



Environmental Performance



Complaints



3. Health and Safety Performance

3.1 Injuries

During 2023 there were 11 injuries reported under the incident reporting procedure.

Two accidents involved employees, one accident involved contractors, and 8 involved members of the public on the HWRC.

Of these, one (1) staff injury required reporting under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)

All 11 injuries are detailed below, with the * **RIDDOR event marked ***:

Month of Injury	Group of Person	Location	Description
January	Staff	HWRC	Left own hand in the door frame as the office door closed behind, catching finger in the door. Slight bruising.
February	Public	HWRC	MoP struck their own nose on a signage post near the battery storage causing a bruise
May	Public	HWRC	MoP disposing of a mattress with family assistance, mishandled the item and struck head on bay wall causing a bruise
May	Public	HWRC	MoP disposing of fish tank, dropped fish tank and cut own hand when trying to pick up the glass
May*	Staff	HWRC	Assisting contractor handling large steel plate, contractor dropped plate without warning, striking a finger. The fingertip was later partially amputated. *RIDDOR due to lost time >7 days
June	Public	HWRC	MoP lifted bed frame over their own head to throw it into the container, but it struck the back of their head and they struck the bay wall, causing a cut
June	Public	HWRC	MoP cut own fingers on wood waste as it was being disposed of
July	Contractor	Main Plant	Scaffolder got a very large splinter in their forearm whilst handling scaffold boards
August	Public	HWRC	MoP cut own hand on waste materials
August	Public	HWRC	MoP cut own hand on broken glass waste that they had dropped whilst disposing of it
November	Public	HWRC	MoP fell backwards from the disabled access ramp they were using to get their waste from their vehicle. The MoP was able bodied and had seemingly borrowed the vehicle

All the accidents recorded have been actioned under the incident report system with new or additional controls measures put in place, such as toolbox talks, changes in procedures or risk assessments and improvements to safe systems of work. Specific actions were implemented where possible to further reduce risk. Reviews of risk assessments and safe working procedures continue in all areas to ensure these documents remain relevant for the tasks to which they relate.

This quantitative result is a reduction in injuries when compared to 2022 performance; where there were 15 injuries. The injury rate per 100,000 hours worked for staff and contractors has decreased from 4.45 injuries per 100k hours worked to 1.23. Whilst the total injury count is not the best on record, the fact that 8 of the 11 recorded events involved members of the public, the staff/contractor rate is the lowest recorded.

Recorded staff injuries remained constant compared to 2022, with two recorded in the 12-month period.

Contractor injuries have decreased significantly when compared to 2022; from 9 to 2. This supports the actions taken during 2022 and 2023 to increase behavioural discussions and auditing of permitted works

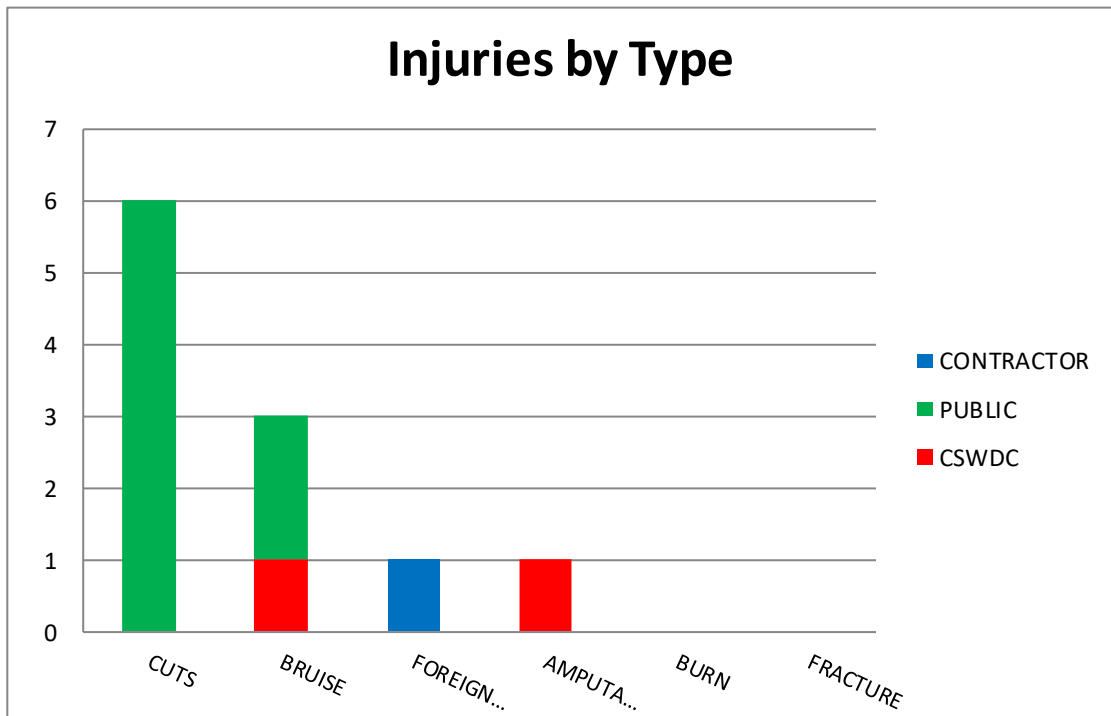
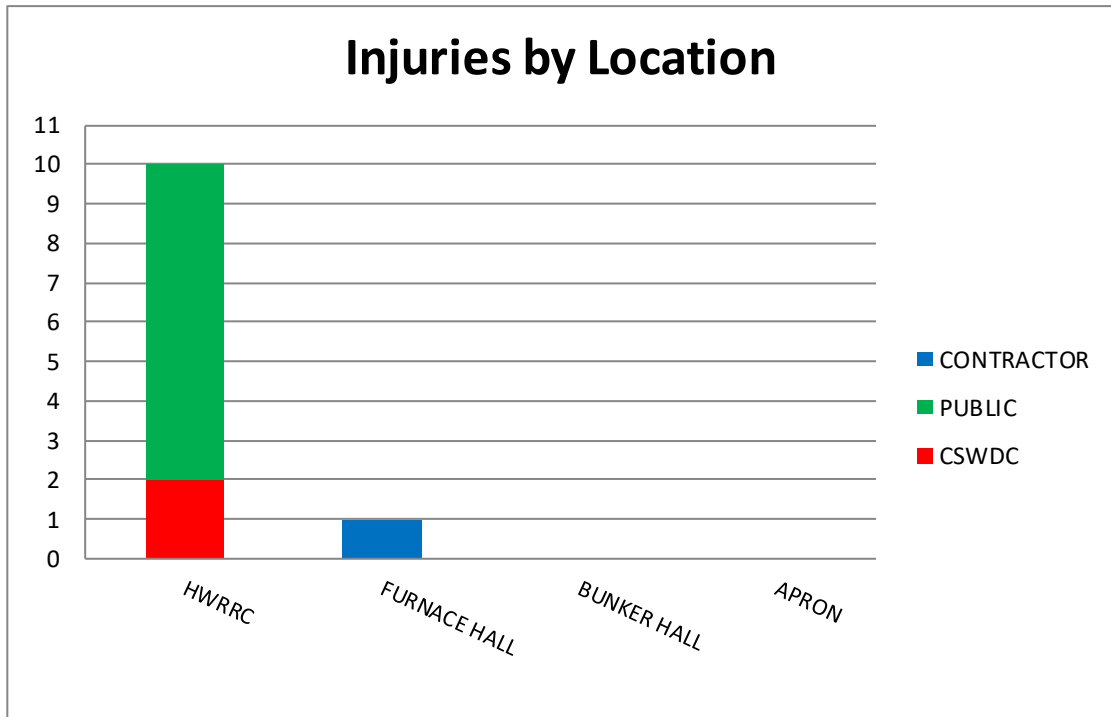
Public injuries have increased from 4 in 2022 to 8 in 2023. The 2021 result was their lowest level for some years and 2022 was not excessive.

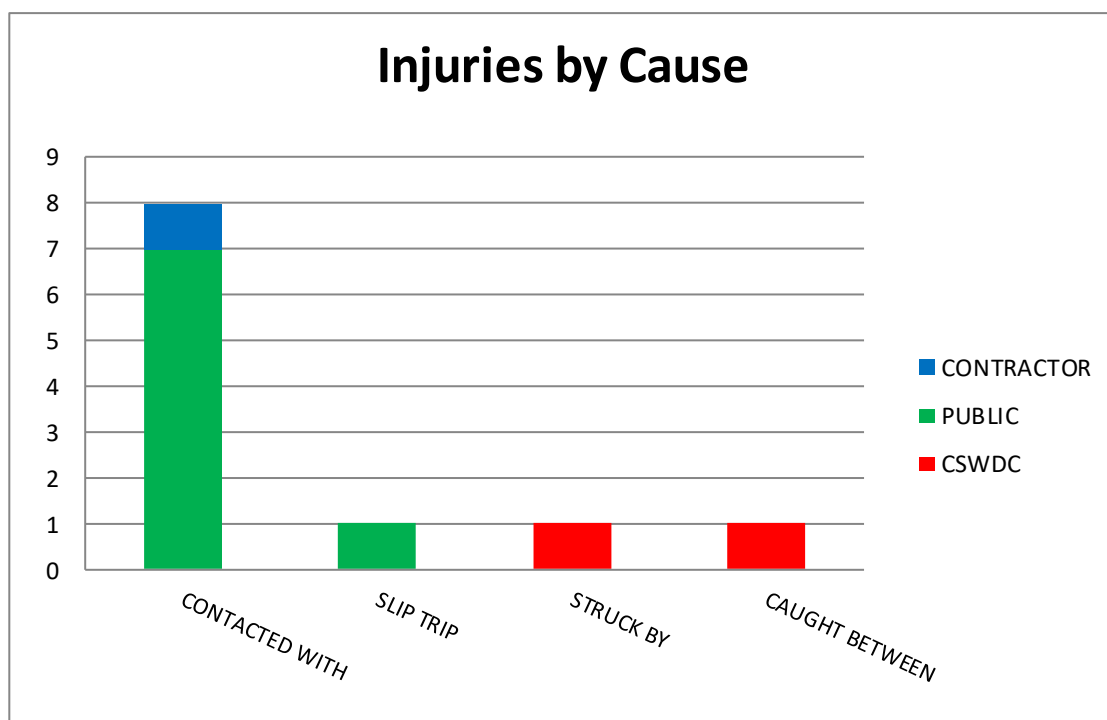
The public can behave in an unpredictable manner but given the number of people who use the HWRC over the course of a year these figures do not give cause for undue concern, as shown by the incident trend over the last 10+ years in APPENDIX 1. The levels continue to be monitored and suitable actions are taken where possible. All public injuries in the year were sustained whilst handling their own waste materials and although staff offer advice and assistance where possible, not all members of the public are prone to heeding advice or accepting help.

Follow-up and closure of injury reports is ensured by the intranet workflow system and periodic meetings to go through any items that remain in progress.

Injuries by Person Type

	Staff	Contractor	Public
2018	1	4	5
2019	5	5	3
2020	5	3	6
2021	3	3	2
2022	2	9	4
2023	2	1	8





Most of the injuries are attributable to unsafe behaviour; where someone's acts or omissions have contributed to the injury. Incident trends are discussed with the senior management team and individual events are included where relevant, to ensure lessons are learned and actions taken are appropriate.

Toolbox talks and H&S videos continue to be undertaken in all departments to improve and maintain awareness. These have been targeted where relevant to increase focus on a specific area of risk or type of hazard. The video system is available on any internet-connected device using individual accounts. Participation is monitored and reported to the senior management team at the monthly management meetings and the quarterly EH&S Committee meetings. Monthly team briefings also include targeted information where relevant if there is a current subject that needs discussion.

Contractor information is stored in a database enabling easy checks on insurance and the standards of risk assessments. Automated email reminders are issued to nominated supervisors to ensure insurance information is renewed in a timely manner.

3.2 Incidents and Near Misses

There were 179 hazards/near misses reported during 2023, which again exceeds the target set at the start of the year (12 each month). The reporting of hazards and near misses is encouraged as it allows us to identify and address a risk before an accident has taken place.

All incidents are reported via the SharePoint intranet system, which enables immediate notification and tracks the status of corrective actions. Close-out of the reports is monitored and reported to senior management on a monthly basis; any open actions are discussed at a quarterly meeting with the technical managers, to completion of open actions. Reports include abusive customers at the HWRC.

Damage incidents have decreased slightly from 28 in 2022 to 27 in 2023. Though this is an improvement, it remains disappointing, as historical incident levels were much lower. The

spread of people involved in damage incidents is as follows – Delivery Vehicles 9, Employees (mobile equipment operation) 8, MoP 5, Plant or equipment issues 3, Contractors 2.

There is also a possibility that reporting levels have increased due to changes in the management team in recent years. Plant and equipment damage incidents are also being captured more consistently.

Note – explosion damage from N₂O cylinders in the combustion chamber are not included here

The incident reporting levels from other areas such as operations and engineering remain encouraging, with reports being raised where relevant. APPENDIX 2 contains a summary chart and trends of the incidents and near misses that have occurred during 2023.

3.3 Other Health and Safety Issues

Quarterly EH&S committee meetings continue to be well attended and productive, with each senior manager presenting on health and safety activities within their teams. Involvement is positive and senior management are actively engaged in providing a monthly summary of activities whilst also encouraging the team members on the committee. Senior manager attendance was reduced slightly in 2023, by introducing a more rotational attendance system. The reason for this change was to encourage more members of staff to join the committee instead for a greater balance and improve staff awareness/participation.

3.4 Employer Liability & Public Liability Insurance Claims

Two new insurance claims were raised in 2023, which related to a contractor hand injury in November 2022 and the RIDDOR finger injury in May 2023. There has been no further communication regarding the noise induced hearing loss claim received in 2021.

3.5 Workplace Inspections

Monthly, internally driven workplace inspections continue to be performed by management, supervisors and employee representatives on the EH&S committee. A total of 168 activities took place in the year, which includes inspections, audits and behavioural conversations.

4. Environmental Performance

4.1 Environmental Complaints/Incidents

There was no complaints received in 2023 which related to our EH&S performance.

4.2 Other Environmental Matters

BREF Derogation and Local Enforcement Position (LEP)

The BREF Derogation was submitted on the 31/10/23 as agreed with the EA.

In summary - having undertaken trials to determine whether the Facility is able to meet emission limits within the environment permit (EP), CSWDC had identified that whilst the Facility was able to comply with most of the emission, there were concerns at the beginning of 2023 that it was not able to consistently operate in accordance with the emissions limits for NO_x and ammonia imposed.

CSWDC had identified a number of potential improvements which could be made to the design and operation of the Facility to enable it to comply with the BAT-AELs for NO_x and NH₃, and was in the process of implementing a programme of works. However, during 2023, CSWDC did not have certainty that the proposed improvements would enable the facility to consistently operate in accordance with the emission limits.

CSWDC applied for a derogation and a LEP in the interim from the emission limits for ammonia and NO_x whilst it implemented and commissioned the proposed improvements to minimise emissions of NO_x and ammonia.

CSWDC requested that the derogation was granted for up to two years following implementation of the BREF, i.e. up to 03/12/25. Following successful implementation of the modifications to the Facility, and demonstration of compliance with the BAT-AELs, CSWDC would propose that the application of the derogation is removed.

The LEP would be initially for 6 months (03/06/24) with a view to extend depending on the following:

- Length of time for the derogation to be issued.
- The derogation may no longer be required as the plant has been optimised.

Existing ELVs for NH₃ and NO_x are the only two CSWDC requested under the LEP. The environmental impact of operating under the proposed Derogation will be the same as operating in accordance with the BAT-AELs. Therefore, this derogation will not result in a significant environmental impact and will provide the same level of environmental protection as operating in accordance with the BAT-AELs.

The local EA team worked on the LEP with EA EFW sector lead in 2023. CSWDC's inspector Dr Gurinder Bains visited site for further information on the 22/11/23. The EA issued the LEP on the 22/12/23. The LEP has been issued for 6 months with a view to extend if the derogation has not been issued by then.

Work continues with RJM and NOxSOL to improve BREF compliance on all units for NO_x and NH₃. This is a multi-departmental collaboration given the importance of BREF.

Line 1, 2 and 3 have had the recommended modifications completed to the over fire air nozzles as recommended by RJM. Units 1, 2 and 3 are currently compliant with the new BREF NO_x and ammonia slip limits. Work continues in this area though with RJM and Martin to improve the headroom on the NO_x and ammonia slip limits.

Continuous Emission Monitoring System (CEM's)

QAL2 functions were inputted into the CEMS on 20/11/23 by ENVEA with QC by CSWDC. All 6 CEM's have had new functions. Standby (original machines) had QAL2 functions for Nitrogen Monoxide (NO) which makes up the majority of the NO_x. The newly installed CEM's also had favourable function for NO and both track each other well. All other functions were satisfactory. QAL2 reports have been submitted to the EA in compliance with BSEN14181 standard.

Coventry 'Heatline' Project

The heat transfer station continues to provide heat to the civic buildings in the City centre. The total amount of heat provided to the scheme was 13043.27 MWh_{Thermal}. It should be noted that for CSWDC to achieve R1 status this heat load would have to increase by a factor of 7.

Environmental Protection HWRC

A fourth toggleblok valve (isolation valve) was installed successfully at the HWRC protecting the river from run off during emergencies. Testing of the valve will be carried out weekly by the waste supervisors. The CPC Manager and Lead Supervisor have the notification system installed on their phones.

BREF - Improvement Conditions

Improvement Condition 1 (IC1) – this has been extended by the Environment Agency (EA) to 31/05/24 – it is an IC on NO_x improvement and requires further time.

Improvement Condition 2 and 3 (IC2, IC3) – the reports were both submitted early. The IC's required additional testing for mercury and dioxin meeting the new BREF limits. The data confirmed that CSWDC did not require continuous monitoring for mercury or dioxins.

Improvement Condition 4 (IC4) report has been submitted. It required the operator to calculate, and submit details of, the facility's gross electrical efficiency. If the calculated gross electrical efficiency was below 20%, an assessment of opportunities to increase the energy efficiency of the installation is also required.

The boiler efficiency is around 85.6 %.

The plant's gross electrical efficiency was calculated as 17.2 %.

Some initial improvements were identified in the report for illustrative purposes and focus on improved use of steam. Increasing generation capacity would require installation of a replacement turbine of greater efficiency. This could be either to suit the existing steam conditions or consider a boiler upgrade such that steam conditions were increased (improved). The latter is not deemed feasible.

Reducing steam flow to match existing turbine swallow capacity would require a reduction in thermal load of the boilers as currently some excess steam produced is directed away from the turbine and associated generation. Initial calculations suggest that the reduction in waste processed to achieve this lower thermal load would be in the region of 1 t/h. It would not materially improve the plant's current gross electrical efficiency and it would result in a lower annual waste processing tonnage of around 8,000 tonnes.

Ramboll concluded that it must be recognised that the design of the CSWDC plant does not match well with that of a modern Energy from Waste plant and as such, it is unreasonable to expect it to achieve a gross electrical efficiency in line with the latest BAT range. Whilst some improvements to the gross electrical efficiency could be investigated this should be considered against the limitations of plant design, configuration, remaining life, and space constraints on site. There may be further work requested by the Environment Agency following submission of this.

OTNOC (other than normal operating conditions) Plan.

CSWDC are required to have a plan in place by 01/04/23. Fichtner have been engaged to deliver this. OTNOC is defined in the UK Waste Incineration BAT Conclusions Interpretation (WI BATCs ID) as periods when the plant is in start-up, shut-down or abnormal operation.

Start-up and shut-down can be summarised as the periods of the time at the start or end of the plant's operation respectively when it is unreasonable to expect the operator to comply with their emission limits due to high oxygen levels compared to normal operational conditions (leading to unrealistic correction factors), and/or unstable emissions.

Abnormal operation

Abnormal operation (AO) is defined in permits as any technically unavoidable stoppages, disturbances, or failures of the plant or the measurement devices.

In practice this means that any type of plant failure which could affect emissions can be counted as AO, but noting that:

- AO cannot be claimed for exceedances due to waste composition or operator error.
- AO cannot be claimed for exceedances of the normal carbon monoxide (CO) or total organic carbon (TOC) limits or the higher limit for particulate matter, nor for the failure of the CEMS for these pollutants (unless a surrogate monitoring method has been agreed and is available). This is because the operator must still be able to demonstrate full control of combustion during AO (indicated by TOC and CO ELV compliance), and acceptable levels of particulate emissions.

Streamline Energy and Carbon Reporting (SECR) FY22-23

Energy consumption associated with CSWDC's operations during the 2022-2023 financial year have been calculated and is shown table 2.1.

Table 2.1: Summary of Absolute Energy Consumption

Source	FY22-23 kWh
Energy Consumption	983,606,287

Absolute GHG emissions associated with CSWDC operations during FY22-23 have been calculated and are detailed below.

Table 2.2: Summary of Absolute GHG Emissions

Greenhouse Gas Scope	FY22-23
Scope 1 emissions (tCO₂e)	96,673
Emissions from combustion of natural gas	2,185
Emissions from combustion of gas oil	117
Emissions from operations (waste-to-energy activities)	94,368
Emissions from refrigerant leakage	3
Scope 2 emissions (tCO₂e)	220
Emissions from purchased electricity [location-based]	220
Scope 3 emissions (tCO₂e)	1,468
Emissions from business travel in rental vehicles, or employee-owned vehicles where company is responsible for purchasing the fuel	1,468
Total Scope 1, 2 and 3 emissions (tCO₂e)	98,361

Carbon Intensity Ratio - A carbon intensity ratio has been established to assess the normalised carbon performance of operations based on the company's employee figure.

Table 3.1 Summary of Carbon Intensity Ratio

Normalisation	FY22-23
Intensity ratio: tCO ₂ e/employee	1,426

Energy Management and Energy Efficiency Measures Undertaken during Financial Year (FY22-23) - The Company has implemented the following energy efficiency actions during the year ended 31st March 2023:

- Review and improvement of the energy efficiency policy, including assessing and targeting the largest contributors to usage such as heaters, air conditioning, lighting and IT equipment
- The Leadership and Policy Statement section of the Environmental, Health and Safety management system has been amended to include an Energy and Resource Use Policy. This amendment aims to govern energy and resource use in the organisation with the aim of reducing consumption over time.

Incinerator Bottom Ash (IBA)

No significant change has occurred regarding the classification of IBA in 2023. The current methodology to determine a waste's hazardous / non-hazardous classification still allows IBA to be classified as non-hazardous. The ferrous metal residues are left in the bottom ash and the two are taken from site for processing together, being separated at the destination site. This reduces transport costs and carbon footprint, and reduces the amount of storage space required for ferrous metal containers.

ROCs

Renewable Obligation Certificates (ROCs) have been claimed since 2016. As part of the application, sampling of Carbon Dioxide is taken from the main stack with the samples analysed to determine the Biogenic content every month. The average percentage remains circa 58% of essentially new carbon (Carbon 14) as opposed to carbon from fossil fuel. This then allows the company to claim a percentage of the electricity exported as renewable and hence claim ROCs. Return is low at the moment but covers the running costs. However, there is a possibility of a higher revenue if the plant efficiency is improved by EQUANS (formally Engie) increasing their heat load.

Carbon Zero Strategy Summary

The Company is committed to assisting the UK in achieving its goal of net zero carbon emissions by 2050 and believe the best strategy for doing so is by the business playing an integral part in the circular economy. Energy from Waste (EfW) plants provides affordable, green (circa 60% of residual waste is biogenic), secure energy supply solutions that form part of the developing circular economy by reducing reliance on landfills and obtaining the maximum value from waste streams. Even with increased levels of recycling and reuse, there will be significant feedstocks available for EfW plants for some time.

Carbon capture and storage (CCS) is currently the only solution for the Company to achieve net carbon zero carbon emissions. However, CCS infrastructure, particularly storage, is in the early stages of development with the storage areas located a significant distance from the Company in the North and Irish Sea exhausted oil fields. As a result, the level of carbon emissions emitted through transporting 240,000 tonnes of carbon each year would currently negate the carbon savings from installing a CCS plant. The CCS plant would also need to be located on the site of the current HWRC with an estimated cost of £78m.

Notwithstanding these issues, over the course of the remaining years of the service level agreements the business will continue to play a key part within the UK circular economy

whilst also continuing to look at ways to reduce its carbon footprint wherever possible, for example by plant efficiency improvements. The progress of the recently implemented government waste policies, such as the plastic tax and extended producer schemes, which are in place to reduce residual waste volumes and plastics, will also be closely monitored. The long-term solution for the Company to achieve net carbon emissions is a replacement EfW plant taking into consideration future capacity requirements and the latest low carbon (CCS plant) and low emissions technology. A high-level report is currently being carried out regarding the options for a replacement plant incorporating CCS.

4.3 Unauthorised Releases

There was one unauthorised release reported to the Environment Agency during 2023, which related to a breach of the daily ELV for SO₂ – 50.4mg against the limit of 50.0mg. The breach occurred due to a late spike in emissions due to an amount of non-conforming waste. This spike took place near the end of a daily period where SO₂ levels had already been elevated, and pushed the value beyond the limit without any available time to take appropriate action to bring the daily average values back into compliance.

Unauthorised Release Historical Data

Year	Yearly Total
2023	1
2022	0
2021	1
2020	1
2019	2
2018	3
2017	1
2016	0
2015	1
2014	1
2013	2

4.4 Other Release Notifications

Abnormal Operation

The table below shows the duration of Abnormal Operation events reported to the Environment Agency.

Year	Line 1	Line 2	Line 3	Total hours
	60hr limit	60hr limit	60hr limit	180 hrs
2023	0	1.5	0	1.5
2022	8.33	0	4.5	12.83
2021	1.5	1.65	1.5	4.73
2020	0	0	0	0
2019	4.85	8.68	6.05	19.58
2018	6.25	3.52	5.46	15.23
2017	3.02	0	4.96	7.98
2016	3.5	3.5	3.4	9.9

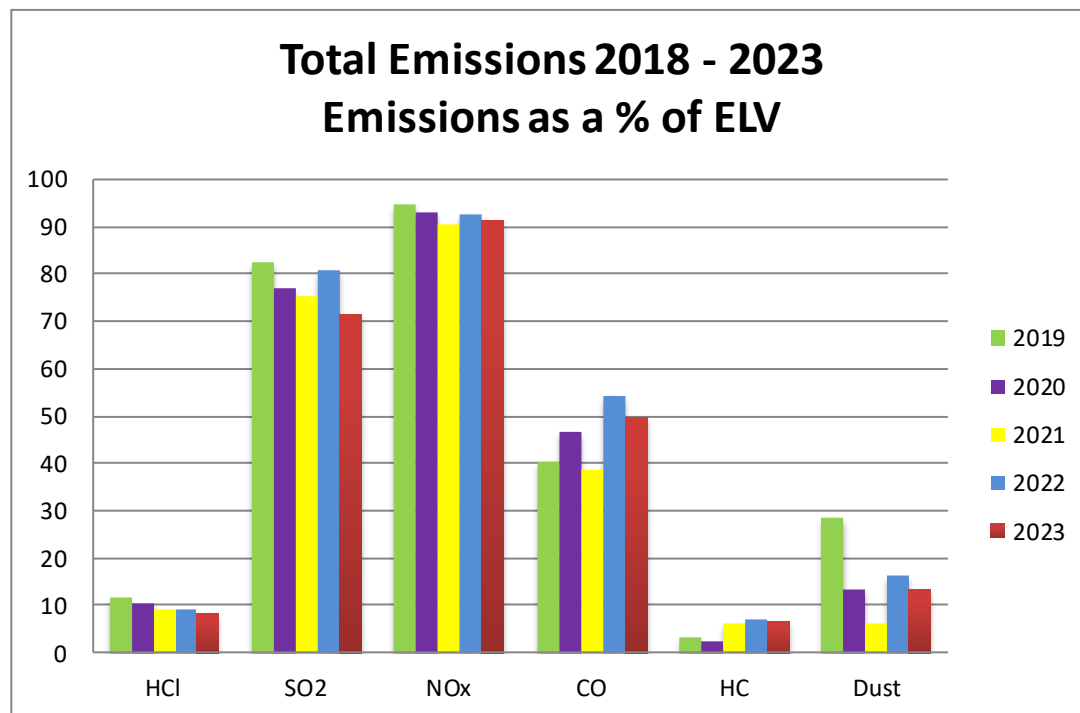
Permit conditions allow 60 hours of abnormal operation on each unit each year.

Fugitive Emissions

These are any gas, liquid, solid, mist, dust, or other material that escapes from a process or equipment other than the chimney stack and passes beyond the site boundary.

There were no instances of fugitive releases of pollutants from site in 2023.

4.5 Environmental Performance – Releases to Air



All emissions are well within the ELV's set by the Environment Agency in our Environmental Permit, as shown in the chart above as a percentage of the Emission Limit Value. NO_x emissions remain controlled at levels below the current ELV by a system which balances the emission level with the amount of ammonia that is injected. A similar system is in operation on the SO₂ sorbent dosing system. Both these systems are designed to keep emission levels within limits whilst ensuring the dosed chemicals are not over-dosed unnecessarily (ammonia and hydrated lime have environmental impacts as well as costs, so control of their use is important).

The mass emission levels of each reported pollutant are shown in the chart, with comparison for the preceding 4 years to show trending.

All levels remain similar to 2022, with a larger reduction in SO₂ likely due preparation for compliance with the reduced ELV which came into force in December 2023.

Further graphs showing comparisons with historical emission levels *per tonne of waste processed* can be found in Appendix 4.

External sampling and analysis contractors have carried out periodic extractive sampling of the emission gases twice during 2023.

All the results were below the Environmental Permit Emission Limit Values. Where applicable the results were comparable with the data generated by the Continuous Emissions Monitoring equipment.

4.6 Environmental Performance – Key Performance Indicators

A summary table of the Key Performance Indicators is shown in Appendix 3. These indicators are used by the EH&S Management System as a method of tracking significant inputs and outputs from the plant on an ongoing basis.

Total water usage bears little resemblance to normal due to the G1 failure.

The volume of gas consumed by the site decreased by a small margin from 3,896,100ft³ to 3,688,083 ft³ possibly due to improved mixing of waste.

The exported electrical energy generated per tonne of waste is much less than expected due to the turbine failure with 0.185 MW/tonne generated as opposed to the more usual 0.36 MW/tonne.

The tonnages of ash residues collected remain similar to previous years; all residue 'tonne per tonne of waste processed' figures have remained similar to the previous year, with APC production increasing marginally due to increased lime use. Ferrous metal collection was lower than usual at 2.0% of throughput mass.

5. Contacts with Regulatory and Other Bodies

5.1 Health & Safety Executive

There were no visits to site nor any other formal communications received from the HSE during 2023.

5.2 Environment Agency

The sites EA enforcement officer; Gurinder Bains, visited site twice in 2023.

- 12/06/2023 - Waste returns and G1 review.
- 12/11/2023 - BREF compliance and local enforcement position.

Both were positive visits with no scoring being made against us.

5.3 EH&S Management System Audits

The third party auditing body carried out a surveillance audit of the Company Environmental, Health & Safety Management System (EHSMS) during September 2023. The system was certified for continued compliance to the environmental ISO14001 and the health and safety ISO45001/2018 standard. During the visit, all previous corrective action requests and observations for improvement were closed out.

There were no minor nonconformities identified.

Internal audits were performed on the integrated EH&S systems on a monthly basis during 2023. Three of the 12 audits performed during the year identified an area of nonconformity or a minor area for improvement. Corrective actions are complete or planned ready for re-auditing later during the year. Internal audits were also undertaken on work control processes, where the RAMS, work instructions and permits were checked out and audited.

Permit to work audits are undertaken each month by the technical senior managers as part of the area inspection plan.

5.4 Other Visits & Contacts

During the course of 2023, there were 4 visits to site from educational bodies.

There were 3 visits to site by client groups to learn about the process.

The Fire Safety Office visited site to undertake a check on the site fire safety measures.

The EA visited site to use our facility as a training exercise for new starters.

The Company website continues to be updated, featuring emissions data and background information, process information and details of our EH&S policy and management system certification. The site induction is available via the website to enable remote access to the induction system prior to arriving to site, thus making the setting to work of contractors more efficient.

6. The Environment Health and Safety Improvement Programme

6.1 Environment, Health and Safety Objectives and Targets

EH&S target attainment was generally excellent, with the majority of targets being met. The notable exception being the RIDDOR event in May – the first reportable injury for almost 4 years

The minor injuries, as previously mentioned, mainly involved members of the public, over whom we have little control. The low levels of staff and contractor injuries is extremely encouraging and demonstrates the efforts made by all departments to ensure the highest standards wherever possible.

Damage incidents, although still high at 27, remain lower than in 2022 and it is hoped that steps taken to deter careless driving of waste delivery vehicles and mobile plant will prove effective.

The target for behavioural conversations was also met. Changes to the inspection and behavioural strategy in 2023 will further embed this activity into the company culture.

One action on the 2023 improvement programme (Appendix 5) has been carried over to 2024, this is due to the project in question being a medium term project that is expected to run over a number of years – plant labelling and identification.

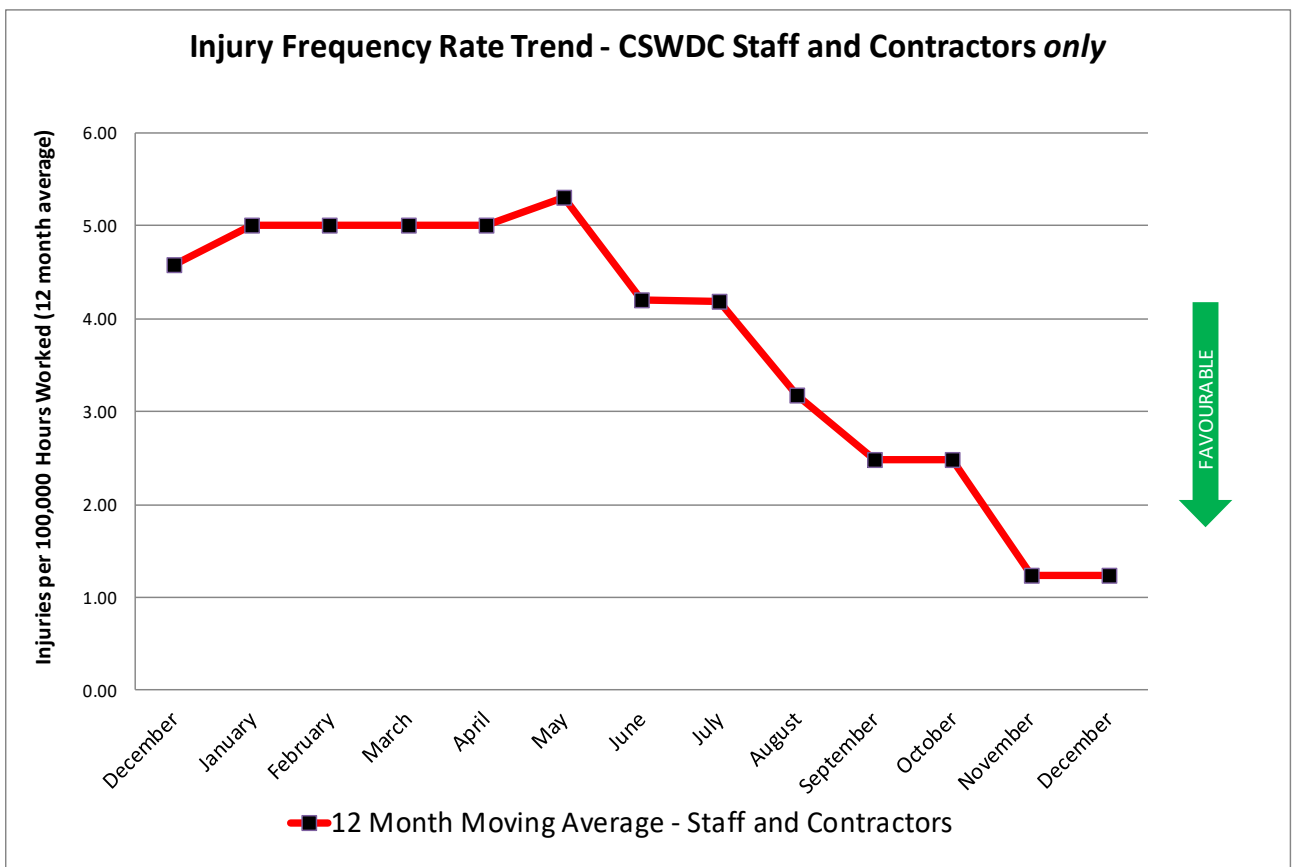
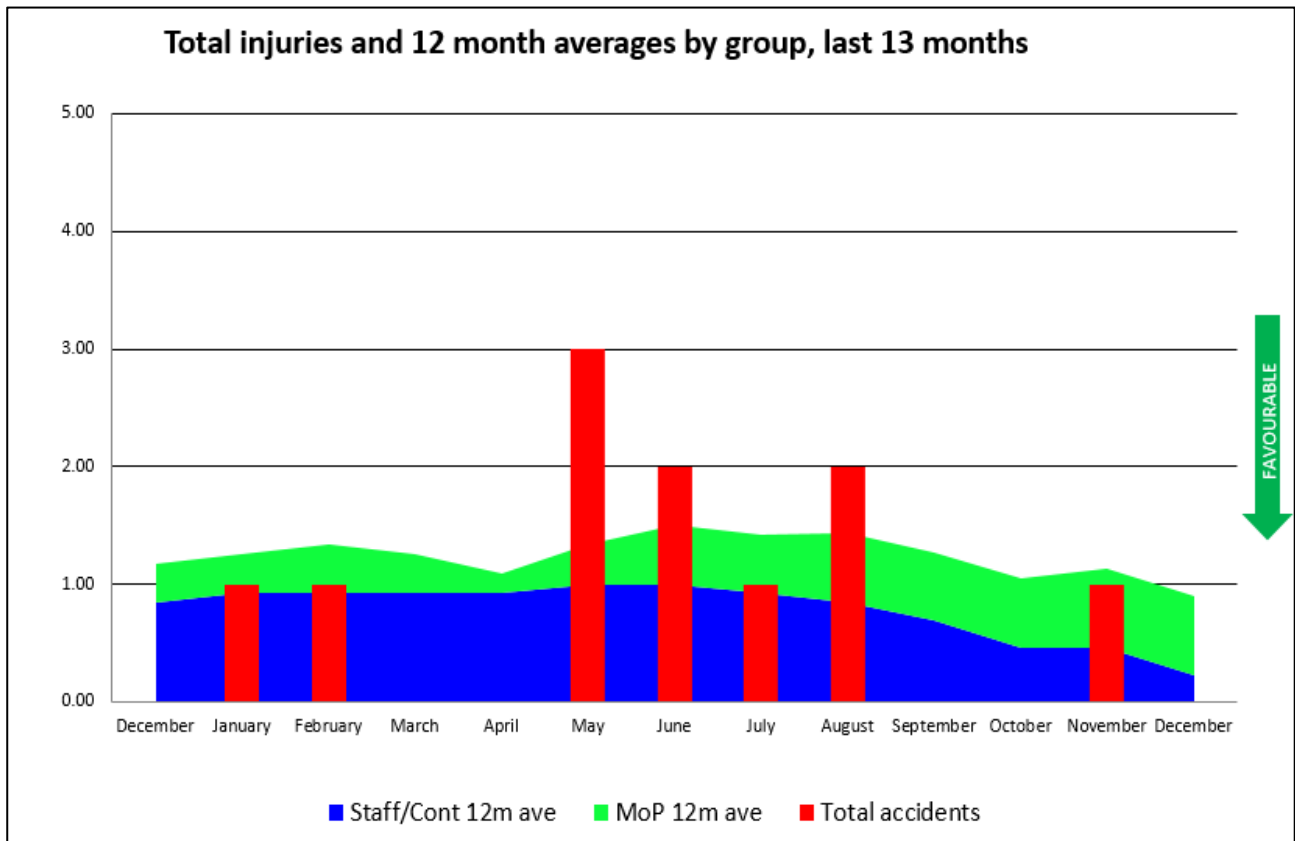
Objectives, targets and the improvement plan for 2024 can be found in Appendix 6, with which will again seek to improve on last year's performance.

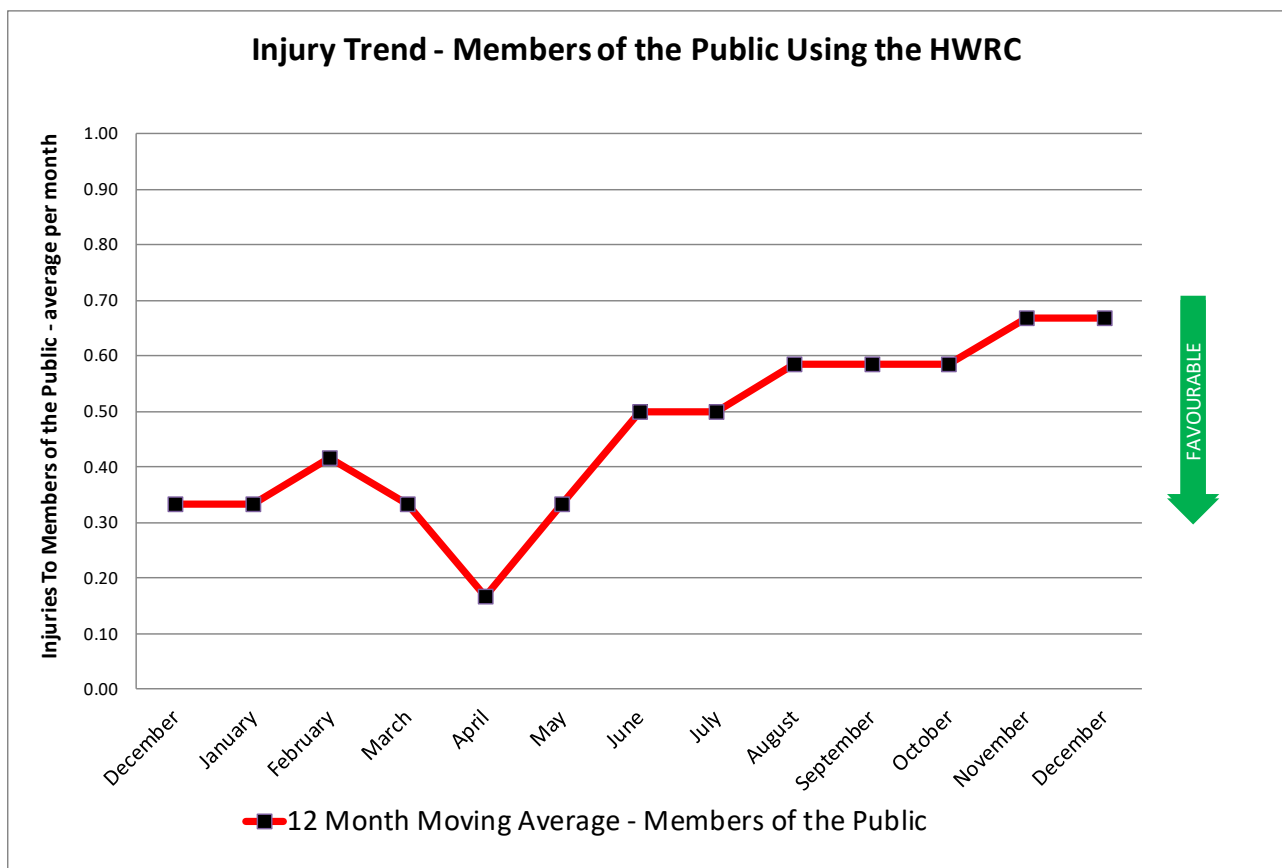
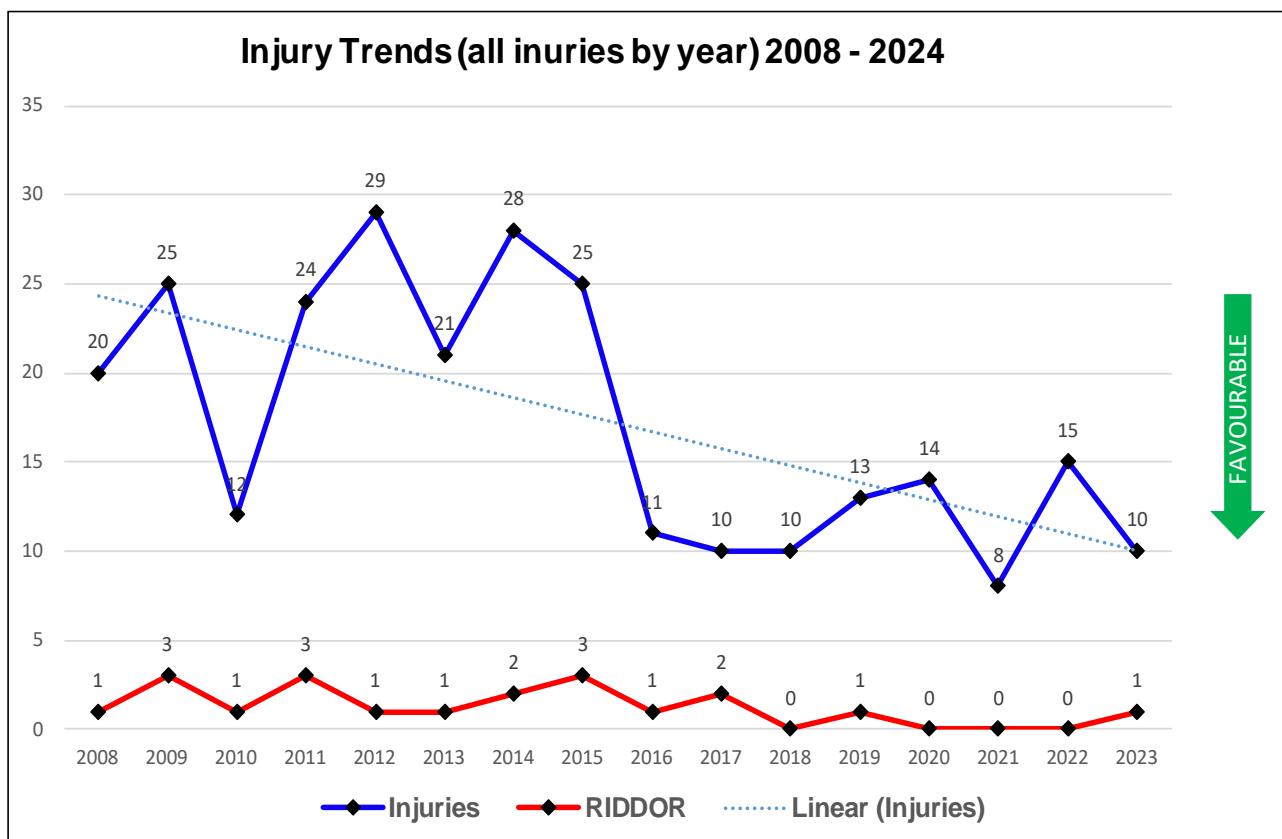
6.2 Changes to Environmental or Health and Safety Legislation, Other Requirements, Risks, Opportunities, and the Needs of Interested Parties

No applicable new or revised legislation came into force during the year.

The revised ELVs that are part of the new Environmental BREF operating permit came into force early in December 2023, as previously explained

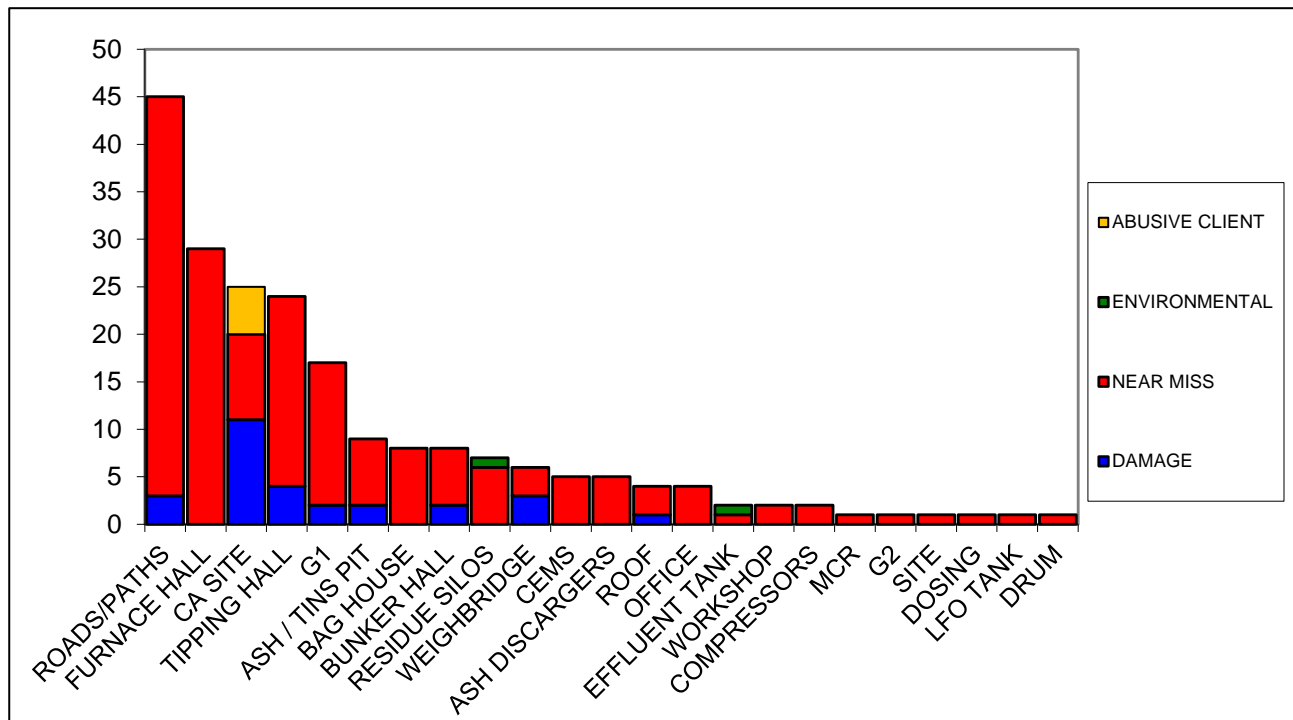
APPENDIX 1 - INJURY STATISTICS 2023



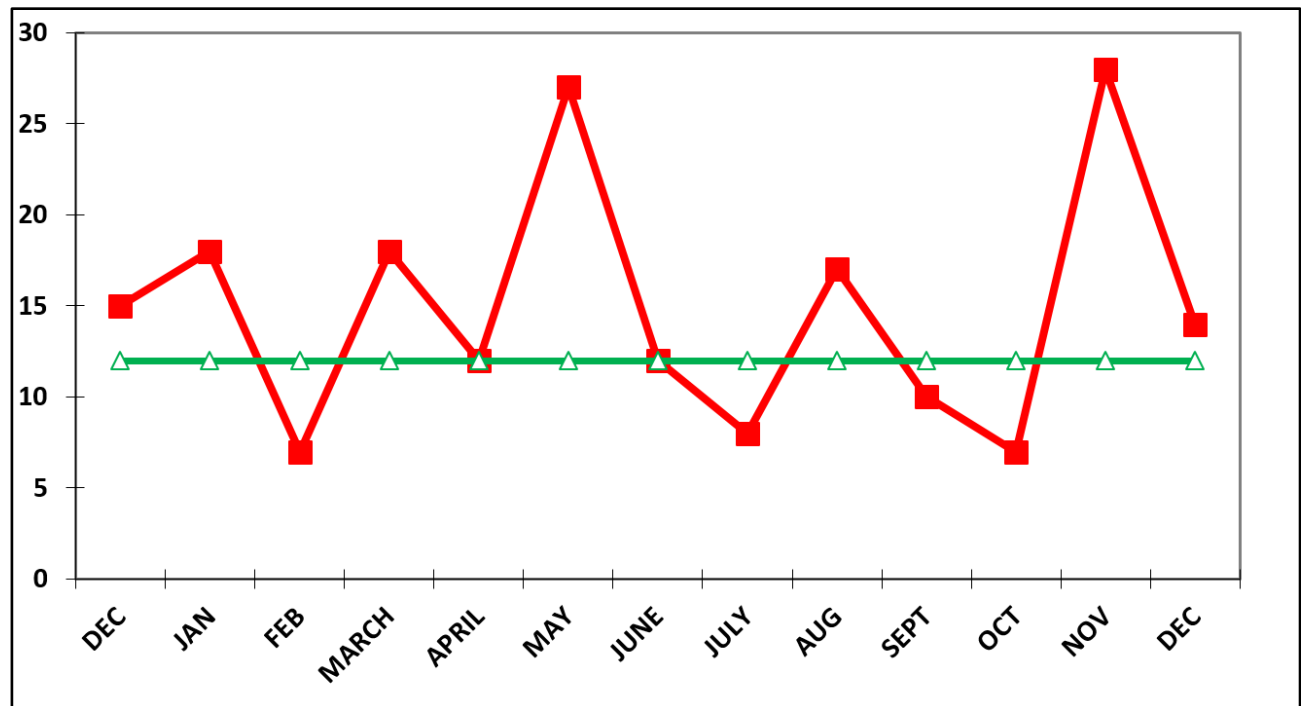


APPENDIX 2 – INCIDENT & NEAR MISS SUMMARY 2023

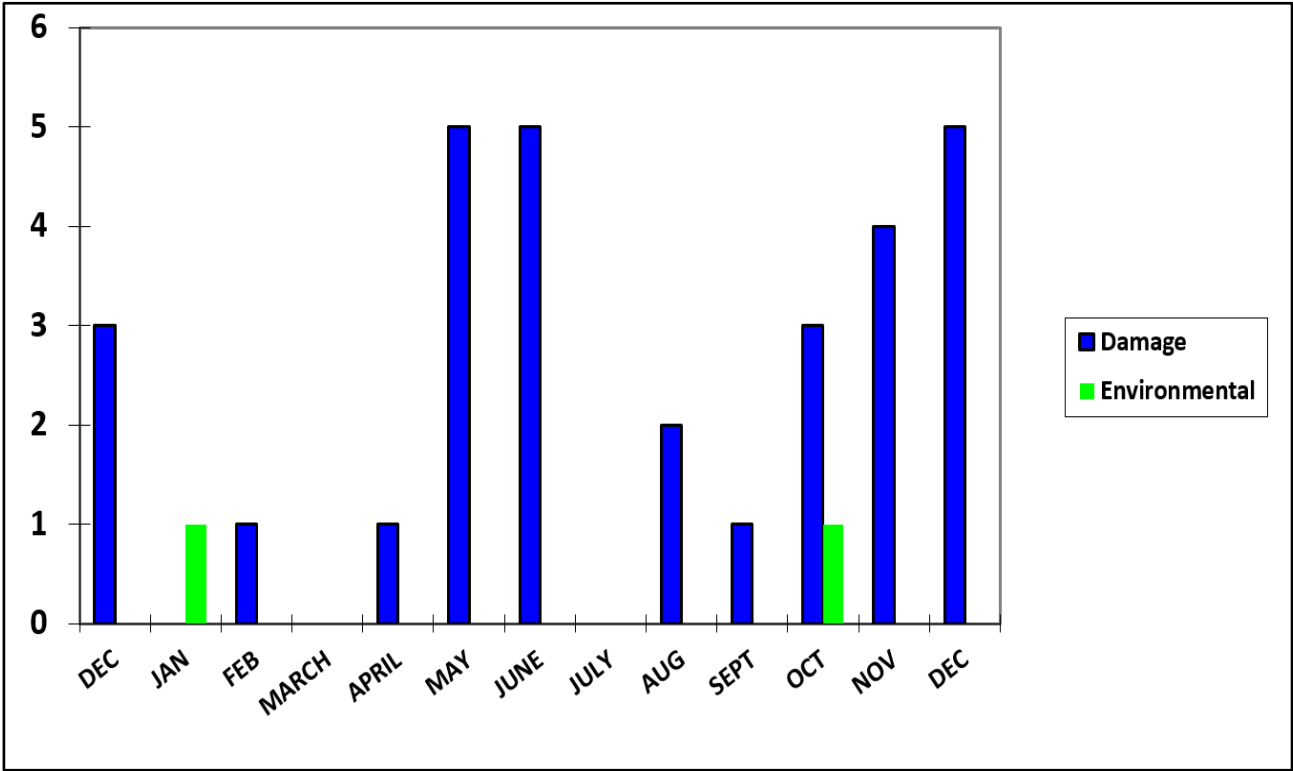
Incidents, Hazards & Near Misses by location:



Hazard and Near Miss trend 2023



Damage and Environmental incident trends 2023



APPENDIX 3 - ENVIRONMENTAL PERFORMANCE

KEY PERFORMANCE INDICATORS 2023

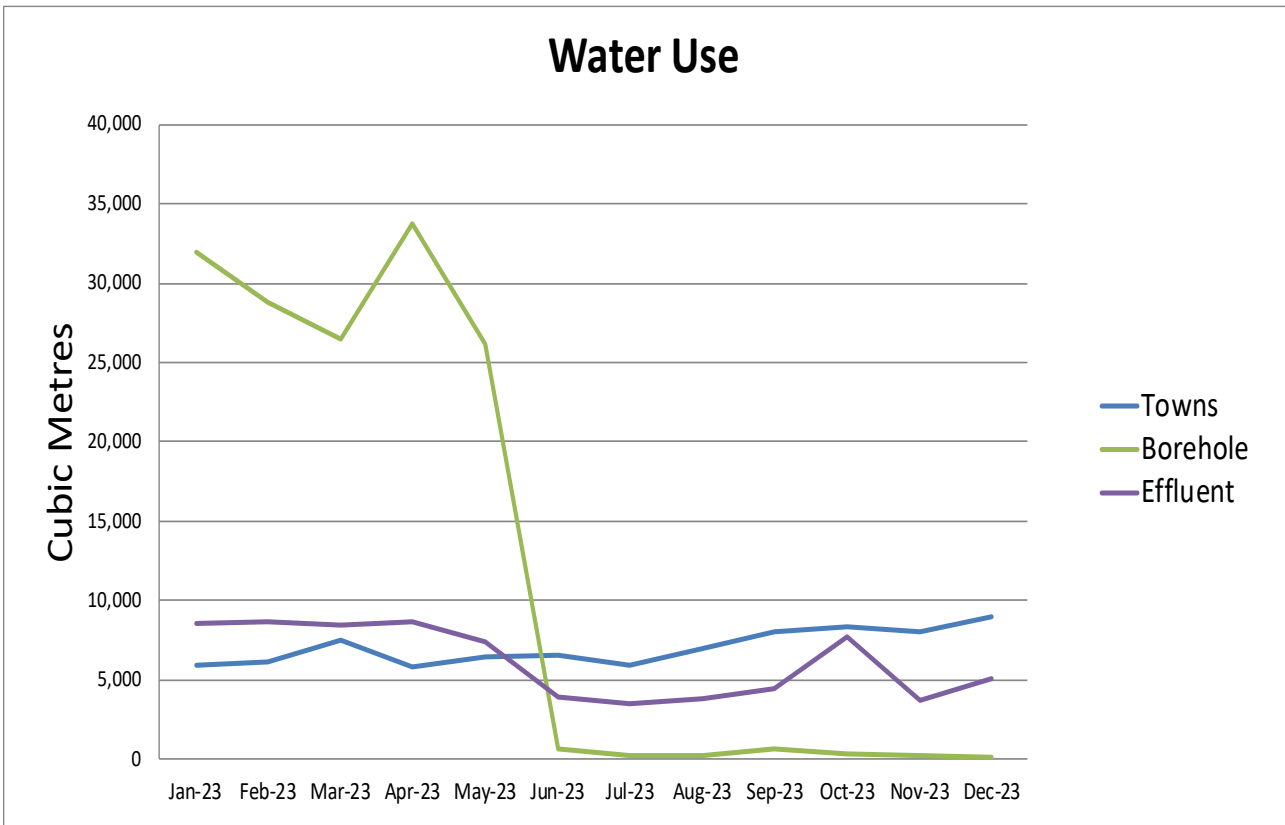
Gross resource use

	Type	2023	2022	2021	2020	2019
Waste Disposal (tonnes)	Waste Throughput	291803	297821	295135	313268	298854
	APC	12311	11846	11344	12904	11661
	Bottom Ash	44623	43365	42617	47961	44065
	Incinerated Metal	5696	8035	7988	8450	7697
Electrical Generation (MWh)	Exported	54086	108267	105452	113052	110071
Water Usage (m³)	Town's supply used	84526	122128	110921	112340	84650
	Site abstracted - river + borehole	149376	323343	362165	381169	405917
Water Discharges (m³)	Effluent to Sewer	73945	105726	119165	123312	109390
Gas Usage (ft³)	Site Consumed	3688083	3896100	3960900	2853800	2994700
Electricity Usage (MWh)	Site Consumed	20843	22847	22202	23404	21928
Steam Flows	Total Steam Flow (t)	885456	897054	875108	927980	919066
	Steam /t waste	3.03	3.01	2.96	2.96	3.08
	Steam (t)/MWh _{Export}	16.37	8.29	8.3	8.21	8.35

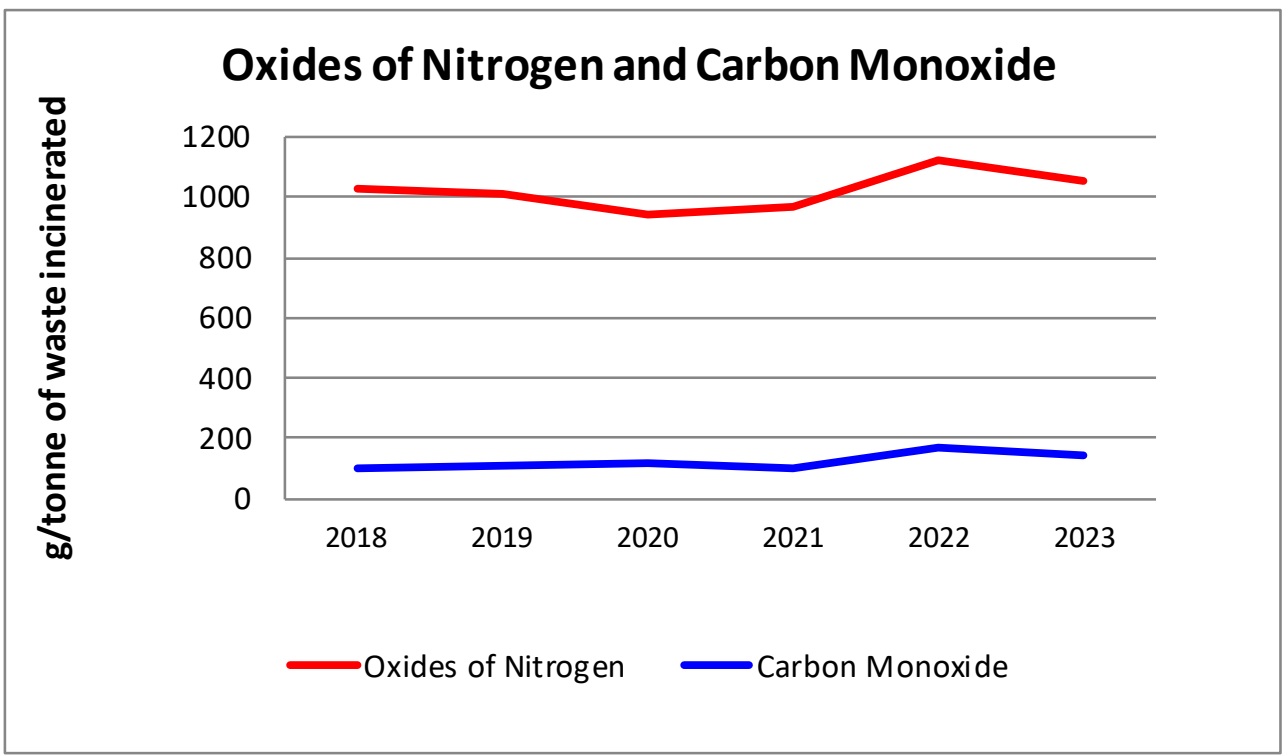
Indicators per tonne of waste processed

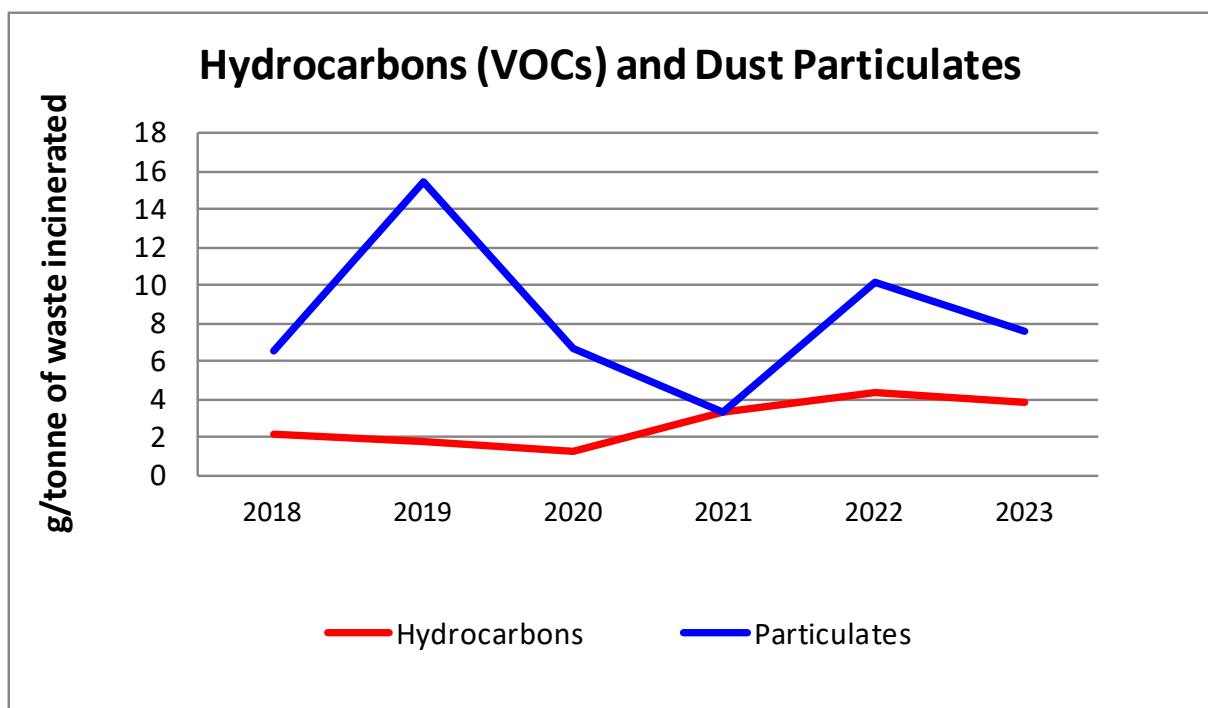
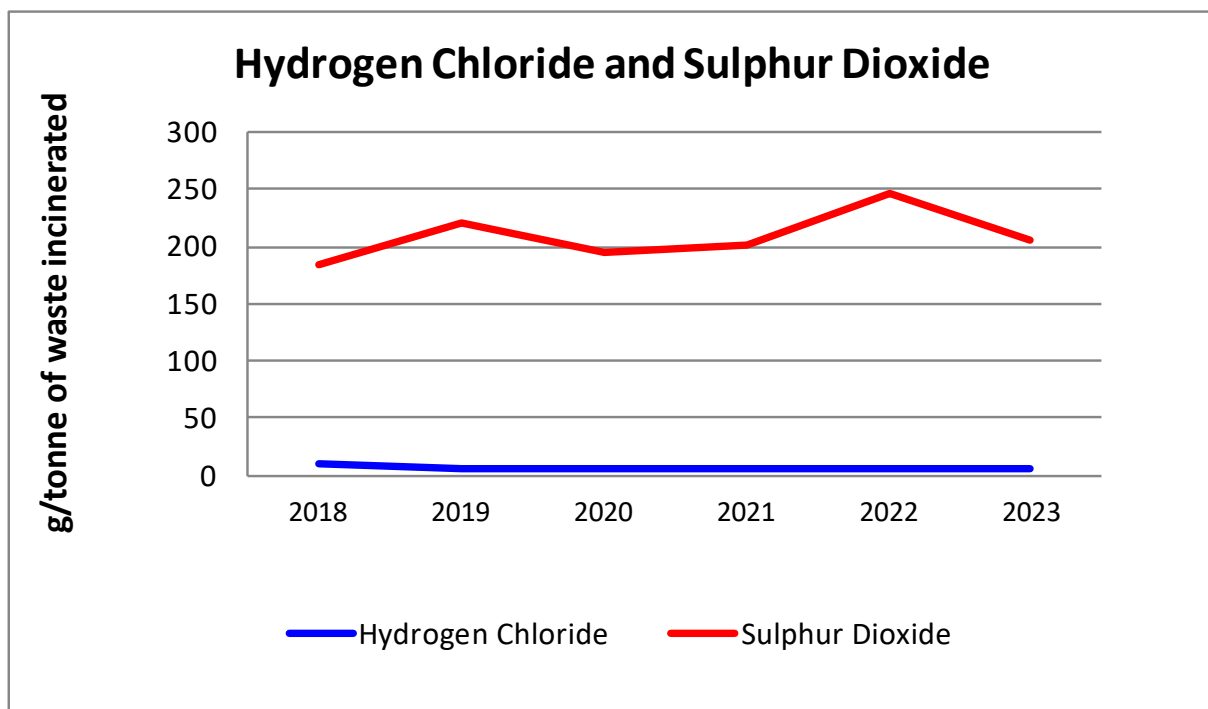
INDICATORS PER TONNE OF WASTE PROCESSED	2023	2022	2021	2020	2019
Incinerated metal (tonnes)	0.02	0.027	0.027	0.027	0.026
APC Residue (tonnes)	0.044	0.04	0.038	0.041	0.039
Bottom Ash (tonnes)	0.153	0.146	0.14	0.15	0.15
Electrical Generation	MWh	MWh	MWh	MWh	MWh
Electrical energy exported	0.254	0.36	0.36	0.36	0.37
Electrical energy consumed	0.071	0.076	0.075	0.07	0.07
Water Usage/Discharges	M²	M³	M³	M³	M³
Town's water consumed	0.29	0.41	0.38	0.36	0.28
River/Borehole water abstracted	0.512	1.09	1.23	1.22	1.36
Effluent discharged to sewer	0.253	0.36	0.4	0.39	0.37
Gas Usage	Cu ft	Cu ft	Cu ft	Cu ft	Cu ft
Gas consumed	12.64	13.08	13.42	9.11	10.02

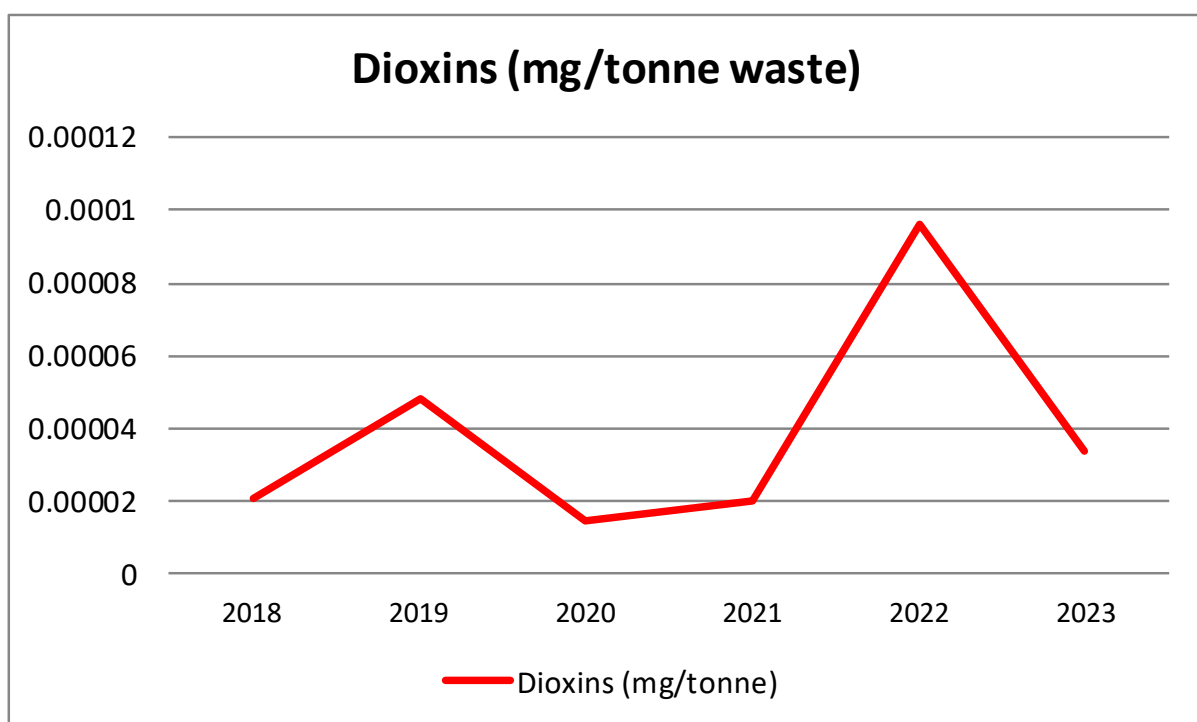
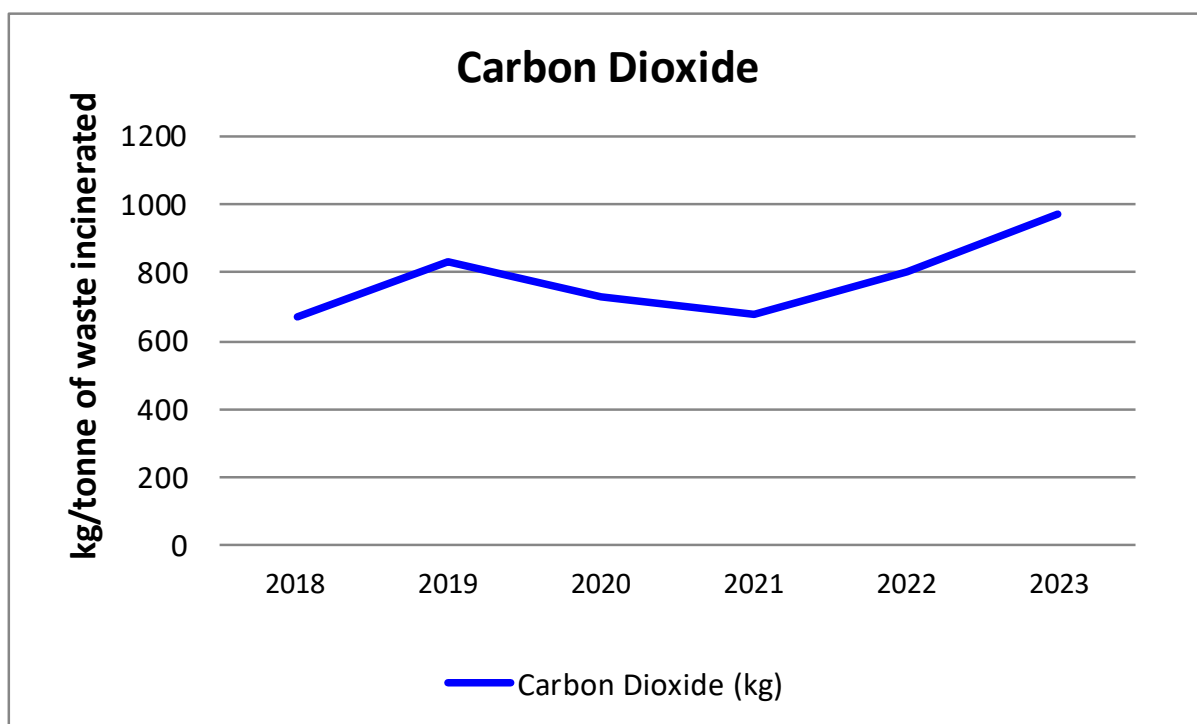
Water use trends 2023



APPENDIX 4 – EMISSION PERFORMANCE (last 5 years)







Note* Dioxins are present in such small numbers that the limits of detection relating to the instruments used can affect overall results. The 2023 result is not excessive, though it is higher than previous years

APPENDIX 5 - SAFETY HEALTH AND ENVIRONMENT IMPROVEMENT PLAN 2023

#	Objective	Project Description	Date	Who?	Information / Comment	
1	EH&S	Improve plant identification, labelling and drawings	Dec-23	Eng./Ops	This project is continued from 2021 and will continue to be carried out in parts over the next 3 years due to the size of the task. Progressing.	✓
2	Safety and Health	Implement the random testing section of the Drugs & Alcohol policy, to include staff and contractors.	Jul-23	CPC Admin	Implementation of the revised plan following changes in procedure. Medicals from 01/04/23 - issue a formal notification before random testing.	✓
3	Environment	Improve and reduce emissions of NOx and NH3 slip	Dec-23	Snr Mgt	Investigate and determine differences causing elevated emissions values compared to historical values	✓
4	Safety	Review traffic management plan	Jun-23	CPC	Review existing systems, develop a site plan for each traffic route/vehicle type	✓
5	Environment Health and Safety	Review and revise the structure of the sharepoint intranet system to provide a more logical and user friendly information hub	Dec-23	CPC / Finance	Facilitate management systems to be linked into one hub, so all areas of the business link to and/or from a single core	✓
6	Health and Safety	Develop and implement a single risk assessment and method statement document thus reducing volumes of documentation and better linking the two	Dec-23	CPC	Develop a new form - Consider whether it could be linked to Nav or the permit software system	✓
7	Environment	Review the possibility of removing from service the by-pass dampers in FGT system to prevent inadvertent dust emissions issues due to failures	Dec-23	Eng. / CPC	Consider their purpose and weld closed, having first conducted a HAZOP.	✓
8	Environment Health and Safety	Review and revise the 2 to 5 year plan, almost all items on the original plan have been completed effectively	Apr-23	Snr Mgt	New plan with medium to long term objectives to continue to bring the company forward, improving culture and inter-departmental cohesion, whilst ensuring compliance with changing legislation and social values	✓
9	Safety	Install solar powered belisha beacons at the pedestrian crossing next to the HWRC to encourage MoPs to stop	Sep-23	Projects	Source and install suitable devices MS has an example quote/estimate Installed.	✓
10	Safety	Review PTW software.	Aug-23	Operations /Finance	Review alternative PTW software solutions taking account of the RAM's review above.	✓
	COMPLETED	✓	IN PROGRESS	▲	OVERDUE	X

APPENDIX 6 OBJECTIVES AND TARGET RESULTS FOR 2023

Objectives:

To prevent pollution, increase recycling, reduce waste and reduce the use of natural resources within company processes.

To reduce accidents and risks of injury and ill health to all persons working for us or on our behalf, whilst raising awareness of hazards and reinforcing a culture where no hazard is ignored.

To maintain our existing certifications to ISO14001 and OHSAS18001 management systems.

Target Attainment 2023: (see 3.5 and 4.1 for more details)

Env 1	2 or less breaches of environmental permit for the year	✓	H&S 1	Increase behavioural conversations ≥22 a month	✓
Env 2	Reduce NOX emissions to BREF ELVs whilst controlling NH ₃ slip to <15mg/m ³ daily average (IC1 from the EPR permit)	✓	H&S 2	Reduce the number of injuries to persons (staff, contractors, MoPs, visitors) to below the previous 3 year average (12/year)	✓
Env 3	Zero valid environmental complaints for the year	✓	H&S 3	Reduce RIDDOR reportable injuries to zero for the year	✗
Env 4	Assess gross electrical efficiency of the plant (IC4 of the EPR permit)	✓	H&S 4	To maintain near miss reporting at its current level. Target is ≥ 144 for the year (12/MONTH)	✓
EHS 1	Perform area inspections (40) and audits (38) to the respective plan for the year	✓	H&S 5	Carry out ≥ 5 x emergency response mock scenarios in the year	✓
EHS 2	Ensure all incident reports are effectively actioned	✓	H&S 6	To identify and manage all instances of work related ill health affecting employees	✓

Targets for 2024

Env 1	2 or less breaches of environmental permit for the year	H&S 1	Increase behavioural conversations ≥22 a month
Env 2	Improve and maintain NOX emissions within BREF ELVs whilst controlling NH ₃ slip to <15mg/m ³ daily average (IC1 from the EPR permit)	H&S 2	Reduce the number of injuries to persons (staff, contractors, MoPs, visitors) to below the previous 3 year average (12/year)
Env 3	Zero valid environmental complaints for the year	H&S 3	Reduce RIDDOR reportable injuries to zero for the year
Env 4	Complete the OTNOC plan in accordance with the EPR permit	H&S 4	To maintain near miss reporting at its current level. Target is ≥ 144 for the year (12/MONTH)
EHS 1	Perform area inspections (44) and audits (40) to the respective plan for the year	H&S 5	Carry out ≥ 5 x emergency response mock scenarios in the year
EHS 2	Ensure all incident reports are effectively actioned	H&S 6	To identify and manage all instances of work related ill health affecting employees

SAFETY HEALTH AND ENVIRONMENT IMPROVEMENT PLAN 2024

#	Objective	Project Description	By When?	Who?	Information / Comment
1	EH&S	Improve plant identification, labelling and drawings	Dec-24	Ops	This project is continued from 2021 and will continue to be carried out in parts over the next year due to the size of the task.
2	Safety	Stores racking outside the stores is in need of modernisation as the area is difficult to keep in an orderly state due to its design	Sep-24	Eng	New racking with more stable and easy to use storage to be sourced and installed to improve the facility
3	Safety	Fire and smoke doors to be modernised on the main stairwell in the main building to ensure they provide the correct smoke and fire rating for the risk	Dec-24	Eng	A suggestion from the fire inspection. Door and frame structures to be checked with seals and glazing being brought up to correct standards
4	Safety	Contractor management improvements to be implemented as per insurer consultant report from SRS	Apr-24	EHS & Eng	Improvements to be implemented as per the report - contractor checks to be increased and documentation revised as recommended
5	Environment Health and Safety	Rainwater capture system to be considered as a business and environmental impact case	Oct-24	Eng, EHS	Water capture and storage systems to be investigated for consideration as a future project for non-potable applications. Legionella risk will need to be considered
6	Health and Safety	Weighbridge project will provide improvements to space and traffic/pedestrian interfaces?	Sep-24	Eng, Waste	Improvements in traffic management and pedestrian segregation. Consider H&S aspects in the design processes and route layout.
7	Environment	Consider the use of green technology in the design of the replacement lodge office block to give a reduction in environmental impact/carbon footprint	Dec-24	Eng, EHS	Consider modern technology in the design, lighting, heating, ventilation, stand-alone solar powered systems, insulation, etc
8	Safety	Improve bunker hall/crane deck door interlocks with crane to improve flexibility of access for more than one person	Mar-24	Eng, Ops, EHS	Revised system to be installed which prevents lock-ins
9	Environment	Improve and reduce emissions of NOx and NH3 slip in line with the BREF changes	Dec-24	Ops, Eng, EHS	Investigate and determine differences causing elevated emissions values compared to historical values. Consider seasonal impacts on the feed stock and the combustion processes to ensure all foreseeable conditions are covered.
10	Safety	Consider ways to improve the permit to work office layout to ensure improved security and separation from persons awaiting permits	Dec-24	Ops Eng	Possible relocation of office or improvement of designs to enable the fire exit to remain in place whilst providing the desired result

GLOSSARY OF TERMS

BAT	best available technique
BREF	best available technique reference document
EA	Environment Agency
ELV	emission limit value
G1/G2	generator 1 / generator 2
HSE	Health and Safety Executive
HWRC	household waste recycling centre
IBA	incinerator bottom ash
KPI	key performance indicator
RAMS	risk assessment and method statement
RIDDOR	reportable injuries diseases and dangerous occurrences