



Environment, Health and Safety Review for the year to 31st December 2021

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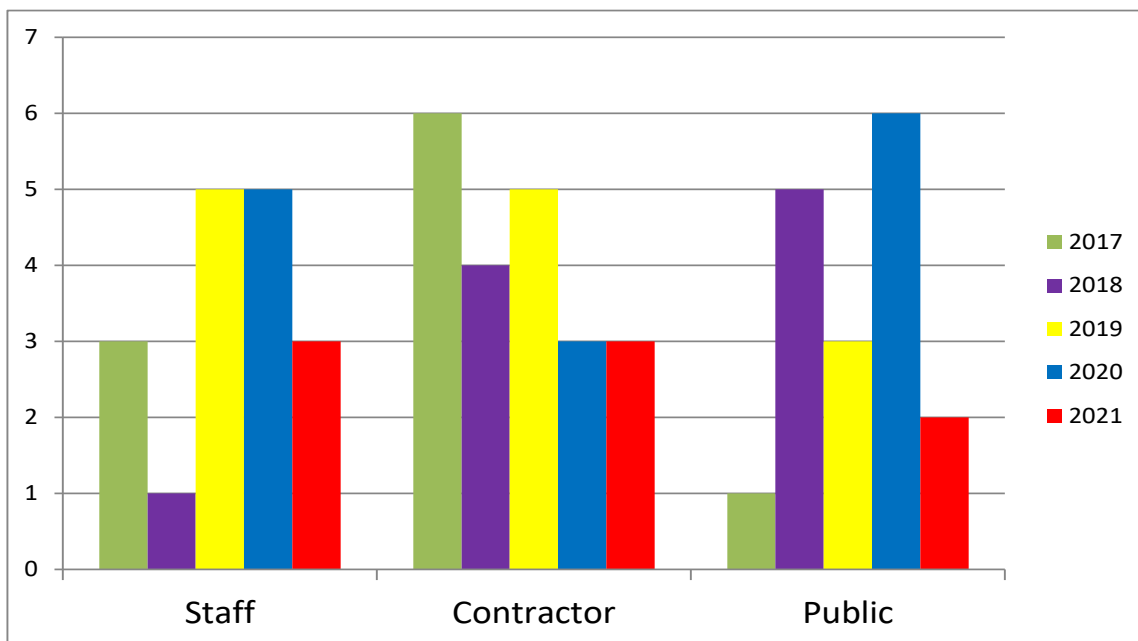
1. Introduction

This report provides a review of Environment, Health and Safety for CSWDC from 1st January to 31st December 2021 inclusive and addresses four principal areas;

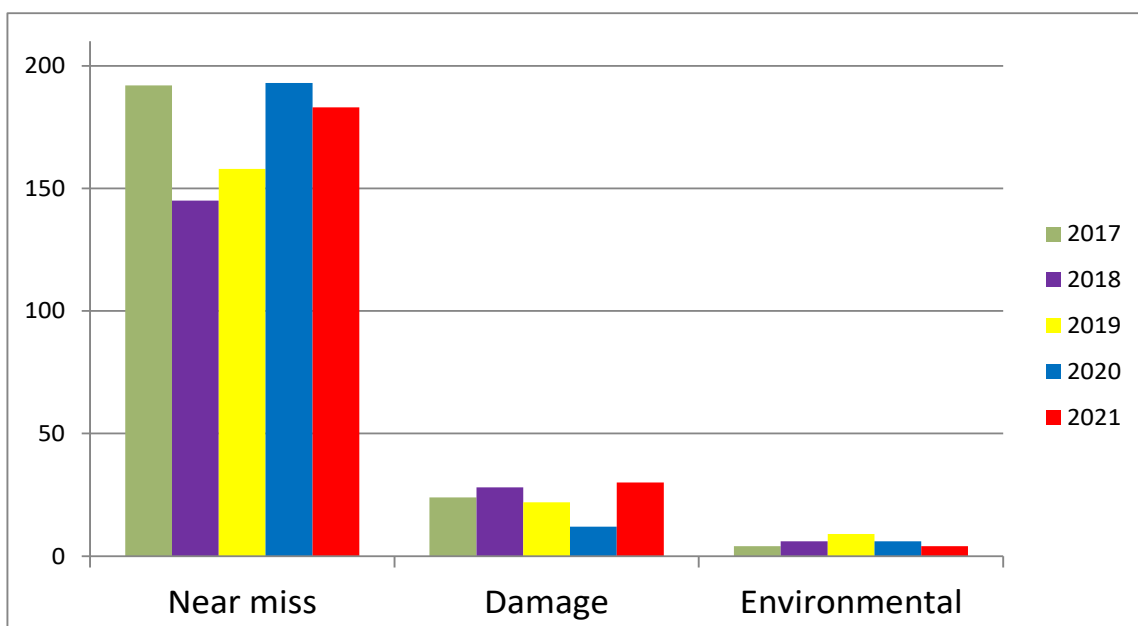
- Health & Safety Performance
- Environmental Performance
- Contacts with Regulatory and Other Bodies
- The Environment Health and Safety Improvement Programme

2. Management Summary

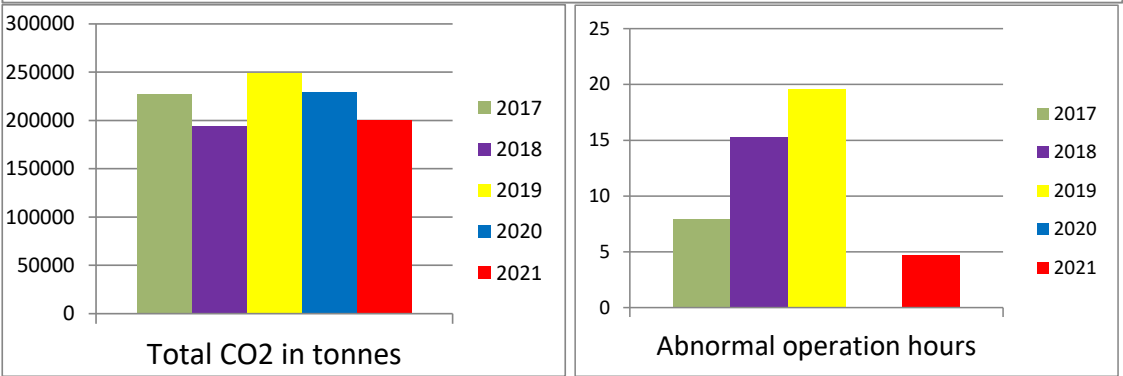
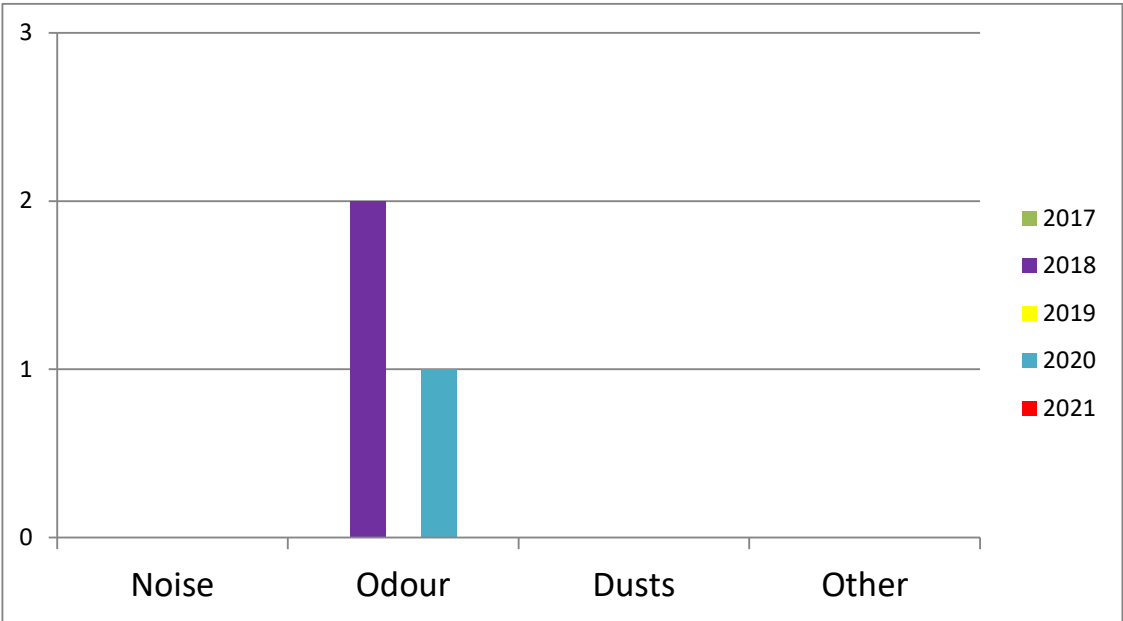
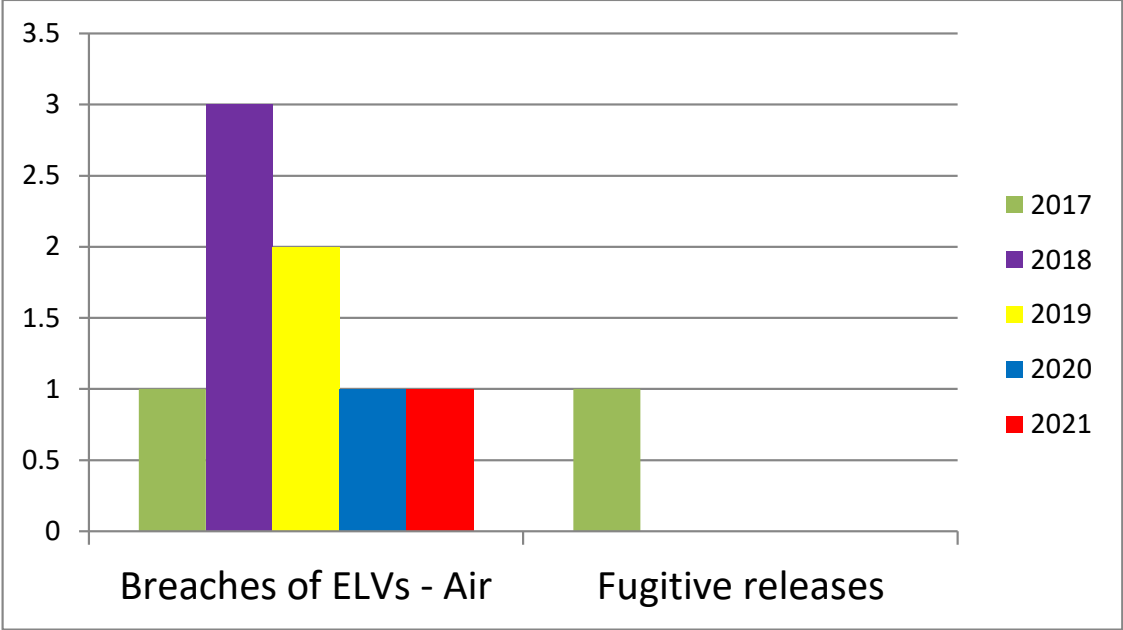
Injuries to Persons



Incidents, Hazards and Near misses



Environmental Performance



3. Health and Safety Performance

3.1 Injuries

During 2021 there were 8 injuries reported under the incident reporting procedure.

Three accidents involving employees, four accidents involved contractors, and the remaining one involved a member of the public on the HWRC.

Of these, none (0) required reporting under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR)

The 8 first aid injuries that were minor in nature are detailed below:

January	Staff	G1 Water Treatment	Slipped on ice formed from a leak on an emergency shower during cold weather injuring their wrist
May	Staff	HWRRRC	Handling glass waste with a member of the public, cut finger as hands were placed through grab holes in the box
June	Staff	Bunker Hall	Replacing a hydraulic cylinder, which slipped whilst a finger was in the bolt holes to retain alignment. Fractured tip of finger.
July	Contractor	HWRRRC	Cut finger on a sharp edge whilst handling TV/display screens into the back of the vehicle
July	Member of the Public	HWRRRC	Cut finger whilst handling own waste at the HWRC
August	Member of the Public	HWRRRC	Cut finger on sharp edge on mesh grill of cardboard container fence
October	Contractor	Bunker Hall	Stepped on a crane rail bundle which then moved under their weight, causing a twisted ankle
October	Contractor	Boiler Drum	Struck own finger with a flogging hammer whilst flogging a fixing. Hammer struck an overhead obstruction defelcting it onto his hand.

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. Specific actions were implemented where possible to improve tasks. 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 2020 performance; where there were 14 injuries. The injury rate per 100,000 hours worked for staff and contractors only, the rate also reduced significantly from 3.89 to 2.39 injuries per 100k hours worked. These injury statistics are the lowest on record.

Recorded staff injuries have fallen by 40% and although all were minor, the finger injury could have resulted in more serious consequences.

Contractor injuries have remained the same when compared to 2020, but when compared to the previous three years, they continue to fall. This demonstrates that CSWDC are employing good contractors and controlling them well.

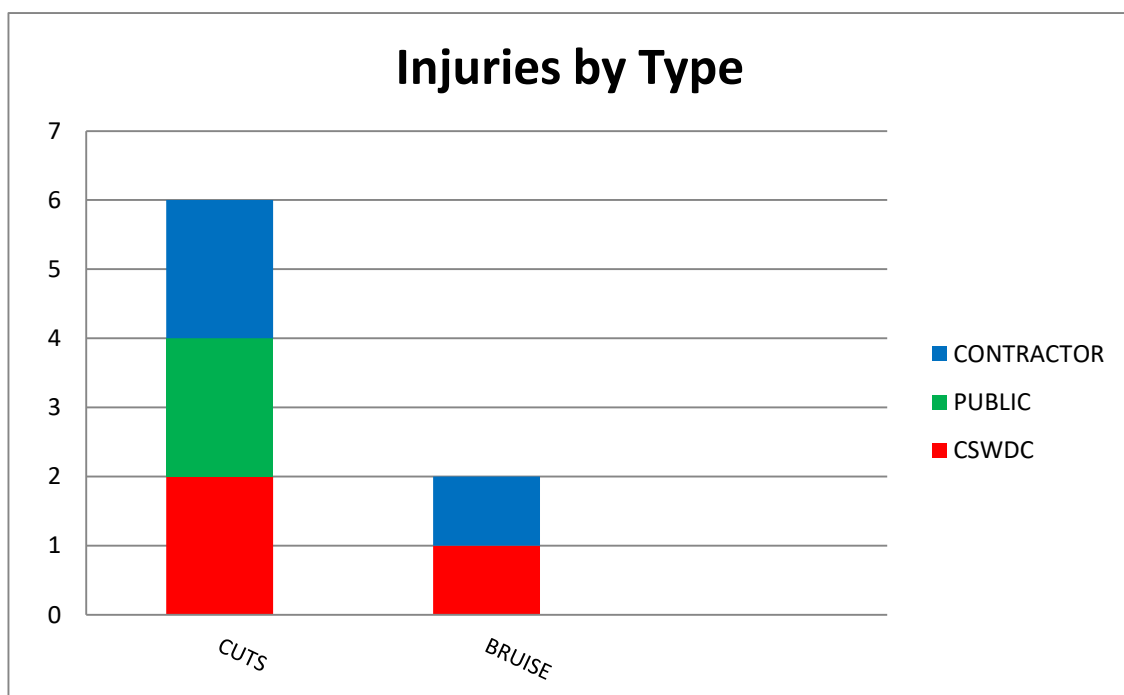
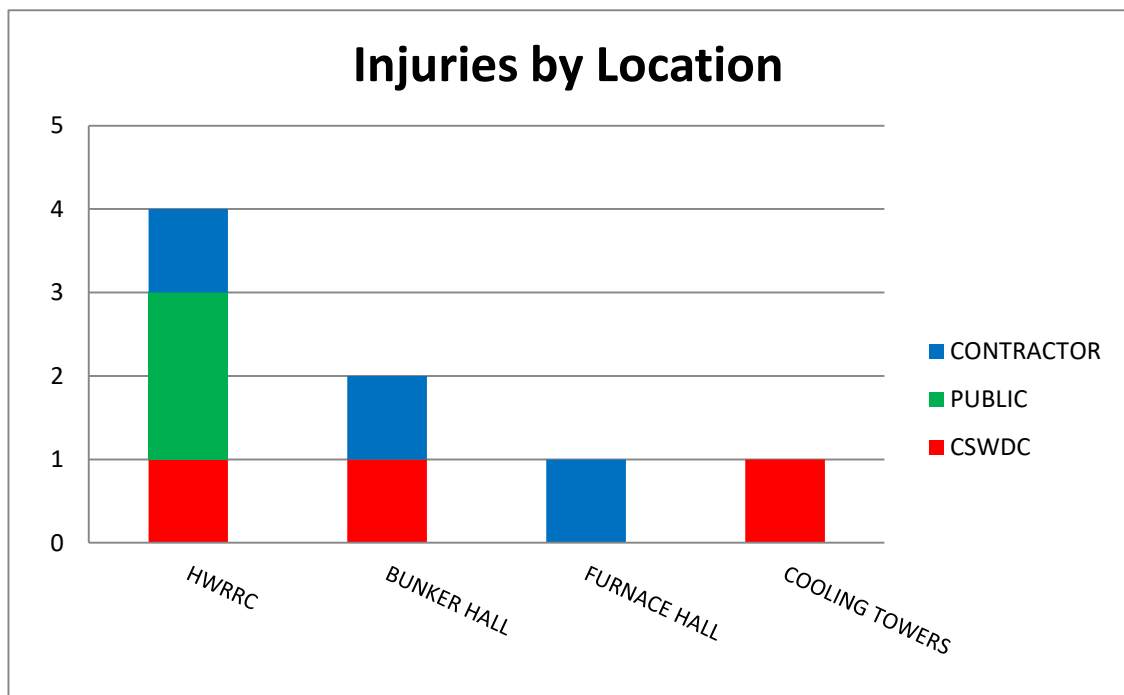
Public injuries have decreased to their lowest level for some years. Although footfall has increased due to the Covid-19 restrictions at the HWRC being relaxed over the course of the year, the Covid-19 control of only one person being permitted to exit the vehicle was removed and has resulted in less injuries where individuals may have been struggling to dispose of materials alone.

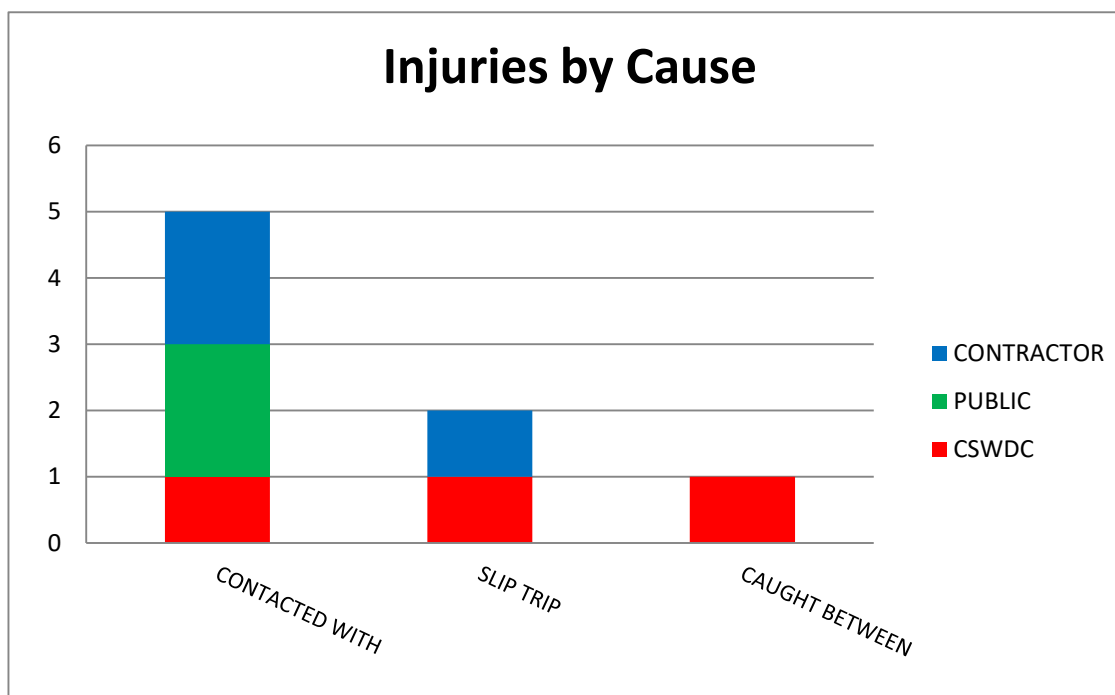
The public can behave in an unpredictable manner but given the number of people who use the HWRC over the course of a year these figures show good control of activities, as shown by the incident trend over the last 10+ years.

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
2017	3	6	1
2018	1	4	5
2019	5	5	3
2020	5	3	6
2021	3	3	2





Most if not all 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 195 hazards/near misses reported during 2021. This is a slight increase on 2020 results – the target set at the start of the year was to maintain a level of 12 each month, which has been achieved – reporting of hazards and near misses is encouraged as it allows us to 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 increased from 12 in 2020 to 30 in 2021. This is disappointing; the data has been analysed and the only determinable increase is in staff related incidents,

involving the ash crane and/or the 360 excavator. Coaching of equipment operators is on-going along with monitoring of individual performance.

The incident reporting levels from other areas such as operations and engineering have also been 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 2021.

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.

3.4 Employer Liability & Public Liability Insurance Claims

One new insurance claim was raised in 2021. This related to a former employee initiating a Noise Induced Hearing Loss claim. Information has been provided to our insurer's solicitors though no final decision has been reached at the time of writing.

3.5 Workplace Inspections

Monthly workplace inspections continue to be performed by management, supervisors and employee representatives on the EH&S committee. 22 inspections out of 168 were missed during 2021. This is a similar proportion to 2020 as the scope of the inspection plan has increased significantly since the previous year, and although it is not ideal, given the on-going pandemic conditions and the significant amount of projects carried out during the year the results show a positive level of support from all departments.

4. Environmental Performance

4.1 Environmental Complaints/Incidents

There was one complaint received in 2021, which related to odour which was described as 'burning plastic' by a neighbour. This took place in the evening and staff attended external areas to determine a possible source. None was found at the time, however it was later found that a homeless person was living under the railway viaduct arches and using a bonfire to keep warm. The fire would often be fed with whatever materials the person could find, and would therefore include plastics at times. The person moved on and no issues have been noted since.

4.2 Other Environmental Matters

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 11863.3 MWh_{Thermal}.

EA Enforcement

The sites EA enforcement officer; Gurinder Bains, did not visit site during 2021 due to the Covid-19 pandemic restricting movement and encouraging working from home. Electronic lines of communication have been used to report monthly data and discuss various issues as and when required.

Incinerator Bottom Ash (IBA)

No significant change has occurred regarding the classification of IBA in 2021. 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 66% 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 Engie increasing their heat load.

R1 Energy Efficiency

There is an ongoing steer from the Environment Agency to achieve R1 status. CSWDC is working with technical specialists Ramboll to achieve this. During 2021 CSWDC asked Ramboll to assess the energy efficiency factor of its Energy from Waste (EfW) plant to establish whether it can achieve 'R1 recovery status' when measured against the guidelines set out in the EU Waste Framework Directive and as implemented locally through the Environment Agency.

The ambition in 2022/23 is to continue working with Ramboll to include the following:

- Assessment of R1 value with sub cooling system (SCS) included
- Assessment of R1 value with SCS Shutdown
- Calculation of how much additional heat loading will be needed to expand the district heating system by in order to meet R1, with the SCS in service
- CSWDC must carry out Energy Efficiency Status Boiler Efficiency Determination trial to gather relevant information for R1 application. This is a significant piece of work

If requirements are met then Ramboll will carry out further modelling work with the intention of submitting an application to the Environment Agency in 2023/24. If successful, this will result in the plant being classified as recovery rather than disposal.

To note in June 2021 the Environment Agency issued additional guidance regarding boiler efficiency - R1 Energy Efficiency Status Boiler Efficiency Determination. The Environment Agency asked all municipal EfW plants that had submitted a 5-year R1 boiler efficiency calculation within the last year to resubmit a revised one by the end of 31st August 2021. CSWDC will have to plan an Energy Efficiency Status Boiler Efficiency Determination trial in order to gather data and submit a R1 calculation.

Revised EU BREF

The revised BREF for Waste Incineration was published on 3rd December 2019. The main challenges are the changes in the emission limit values for Oxides of Nitrogen (NOx) and Ammonia (slip). To assess the performance of the existing abatement system against the proposed new limit of 180 mg/Nm³ for NOx, 15 mg/Nm³ Ammonia a continuation of trials are planned. Specialist partners Ramboll and NOxSOL have are also working with CSWDC optimising the current abatement system and assessing further opportunities for improvement.

Further NOx trials were carried out in 2021 with support from NOxSOL. SNCR system was run for a week with some minor pipework modifications. Trial work in 2021 was again limited due to the COVID pandemic.

CSWDC installed new waste feed cranes in October 2021 to improve the stability of input waste composition through improved mixing of waste in the bunker.

2022 Trial work is already underway with further analysis of ammonia recipes and injection levels. Martin are onsite Jan 2022 for 3 weeks to optimise combustion and NOxSOL are working alongside them to optimise NOx / NH3 performance.

The Environment Agency have started the Permit Reviews, targeting clinical and hazardous waste incineration as a priority. They have selected 11 EFW's as part of an initial permitting trial using consolidated variation approach. CSWDC have been issued with the regulation 61 notice initiating the review of the Company's permit.

BATCs were published on 3rd December 2019 therefore permits must be issued for existing plants to be compliant by December 2023.

CSWDC continue to work with ESA and Environment Agency regarding the following outstanding BREF areas

- Start and Shutdown Guidelines
- SO2 BAT-AEL Upper Range
- NOx Improvement Condition Trial Template
- Brominated Dioxins Testing Trial
- OTNOC Management Plan Response Template

During 2021 CSWDC continued to participate in the ESA / WRc IBA speciation project. WRc completed a second phase of chemical speciation testing on behalf of the Environmental Services Association (ESA) to review the copper and zinc 'refinement factors' used for HP14 hazard assessment of incinerator bottom ash (IBA) in 2021. The WRc report has been issued in draft and work will continue into 2022.

In 2021 CSWDC participated in ESA Heat Prospectus supplying data on operations to the project. The Prospectus will be displayed through an interactive map on a new dedicated page on the ESA website.

Carbon Footprint

In the UK and across Europe, strategies on waste management have shifted from traditional waste disposal in landfills to increased recycling and waste treatment in energy recovery facilities. A consensus has emerged that diversion of waste from landfill is fundamental to reaching a circular economy and reducing carbon emissions.

A study was carried out by the Company in 2021 to understand the impact the plant had on reducing UK carbon emissions, in relation to alternative energy generation and waste management pathways. The results of the study highlighted that the company's operations provided substantial carbon benefits by saving circa 17,000 tonnes of additional carbon dioxide being emitted to the atmosphere in 2020 compared with landfilling the residual waste. This shows the positive benefit of utilising non-recyclable waste to generate electricity.

The Company has further improved its carbon impact:

- Installing low energy usage equipment such as LED lighting and variable speed drives throughout the plant;

- Automated motion detected lighting fitted around site;
- Installing four electric car charging points to help staff switch from fossil fuel powered cars to electric;
- Implementing a company cycle to work scheme;
- Only traveling by car on company business if it is an absolute necessity - the default is for external meetings to be held via video conferencing;
- Allowing staff who can work from home to do so once a week which will save on vehicle emissions;
- Assisting Engie where possible with the expansion of the district heating network;
- Energy saving policy for staff to switch off their PCs and air condition/heating when not in use.

It is planned to produce a carbon reduction strategy in 2022 which will explore the viability of new and leading edge technologies such as carbon capture which could facilitate a further reduction in the plant's carbon footprint.

4.3 Unauthorised Releases

There was one unauthorised release reported to the Environment Agency during 2020, which related to an elevated level of dioxins during the emissions monitoring on stream 1. The sampling and analysis processes were checked and reviewed, with further sampling undertaken and analysed at two different laboratories to ensure accuracy. Both retests returned compliant data and it is believed that the elevated level was due to a calculation error.

Unauthorised Release Historical Data

Year	Yearly Total
2021	1
2020	1
2019	2
2018	3
2017	1
2016	0
2015	1
2014	1
2013	2
2011	4

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
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
2015	6.94	12	8.22	27.15
2014	0	0	0	0
2013	0.41	0	3.31	3.72
2012	1.32	1.28	1.3	3.9

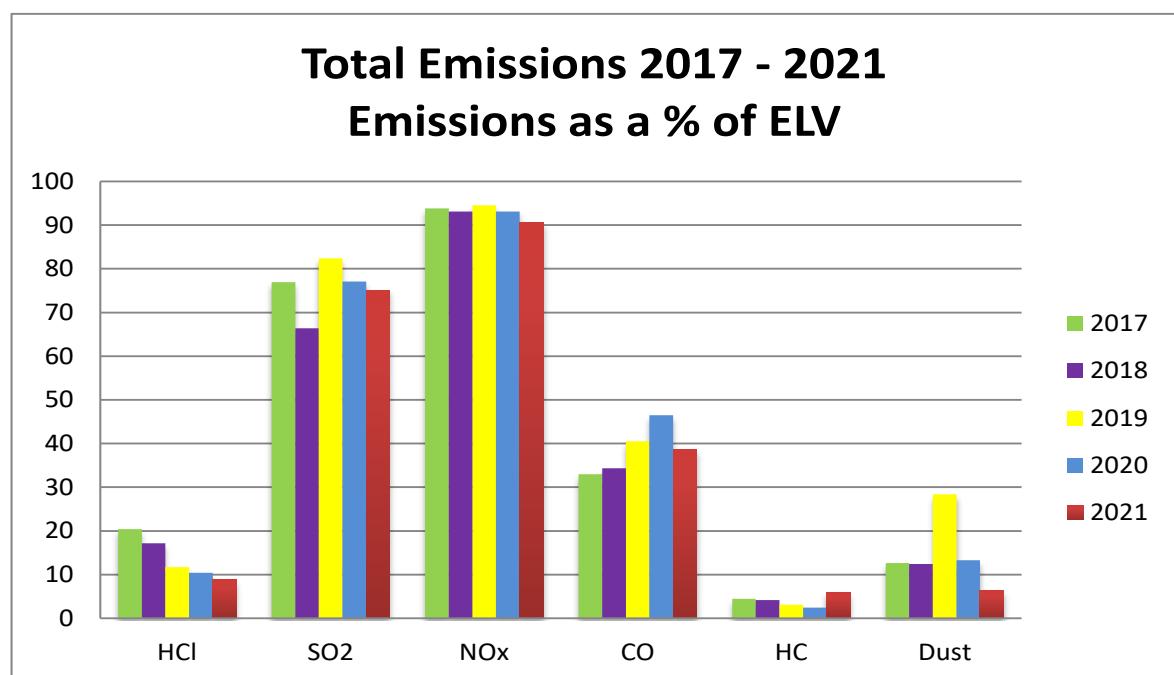
Permit conditions allow 60 hours of abnormal operation on each unit each year.

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 2021.

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. NOx emissions remain well controlled at levels below the ELV by a system which balances the amount of ammonia that is injected to ensure that NOx is kept below the limit without using excess ammonia. A similar system is in operation on the SO₂ 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 above as a percentage of the Emission Limit Value, with comparison for the preceding 4 years to show trending. Dust levels have continued to reduce due to filter bag replacement following the introduction of revised materials from the supplier. CO levels have decreased slightly most likely caused by changes in waste make-up.

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

An external sampling and analysis contractors have carried out periodic extractive sampling twice during 2021, and they also attended a third time to undertake resampling on stream 1 for dioxins, following the elevated results from sampling in September.

With the exception of the unusual dioxin values on stream 1, all the results – including the retest 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. Action is taken if changes occur outside of normal operation. Improvements or unfavourable trends are noted and investigated accordingly.

Total water usage (Borehole + mains) decreased slightly during 2021 over 2020 results, from 493,509m³ to 473,086m³. Town's water use fell from 112,340m³ to 110,921m³, whilst abstracted borehole water use decreased from 381,169m³ to 362,165m³, and effluent to sewer levels decreased from 123,312m³ in 2020, to 119,165m³ in 2021.

Water use shows a reduction on the annual totals due to reduced availability and consequent lower waste throughput and power generated. However, when measured against waste throughput and power generated, water use was marginally higher than in 2020, which is believed to be due to a softener failure in June.

The volume of gas consumed by the site increased by 38% from 2,853,800 cubic feet in 2020 to 3,960,900. This is due to increased minor breakdowns requiring the use of the burners for start-up and also to enable the replacement of the waste crane rail supports (corbels) to be carried out with the plant online which subsequently enabled the total plant outage to be completed ahead of schedule.

The exported electrical energy generated per tonne of waste has remained similar to last year's performance with 0.36 MW/tonne generated.

The tonnages of waste 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 and IBA production decreasing marginally. Ferrous metal collection remained steady at 2.7% of throughput mass.

5. Contacts with Regulatory and Other Bodies

5.1 Health & Safety Executive

The HSE undertook a Covid-19 spot check via telephone. All points were met and no issues were raised. The mental health risk assessment was reviewed and reissued at their suggestion. There were no visits to site nor any other formal communications received from the HSE during 2021.

5.2 Environment Agency

During 2021 the Environment Agency Waste Management Licence Inspectors made one inspection of the HWRC resulting in a minor point being raised, which related to Electrical waste.

The Environment Agency PPC Compliance Officer did not make any visits to the Energy from Waste plant during 2021.

5.3 EH&S Management System Audits

The third party auditing body carried out a recertification audit of the Company Environmental, Health & Safety Management System (EHSMS) during September 2021. 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 three minor nonconformities identified, closure of which has been completed.

Internal audits were performed on the integrated EH&S systems on a monthly basis during 2021. Two 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 2021, there were no visits to site for educational purposes. It is hoped these can restart in 2022 with the continued relaxation of COVID-19 restrictions.

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 a welcomed reduction in injuries to persons resulting in a best-ever result of 8 for the year.

Damage incidents however brought a significant increase, as previously mentioned. Staff coaching and monitoring has been implemented as well as analysis of the incidents to ascertain any trends or correlation between them.

The target set for area inspections was not met, though as previously explained, the schedule was re-structured significantly due to the pandemic mitigation measures. A number were also missed in October which coincided with the major outage works that took place.

The targets set for reducing carbon footprint was not met due to the significant increase in gas use. The target for behavioural conversations was also missed, although strong improvements were seen at the end of the year.

Abnormal operations increased though they were well within the 60 hour limit at 4 hrs 44 minutes total across all three units.

Two actions on the 2021 improvement programme (Appendix 5) has been carried over to 2022.

Objectives, targets and the improvement plan for 2022 can be found in Appendix 6, 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 new or revised legislation came into force during the year apart from those relating to Covid-19 pandemic mitigation measures. The CSWDC Pandemic Mitigation Plan was developed in 2021 and has been regularly updated when required by changes to UK Government guidance.

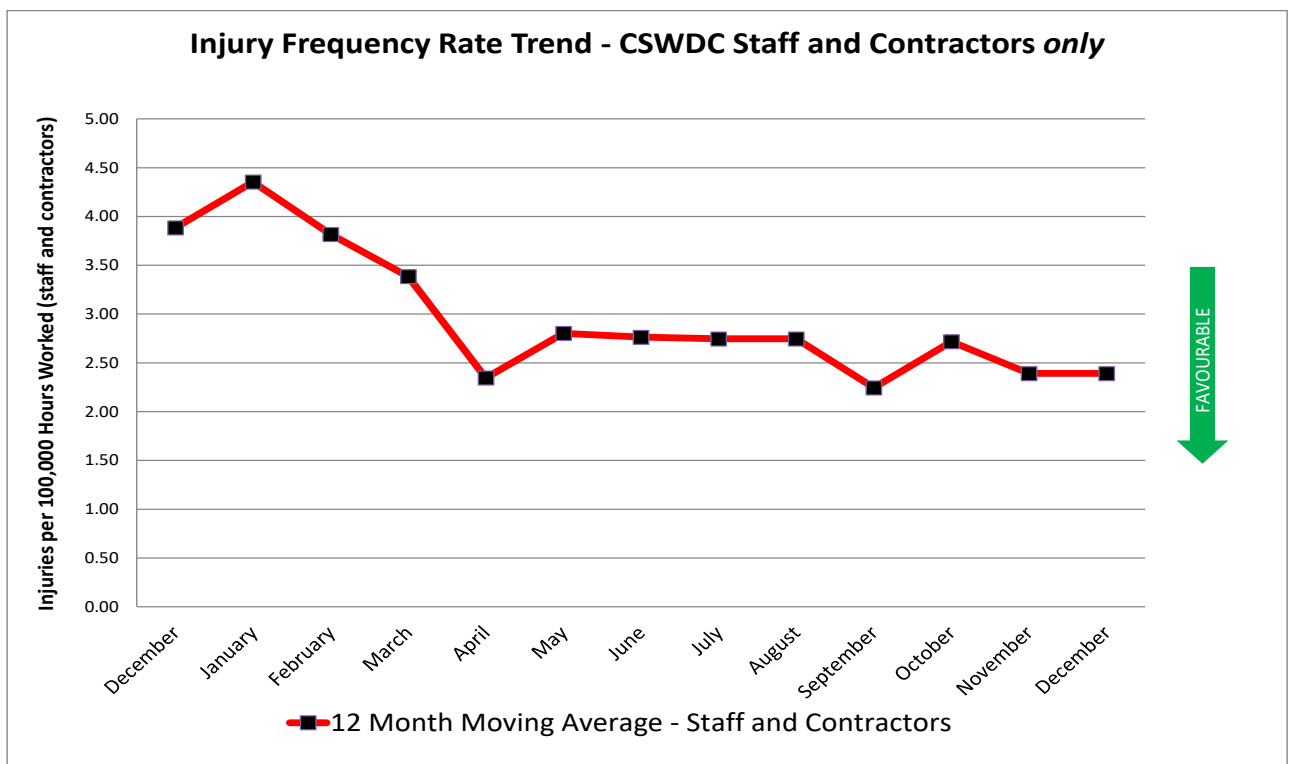
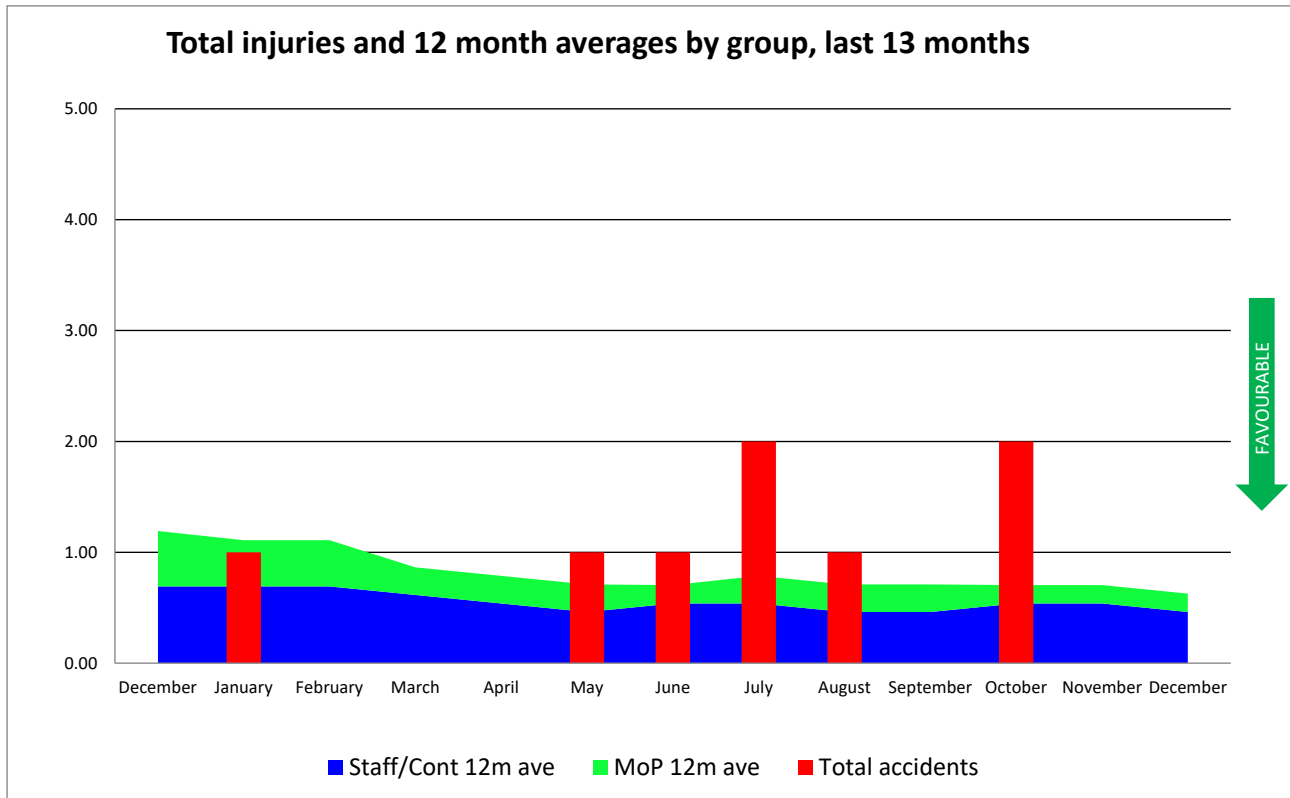
Staff awareness has increased during the pandemic, possibly due to the increased use of H&S terminology by the government and in the media when describing issues and changes in the guidelines, and CSWDC is now better placed to respond to changes having learned from the planning processes used.

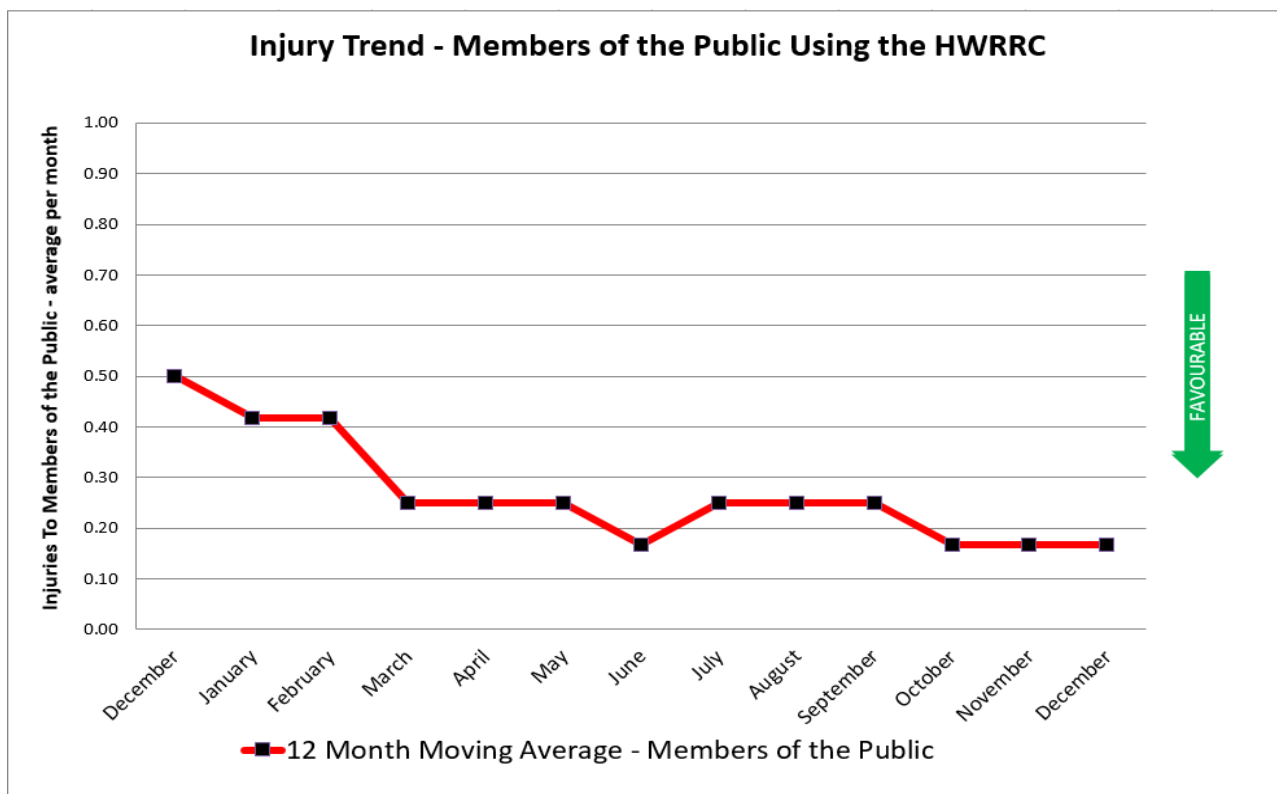
Shareholders and stakeholders within the community rely on the essential service the business provides, this was also a vital aspect of the planning in relation to the Covid-19 challenges. The continued provision of the essential services of waste recovery, power generation and the provision of a safe Household Waste Recycling facility remained priorities throughout the year.

Strong communication was maintained with all levels of staff, contractors, waste delivery and collections drives, as well as members of the public using the HWRC to ensure the pandemic control measures were understood and complied with. All meetings were restructured to enable them to be held on-line, thus avoiding any face-to-face interaction.

APPENDIX 1 - INJURY STATISTICS 2021

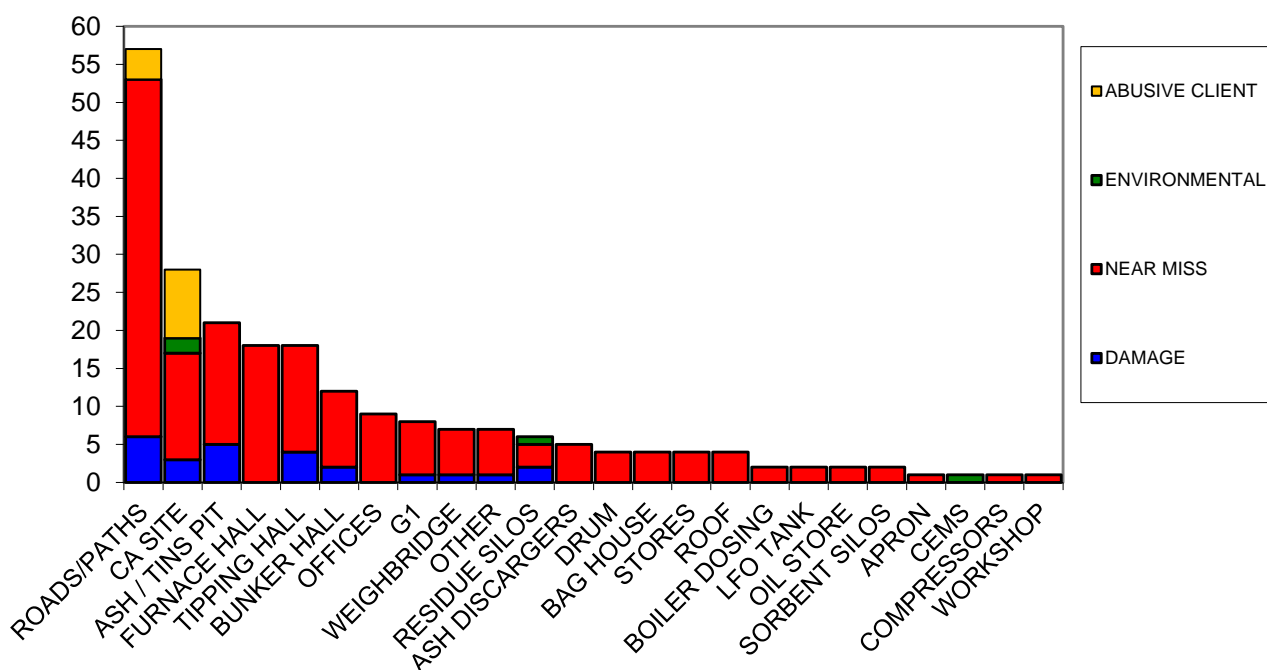
Injury trends 2021



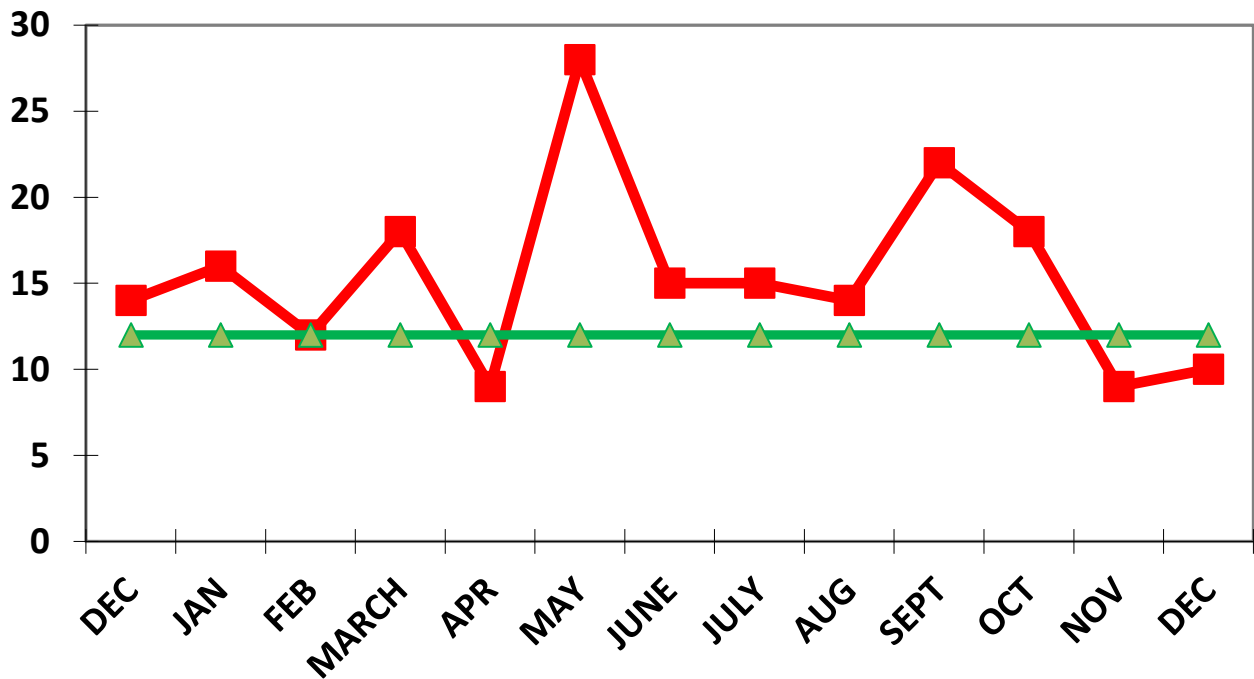


APPENDIX 2 – INCIDENT & NEAR MISS SUMMARY 2021

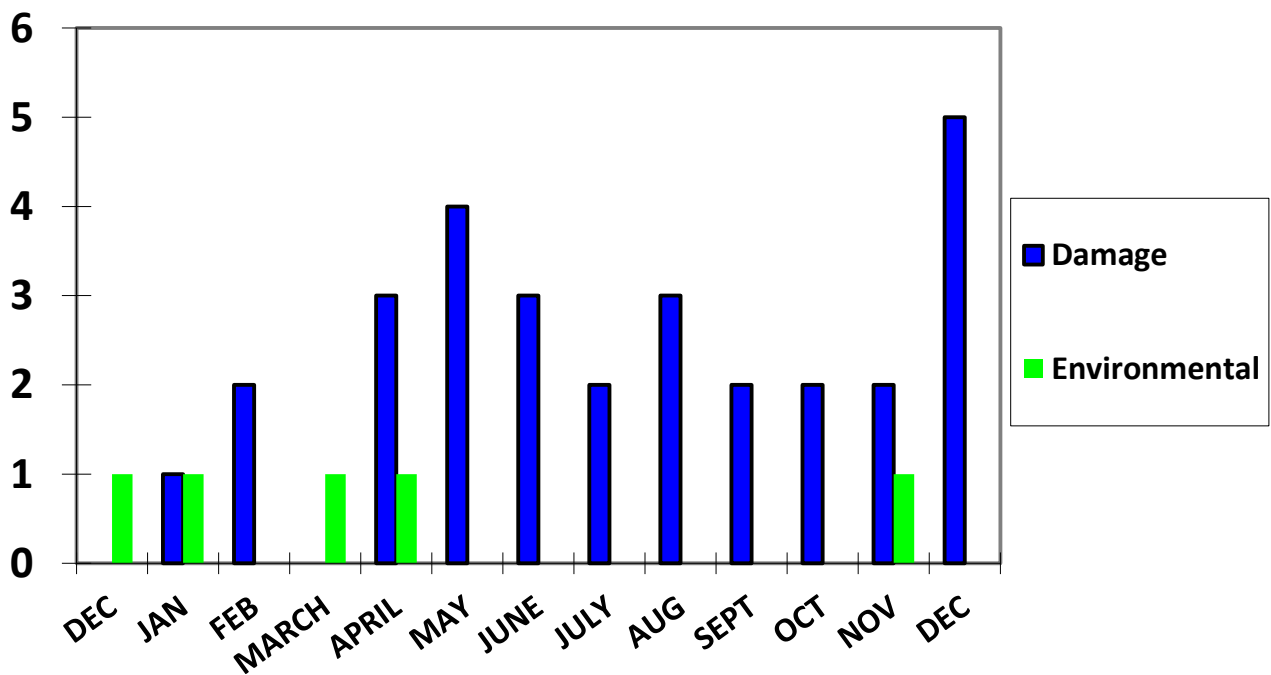
Incidents, Hazards & Near Misses by location:



Hazard and Near Miss trend 2021



Damage and Environmental incident trends 2021



APPENDIX 3 - ENVIRONMENTAL PERFORMANCE

KEY PERFORMANCE INDICATORS 2021

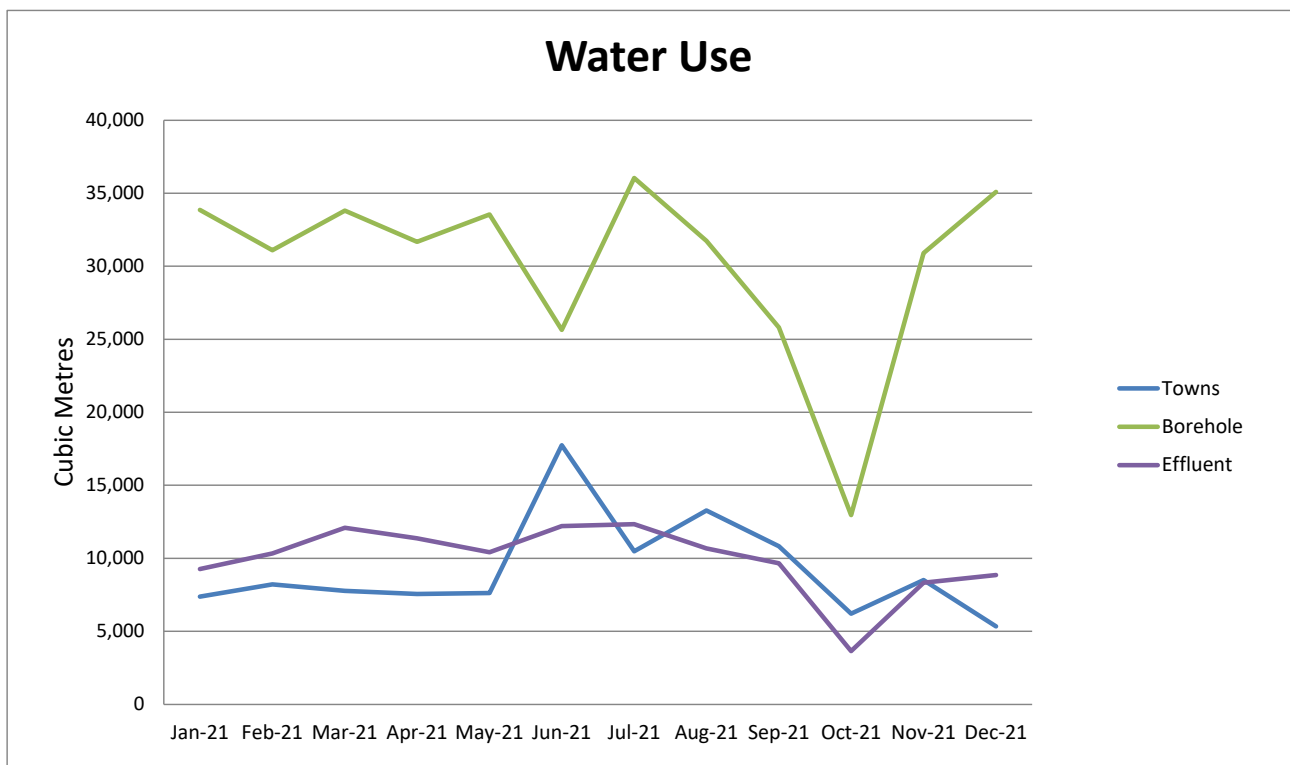
Gross resource use

	Type	2021	2020	2019	2018	2017
Waste Disposal (tonnes)	Waste Throughput	295135	313268	298854	288976	292989
	APC	42617	12904	11661	10450	10384
	Bottom Ash	11344	47961	44065	44217	45176
	Incinerated Metal	7988	8450	7697	7155	7575
Electrical Generation (MWh)	Exported	105452	113052	110071	109581	95245
Water Usage (m³)	Town's supply used	110921	112340	84650	81887	82489
	Site abstracted - river + borehole	362165	381169	405917	424614	340484
Water Discharges (m³)	Effluent to Sewer	119165	123312	109390	114150	112804
Gas Usage (ft³)	Site Consumed	3960900	2853800	2994700	2493800	2089700
Electricity Usage (MWh)	Site Consumed	22202	23404	21928	22142	18789
Steam Flows	Total Steam Flow (t)	875108	927980	919066	913824	859668
	Steam /t waste	2.96	2.96	3.08	3.16	2.93
	Steam (t)/MWh _{Export}	8.3	8.21	8.35	8.34	9.03

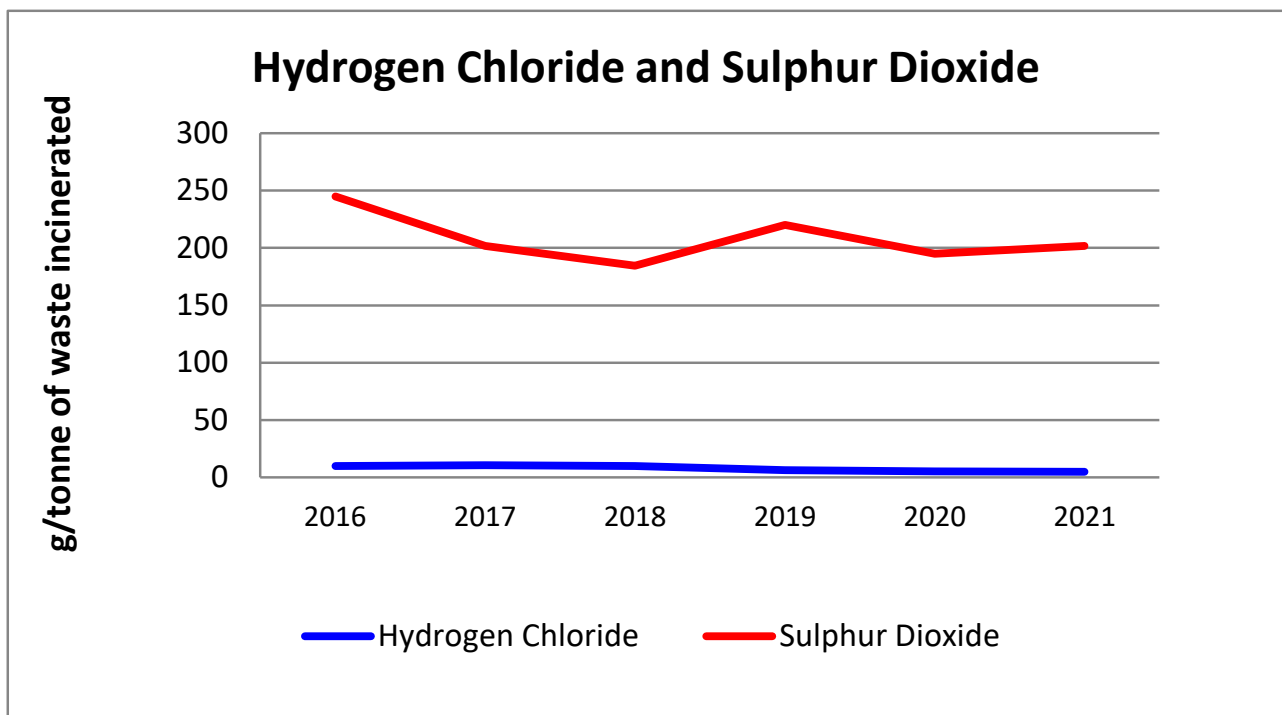
Indicators per tonne of waste processed

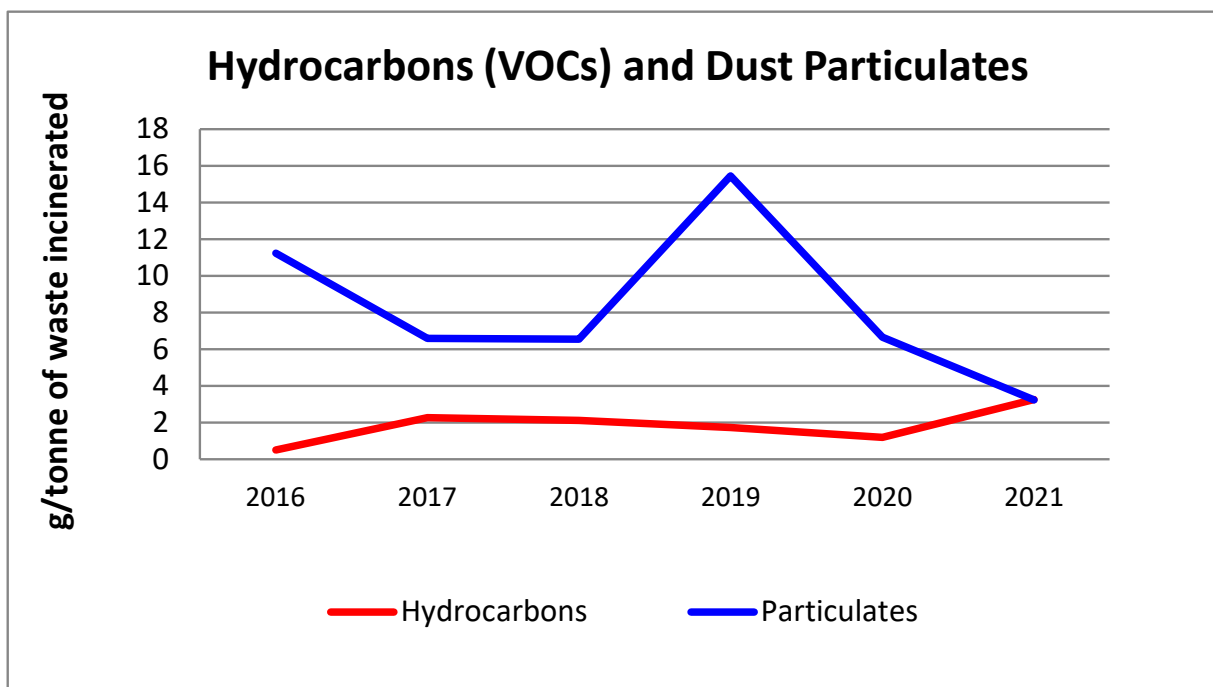
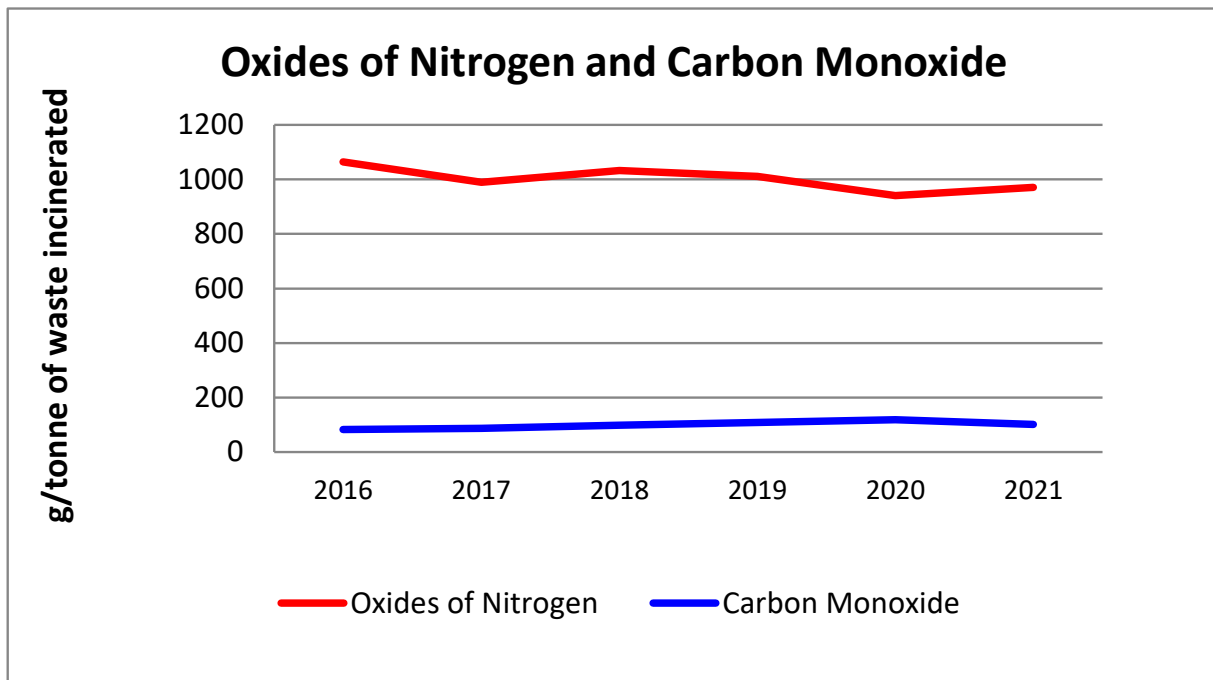
INDICATORS PER TONNE OF WASTE PROCESSED	2021	2020	2019	2018	2017
Incinerated metal (tonnes)	0.027	0.027	0.026	0.025	0.026
APC Residue (tonnes)	0.38	0.041	0.039	0.036	0.035
Bottom Ash (tonnes)	0.14	0.15	0.15	0.15	0.15
Electrical Generation	MWh	MWh	MWh	MWh	MWh
Electrical energy exported	0.36	0.36	0.37	0.38	0.33
Electrical energy consumed	0.075	0.07	0.07	0.08	0.06
Water Usage/Discharges	M³	M³	M³	M³	M³
Town's water consumed	0.38	0.36	0.28	0.28	0.28
River/Borehole water abstracted	1.23	1.22	1.36	1.47	1.16
Effluent discharged to sewer	0.4	0.39	0.37	0.40	0.39
Gas Usage	Cu ft	Cu ft	Cu ft	Cu ft	Cu ft
Gas consumed	13.42	9.11	10.02	8.63	7.13

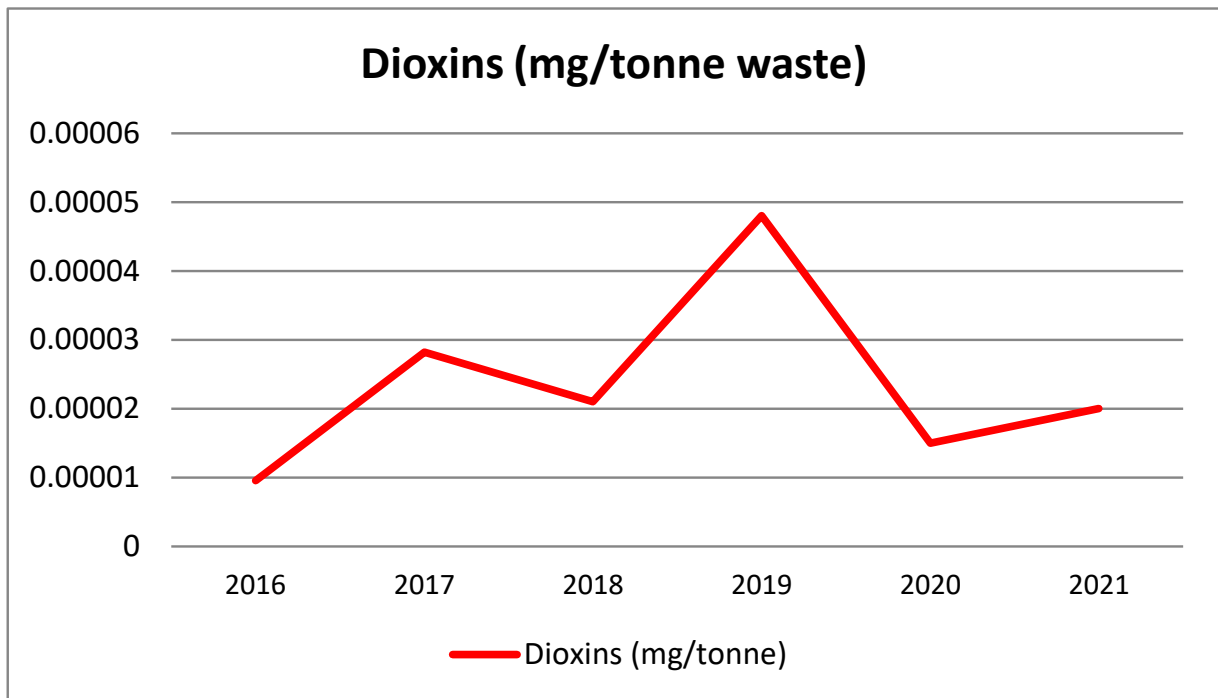
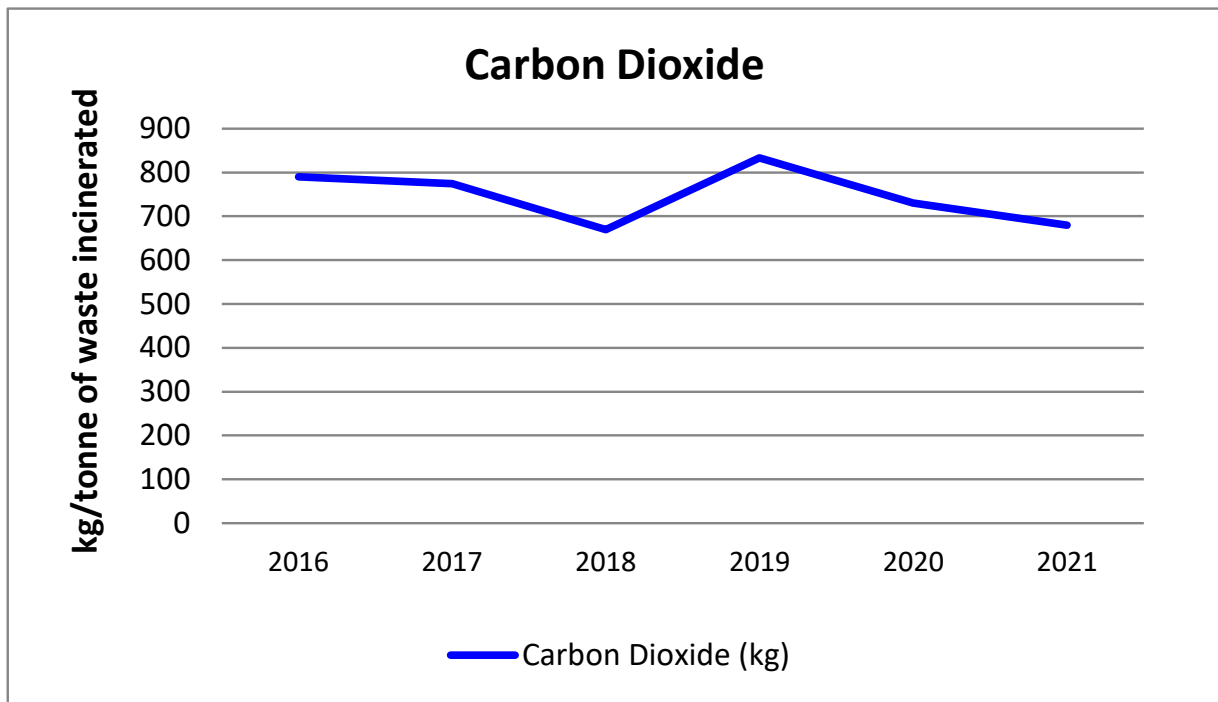
Water use trends 2021



APPENDIX 4 – EMISSION PERFORMANCE (last 5 years)







APPENDIX 5 - SAFETY HEALTH AND ENVIRONMENT IMPROVEMENT PLAN 2021

#	Objective	Project Description	Due date	Who?	Information / Comment	Status
1	EH&S	Improve plant identification, labelling and drawings	Dec-21	Eng./Ops	Produce a plan to improve plant identification, labelling and drawings. This project will be carried out in parts over the next 3 years. 2021 will be to agree the scope of work, a numbering system and then to update the relevant drawings. Work completed, electrical and steam systems drawings updated. Completed for 2021.	✓
2	Safety	HWRC signage modernisation and simplification	Oct-21	Waste	Delayed due to COVID in 2020, however initial project work has started in conjunction with staff on site, regarding improvements and simplification of the signage. Also addition of more 'one way' and 'no entry' signs to reduce occurrences of MOPs breaching the traffic management plan. Signs have been completed and installed minor snagging ongoing and some additional work to complete that was outside scope.	✓
3	Safety and Environment	Carry out a feasibility study regarding widening of the Tipping Hall door	Dec-21	Projects	Consider door widening to improve access space for vehicles (to reduce vehicle collision damage to roller shutters). Study completed - it was not deemed financially viable due to the cost (circa £50k) of having to install an alternative pedestrian route. BM proposed alternative strengthening of the door as a more cost effective solution.	✓
4	Environment and Health	Develop a Carbon footprint policy	Dec-21	All	Develop a plan to reduce the company's carbon footprint - This will include a carbon balance assessment, EV charging points, cycle to work scheme, further lighting modernisation and possible home working (subject to business requirements). Items have been completed.	✓
5	Environment and Health	Noise reduction at plant cleaning vacuum system	Sep-21	Projects	Improves personnel health and reduces nuisance noise from the rear of the plant, helps communication for anyone in the area. In planning. Project Engineer Dave Cowling has started project and work should be completed by the end of the year. Original date of Sep-21 moved to Dec-21 due to Major Outage and Crane Installation Work in October-21. Acoustic enclosures installed	✓
6	Safety	Safety rules audit	Nov-21	Ops Eng. CPC	Assess continued suitability of all aspects of the system for all users and ensure the system effectively meets its intended purpose. CD and MS have identified that the nominated supervisor training was required and developed in-house training which they have delivered to all nominated supervisors. SJ and CD reviewed the locking optimisation strategies to improve efficiency whilst maintaining the high level of safety during the major outage. Meeting planned for Nov-21 has been completed and captured all the improvements.	✓
7	Health and safety	Furnace pressure transmitter replacement	Dec-21	Eng.	Enabling better combustion chamber pressure control and reducing hazardous fugitive emissions from the chambers into the plant space. In planning. Stuart Barnett has scoped project, parts have been ordered and once delivered will be installed. CARRIED FOWARD TO 2022	▲
8	Environment	Salt saturator water level control	Sep-21	Projects	Reduction in water use though improved control of water. Stuart Barnett has scoped project and ordered parts. Original date of Sep-21 moved to Dec-21 to complete due to Major Outage and Crane Installation. CARRIED FOPWARD TO 2022	X
9	Environment and Health	Remove mag separator and conveyors, thus removing electro magnet and motors	Nov-21	Projects	Scope has been agreed. Some conveyors will remain after mag separator removal and the design has been agreed delivery due Nov-21. Mag sep removed new system installed. New system has some post installation work to complete and this is ongoing.	✓

APPENDIX 6 OBJECTIVES AND TARGET RESULTS FOR 2021

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:

NOTE; Carbon footprint based upon resources consumed by the process. The findings from the study undertaken in 2021 will be used to determine more accurate and relevant indicators.

Env 1	2 or less breaches of environmental permit for the year	✓	H&S 1	Increase behavioural conversations ≥ 14 a month	✗
Env 2	Improve carbon footprint	✗	H&S 2	Reduce the number of injuries to persons (staff, contractors, MoPs, visitors) to below 2020 levels	✓
Env 3	Zero valid environmental complaints for the year	✓	H&S 3	Reduce RIDDOR reportable injuries to zero for the year	✓
Env 4	Reduce noise pollution to the immediate environment	✓	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 and audits 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 2022

#	Objective	Project Description		Who?	Information / Comment	
1	EH&S	Improve plant identification, labelling and drawings	Dec-24	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.	
2	Safety and Health	Formalise a random testing section of the Drugs & Alcohol policy, to include staff and contractors. Update the induction film to suit the changes in the policy	Oct-22	CPC	Needs planning and careful consideration. HR advisors to be involved	
3	Safety	Crane bay fire escape improvements - modernise and maintain a user friendly hatched escape system, existing is poorly maintained and very difficult to use	Oct-22	Projects	Review existing system with view to improve user experience.	
4	Safety	Improve water meter access to enable reading of values - options of altering meter positions, improving access covers, etc.	Dec-22	Projects	Needs firstly assessing in order to understand the required improvements	
5	Environment	Review and improve the office energy efficiency policy	Dec-22	CPC/ Projects	Assess and target largest contributors such as heaters, air conditioning, lighting and PC's. Improvements can be made by installing more efficient heaters and adjusting settings on AC units. Improve how this is communicated to staff	
6	Environment	Review and improve the paper reduction policy in order to move towards a paperless office	Sep-22	CPC	Review where we waste paper - Roll call tests, permits and documents being printed by staff unnecessarily. How can we control how many documents are printed - control/restrict user usage on the photocopier	
7	Environment and business continuity	Improve CEMs redundancy by installing a complete back up in another location on the plant as per insurers recommendation	Dec-22	Projects	Included in 22/23 Capex program, cabin on inverter roof, two separate sets of 3 CEMs with auto switch over	
8	Health and safety	Furnace pressure transmitter replacement CARRIED OVER FROM 2021	Dec-22	Eng.	Enabling better combustion chamber pressure control and reducing hazardous fugitive emissions from the chambers into the plant space. In planning. Stuart Barnett has scoped project, parts have been ordered and once delivered will be installed. 26/01/22 update carried over to 2022 plan. Requires to be completed when units are shutdown - Line 2 in February-22, Line 1 in May-22 and Line 3 in June-22. Delays due to parts being delayed and installation requiring an outage.	X
9	Environment	Salt saturator water level control CARRIED OVER FROM 2021	Mar-22	Projects	Reduction in water use though improved control of water. Stuart Barnett has scoped project and ordered parts. Original date of Sep-21 moved to Dec-21 to complete due to Major Outage and Crane Installation. Update 26/01/22 completion will be end of February-22.	X

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
CCS	Carbon capture and storage
SCS	Sub cooling system (G1 steam turbine bypass system)