



# **Environment, Health and Safety Review for the year to 31<sup>st</sup> December 2019**

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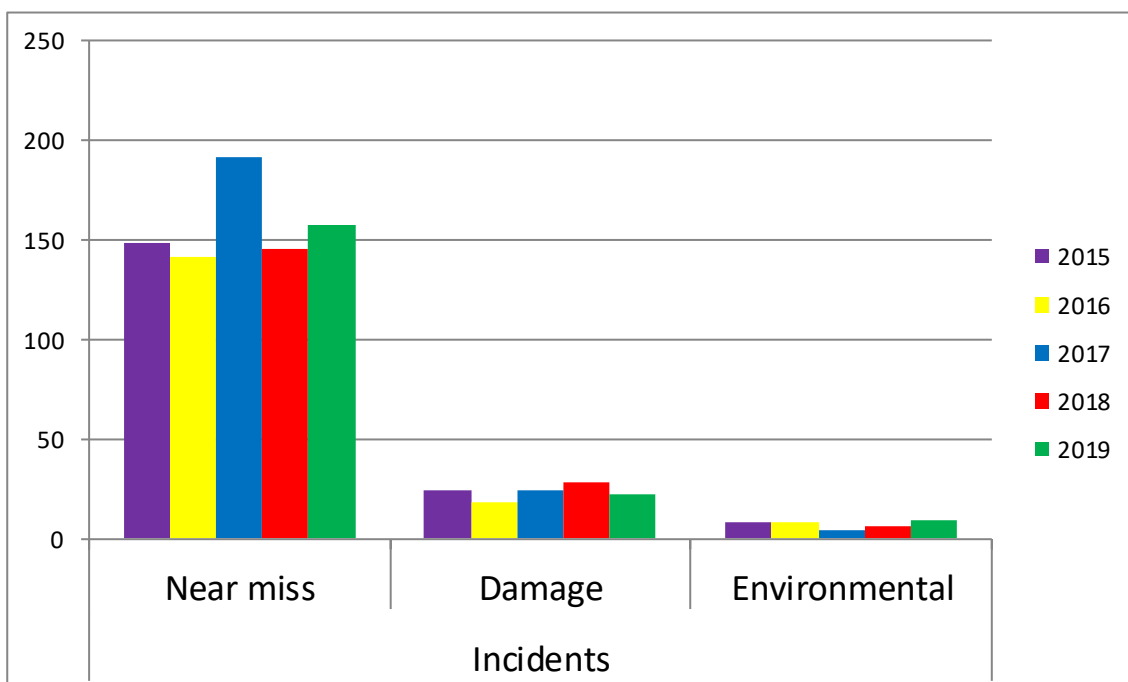
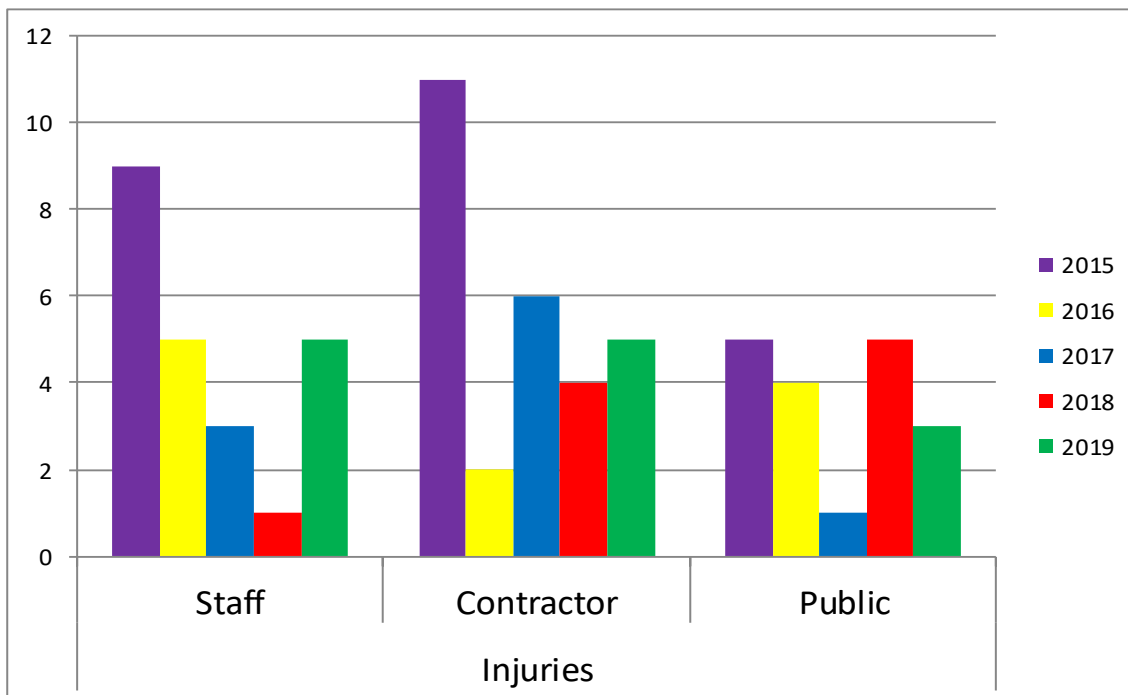
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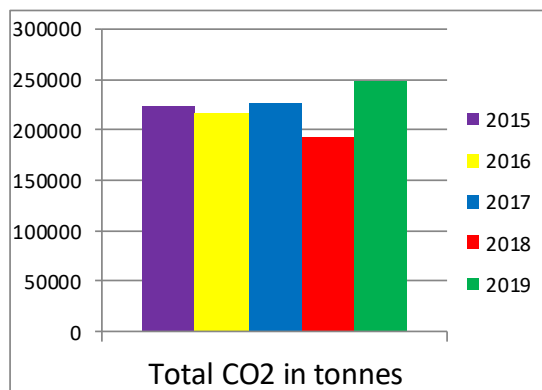
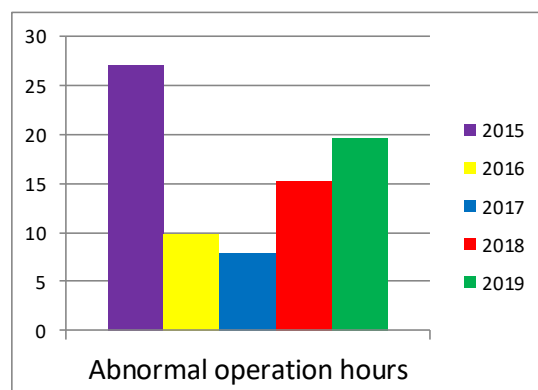
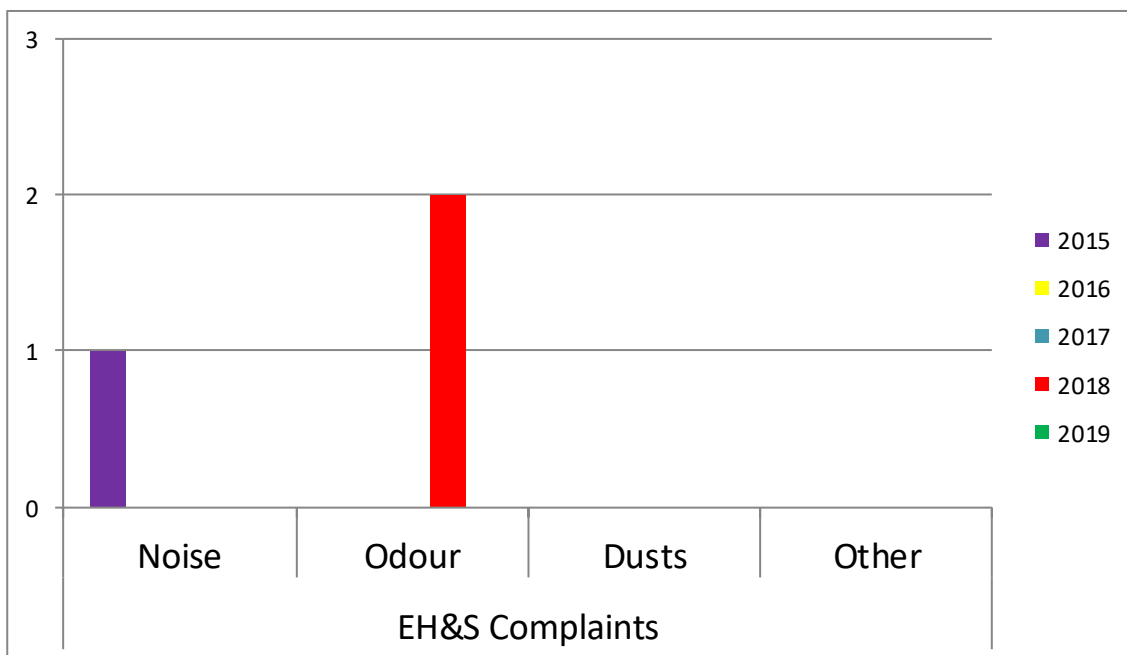
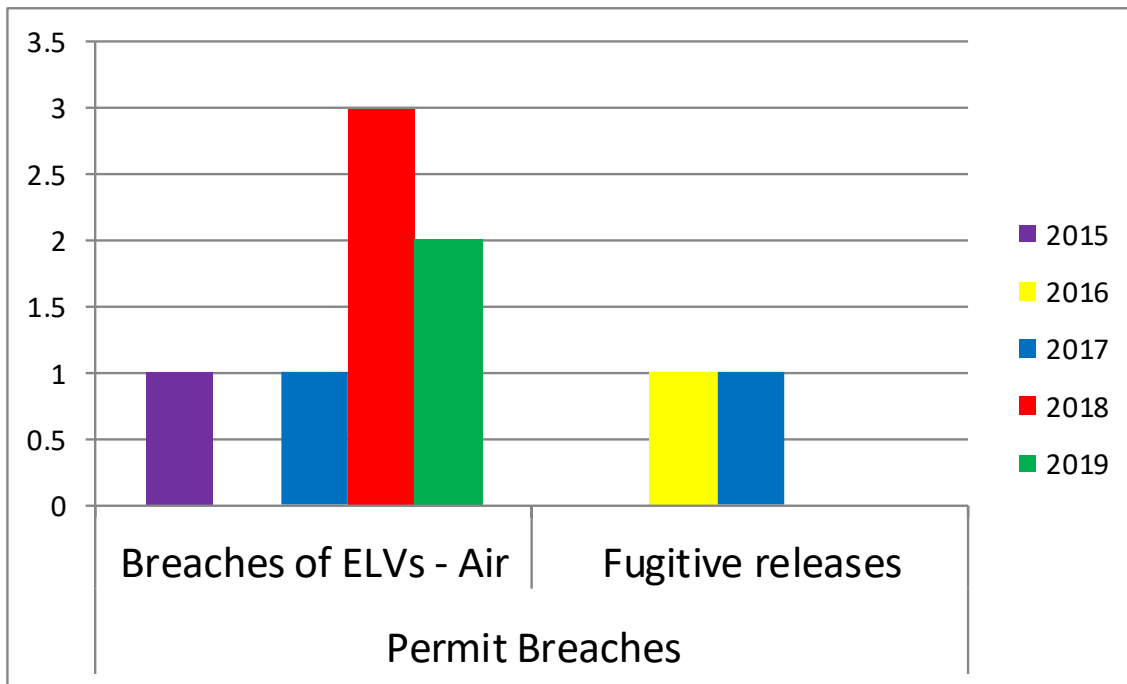
## 1. Introduction

This report provides a review of Environment, Health and Safety for CSWDC from 1<sup>st</sup> January to 31<sup>st</sup> December 2019 inclusive and addresses 4 principal areas;

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

## 2. Management Summary





### 3. Health and Safety Performance

#### 3.1 Injuries

During 2019 there were 13 injuries reported under the incident reporting procedure. 5 accidents involving an employees, 5 accidents involved contractors, and the remaining 3 involved members of the public all on the HWRC.

Of this total, there was 1 injury that required reporting under the Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 2013 (RIDDOR). This injury was suffered by a security guard who was assaulted by an intruder on site. A missile was thrown which struck the injured person on the head, causing a broken eye socket and other facial injuries. Reporting responsibility lay with the contractor's employer and evidence of the report has been provided by them.

The 13 first aid injuries that were minor in nature are detailed below:

January	CONTRACTOR	ROADWAY	Cut, contact with	Groundwork contractor cut ear on wire protruding from the bucket of their dumper truck as he walked by
January	MEMBER OF THE PUBLIC	CA SITE	Bruise, trip HWRC	MoP tripped over their own tow hook on their trailer at the HWRC
February	MEMBER OF THE PUBLIC	CA SITE	Cut, manual handling HWRC	MoP cut fingers whilst disposing of bathroom sink at the HWRC
March	CONTRACTOR	CA SITE	Cut, Contact with sharps installing razor wire	While fitting Razor wire to new fencing on CA site contractor caught his left cheek with the razor wire causing a slight cut to the area.
April	CONTRACTOR	ASH PIT	Cut, contact with ash/tins	Ash lorry driver was cleaning off the near side of his vehicle he somehow caught his fore-arm on an unknown object causing a small 1/2 inch cut.
April	CSWDC	BUNKER HALL	Strain, lifting	Member of staff strained their back whilst handling the crane stops on the refuse crane rails
June	CSWDC	BOILER DOSING	Graze, trip	Member of staff tripped on the small raised section of the concrete slope leading up to the metal gates, gazing his arm/hand.
July	CONTRACTOR	CA SITE	Fracture, physical assault	Security guard (Oakwood Security) was struck in the face with a projectile thrown by intruder on the HWRC at 05:00hrs. Caused cut requiring medical treatment. Ambulance and Police called. Fractured eye socket, reported as a RIDDOR by his employers.
October	CSWDC	ASH DISCHARGE LEVEL	Back strain, manual handling on conveyor	Large items conveyor not working due to a break down, temporary requirement for manually clearing materials periodically using a rake etc. Whilst doing so a member of staff strained their back. This was not reported at the time; coming to light some time after the event.
October	CSWDC	CA SITE	Strain, manual handling HWRC	While trying to direct some waste towards the back of the container on Bay 6 a member of staff jumped upwards to try and gain some momentum in pushing the waste back and landed awkwardly on his left calf causing a strain.
October	CONTRACTOR	CONTRACTOR CABINS	Bruise, trip	Office cleaner tripped whilst accessing contractor cabins near ACC, injuring her wrist
November	MEMBER OF THE PUBLIC	CA SITE	Bruise and cut, trip	MoP trip whilst moving between their car and the bays, cut to forehead. Area clean and dry
December	CSWDC	CA SITE	Back strain, Lifting	Handling TV screen from the tele-handler bucket to the secure container, felt a sharp pain in his back

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 an increase when compared to 2018 performance; where there were 10 injuries. It is worth noting that although there was one reportable injury in 2019, as it was caused by a criminal act it was not directly attributable to our work activity. Security measures have been increased following a spate of site break-ins which had led to damage to facilities and equipment taking place. No further intrusions recorded since the assault took place.

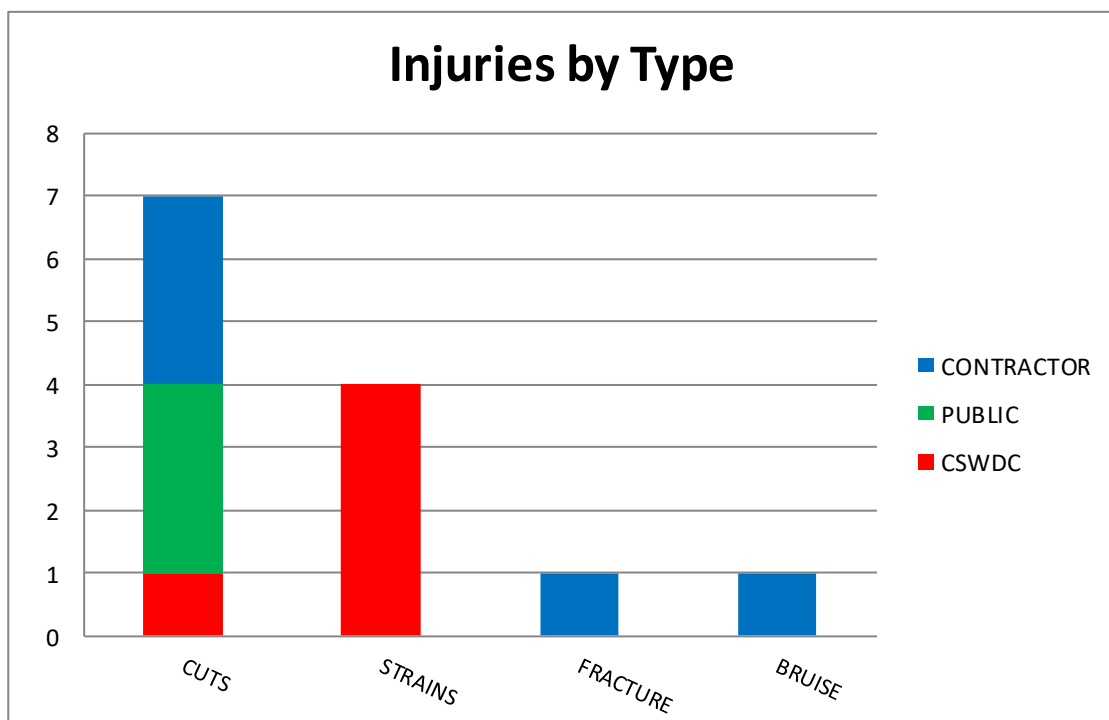
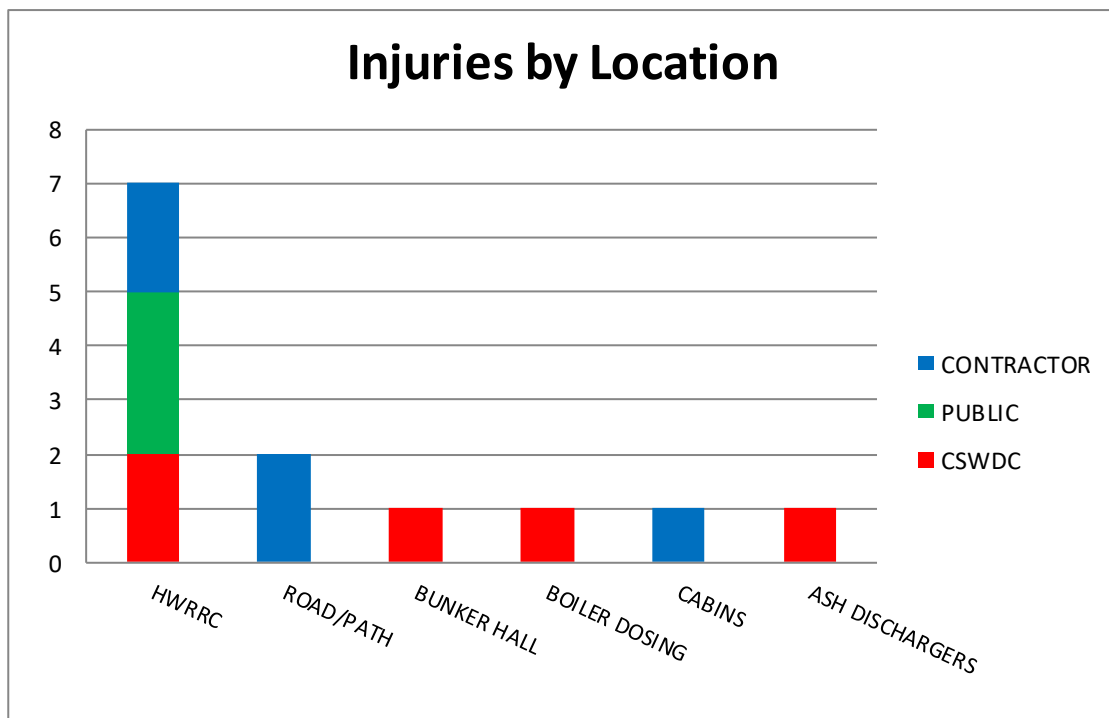
Recorded staff injuries have increased compared to the previous year, which is a challenge for the management team moving forward. There is also an evident trend relating to manual handling, relevant actions have been implemented to reduce manual handling of items and prevent recurrence of similar injuries, such as removing staff manual handling by changing the location of the TV screen storage, for example.

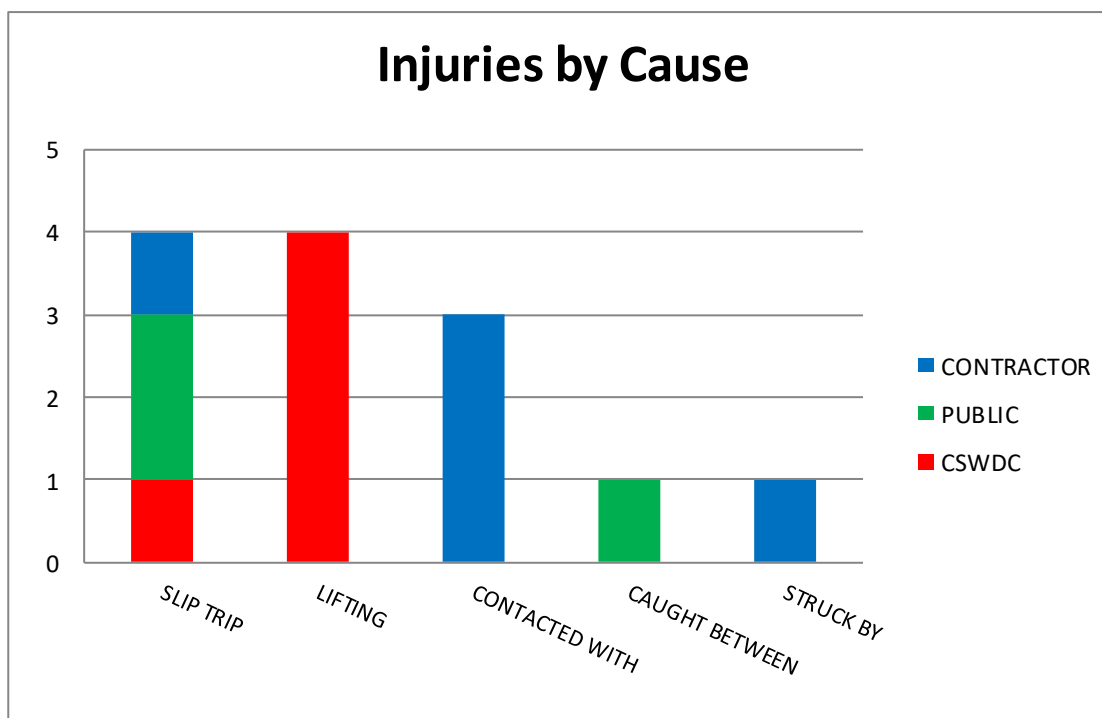
Contractor injuries have remained similar for the last 3 years. Public injuries have reduced although they remain fairly constant in recent years.

The public 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.

## **Injuries by Person Type**

	<b>Staff</b>	<b>Contractor</b>	<b>Public</b>
<b>2015</b>	<b>9</b>	<b>11</b>	<b>5</b>
<b>2016</b>	<b>5</b>	<b>2</b>	<b>4</b>
<b>2017</b>	<b>3</b>	<b>6</b>	<b>1</b>
<b>2018</b>	<b>1</b>	<b>4</b>	<b>5</b>
<b>2019</b>	<b>5</b>	<b>5</b>	<b>3</b>





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 158 hazards reported during 2019. This is an increase on 2018 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 to encourage their completion

Damage incidents have decreased from 28 in 2018, to 22 in 2019. This is an encouraging reduction and is mostly likely attributable to the tipping hall improvements which included a



permanent staff member being located in the area and increased interaction with waste delivery drivers and crews.

The reporting levels from other areas such as operations and engineering have also been encouraging, with reports being raised where equipment or components have been damaged.

APPENDIX 2 contains a summary chart and trends of the incidents and near misses that have occurred during 2019.

### **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**

No new insurance claims were raised in 2019 and the case relating to the loading shovel incident in August 2017 was closed off by our insurer and their loss adjusters.

### **3.5 Workplace Inspections**

Monthly workplace inspections continue to be performed by management, supervisors and employee representatives on the EH&S committee. A total of 12 inspections were missed during 2019, out of a total of 192. This is a positive reduction compared to 2018 where 20 inspections were missed from the same planned total.

It is important that these activities are undertaken regularly otherwise areas can be missed out of this important process, leading to increases in hazards and exposure to risk. Audits also take place to check on work being undertaken under the safety rules, which included checks on the MMS cards, work packs and the permit, as well as the manner in which the work is being undertaken.

## **4. Environmental Performance**

### **4.1 Environmental Complaints/Incidents**

There were no complaints relating to odour received in 2019 following 2 odour complaints in 2018. The additional odour suppression is included in the 2019 improvement plan has been effective although the weather was not as unusually hot as 2018.

### **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 12,594 MWh<sub>Thermal</sub>. This is very similar to historical levels.

#### EA Enforcement

The sites EA enforcement officer; Gurinder Bains, visited site twice in 2019, undertaking site checks and following up on reports of dioxin levels, abnormal operations and monthly emissions reports.

#### Incinerator Bottom Ash (IBA)

No significant change has occurred regarding the classification of IBA in 2019. 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 now 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 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 Bio-genic 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. It is therefore intended to review the 2019 plant performance data to see if the plant meets the R1 requirement. After initial assessment of the 2019 data further work is planned with specialist partners. The ambition in 2020 is to clarify the position and if requirements are met an application will be submitted to the Environment Agency in 2020. If successful this will result in the plant being classified as recovery rather than disposal.

#### Revised EU BREF

The revised BREF for Waste Incineration was published on 20/12/19. 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/Nm<sup>3</sup> for NOx, 15 mg/Nm<sup>3</sup> Ammonia a continuation of trials are planned. Specialist partners have also been engaged regarding the possibility of optimising the current abatement system. In the longer term the company will continue to keep abreast of latest technology.

A previous study was undertaken to run trials at the proposed new limits to see if the plant could conform. These trials successfully proved the plant could meet all the new limits, though Oxides of Nitrogen would require a significant increase in ammonia usage. For the required drop of 20 mg/Nm<sup>3</sup> the ammonia usage would increase from 1000 tonnes per year to 1500 tonnes. The trials so far have only been short term but it is planned to increase the length in 2020.

It is estimated the Environment Agency will start Permit Reviews in April 2020 targeting clinical waste incineration as a priority. A timetable has not been issued yet indicating when the review will take place for CSWDC. However once reviewed the plant will then have to submit a BAT review against the new standards and submit an improvement programme. Please note these are still only provisional dates at the moment and will change. The process will have to be completed and the plant compliant by 20/12/23.

### 4.3 Unauthorised Releases

There were two unauthorised releases reported to the Environment Agency during 2019, which related to a breach of the ELV for dioxins during extractive sampling, and high levels of the SO<sub>2</sub> daily averages on units 1 and 2.

As the levels found were extremely unusual, the dioxin sample was reviewed and no concerns could be found in the sampling and analysis processes. A repeat sample was taken which was found to be within the ELV. The exact causes of this remain uncertain.

The SO<sub>2</sub> event was contributed to by a fault in the sorbent dosing system which prevented normal levels of abatement. The system has now been improved to prevent recurrence of similar events.

#### Prior Years Unauthorised Releases

Year	Yearly Total
2019	2
2018	3
2017	1
2016	0
2015	1
2014	1
2013	2
2012	4
2011	3

### 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
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
2011	9.73	2.4	10.87	23

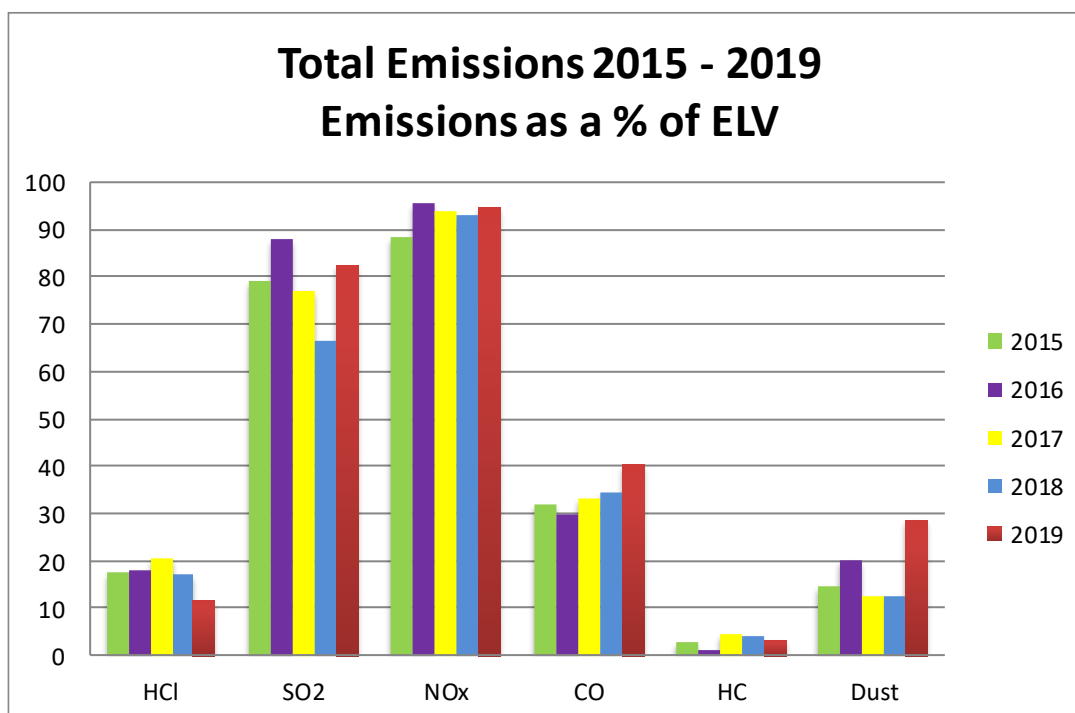
Permit conditions allow 60 hours of abnormal operation on each unit each year. 2019 results are largely due to losses of FID data from the CEMs.

#### 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 2019.

#### 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. NO<sub>x</sub> emissions remain well controlled at levels below the ELV by a system which controls the amount of ammonia that is injected to ensure that NO<sub>x</sub> is kept below the limit without using excess ammonia. A similar system is in operation on the SO<sub>2</sub> 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 increased due to filter bag faults during the introduction of revised materials from the supplier. CO levels have increased slightly following the change of ELV, from the 30 minute limit, to the 10 minute one. As the 10 minute limit is more flexible, less reactive monitoring of levels are needed, leading to these slightly higher total emissions levels over the year.

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

Periodic extractive sampling has been carried out twice during 2019 by an external sampling house. All the results were below the Environmental Permit Emission Limit Values, with the exception of the high dioxin value that was reported as an unauthorised release listed in 4.3. 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 as a method of tracking our significant inputs and outputs from the plant on an ongoing basis. Action should be taken if changes occur outside of normal operation. Improvements or unfavourable trends are noted and investigated accordingly.

Total water usage (Borehole + mains) decreased during 2019 by approximately 3% over 2018 results, from 506,501m<sup>3</sup> to 490,567m<sup>3</sup>. Town's water use rose slightly from 81,887m<sup>3</sup> to 84,650m<sup>3</sup>, whilst abstracted borehole water use decreased from 424,614m<sup>3</sup> to 405,917m<sup>3</sup> and effluent to sewer levels decreased from 144,150m<sup>3</sup> in 2018 to 109,390m<sup>3</sup> in 2019.

The overall reduction in water use is likely to relate to the cooler summer, the increased use of town mains water on G1 was due to borehole system valve and pump faults in March and August.

The volume of gas consumed by the site increased by 23% from 2,493,800 cubic feet in 2018 to 2,994,700 cubic feet in 2019. The reason for this increase is due to the total plant outage for the bunker repairs and additional down time used for repairing the refuse crane rails.

The exported electrical energy generated per tonne of waste has decreased slightly on last year's performance with 0.37 MW/tonne generated compared to 0.38 MW/tonne in 2018. The amount of energy exported increased as the total waste throughput increased to a greater degree. This was contributed to by –

- An issue with the steam ejectors on G2 which had a marginal impact on G2 efficiency. The turbine was running with the hogger, which is less efficient than running on steam ejectors. This is due to a faulty automated valve which is now obsolete, requiring a new type of valve and control system to be sourced which has taken much longer than expected.
- The weather (an unusually wet 2019 against an unusually dry and hot 2018) has had an impact on the waste CV. Wet waste results in a lower CV therefore more waste is needed to produce an equivalent amount of steam/power.
- The G1 bypass (Sub Cooling System) has been in standby mode for a longer period in 2019 when compared to 2018, which resulted in more steam being generated than is being used to generate electricity. This along with the decrease in CV results in a higher throughput rate but no additional power (G1 bypass requires steam to keep in in a hot standby state).

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 use increasing from 0.036 to 0.039 tonnes per tonne processed which is considered marginal.

## **5. Contacts with Regulatory and Other Bodies**

### **5.1 Health & Safety Executive**

There was one visit to site by the HSE which was a routine check on us as part of their on-going focus on waste facilities which is driven by the waste and recycling industry having a higher than average accident rate in the UK. Example documents were provided to support the positive findings from the visit.

### **5.2 Environment Agency**

During 2019 the Environment Agency Waste Management Licence Inspectors made one inspection of the HWRC resulting in positive feedback.

The Environment Agency PPC Compliance Officer made two visits to the Energy from Waste plant during 2019. This was to check on our activities regarding abnormal operations, breaches and also to introduce a newly-assigned Agency manager to the facility.

### **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 July 2019. The system is audited and certified for compliance to the OHSAS18001 and ISO 14001 standards and the opportunity was taken to undertake an upgrade audit to meet the revised ISO14001/2015 standard. This was achieved and the new standard awarded. The audit was also witnessed by a UKAS auditor who oversaw the audit to ensure it included all the relevant aspects, factors and points. During the visit all previous corrective action requests and observations for improvement were closed out.

There were 5 minor nonconformities identified, both of which have been addressed.

The management system will be updated and audited to the new OHS standard; ISO45001, during the year. This new standard brings the H&S system into alignment with the newer environmental standard that was gained in 2018.

Internal audits were performed on the integrated EH&S systems on approximately a monthly basis during 2019. 7 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.

### **5.4 Other Visits & Contacts**

During the course of 2019 there were 12 recorded visits by interested external organisations or individuals to the site. During the course of these visits the Company's processes were described and the environmental impacts from the process discussed. The organisations/individuals are listed below.

Coventry University x 3  
King Henry VIII School x 3  
We Care More  
The family of a local school's environmental champion (student)  
Warwick University  
Coventry Council green team  
Colin Ryan from Australia  
Solihull College

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 whole website look has been updated and new areas created to give a more modern look and feel. The site induction is being made available 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 good, with the only RIDDOR reportable injury being attributed to circumstances beyond our control.

Injuries to staff increased when compared to previous years and focus for the coming year will be on this area.

Incident reporting and the closing of associated actions remained good and the new safety rules have reinforced the mandatory need for contractor checks and RAMS for all work.

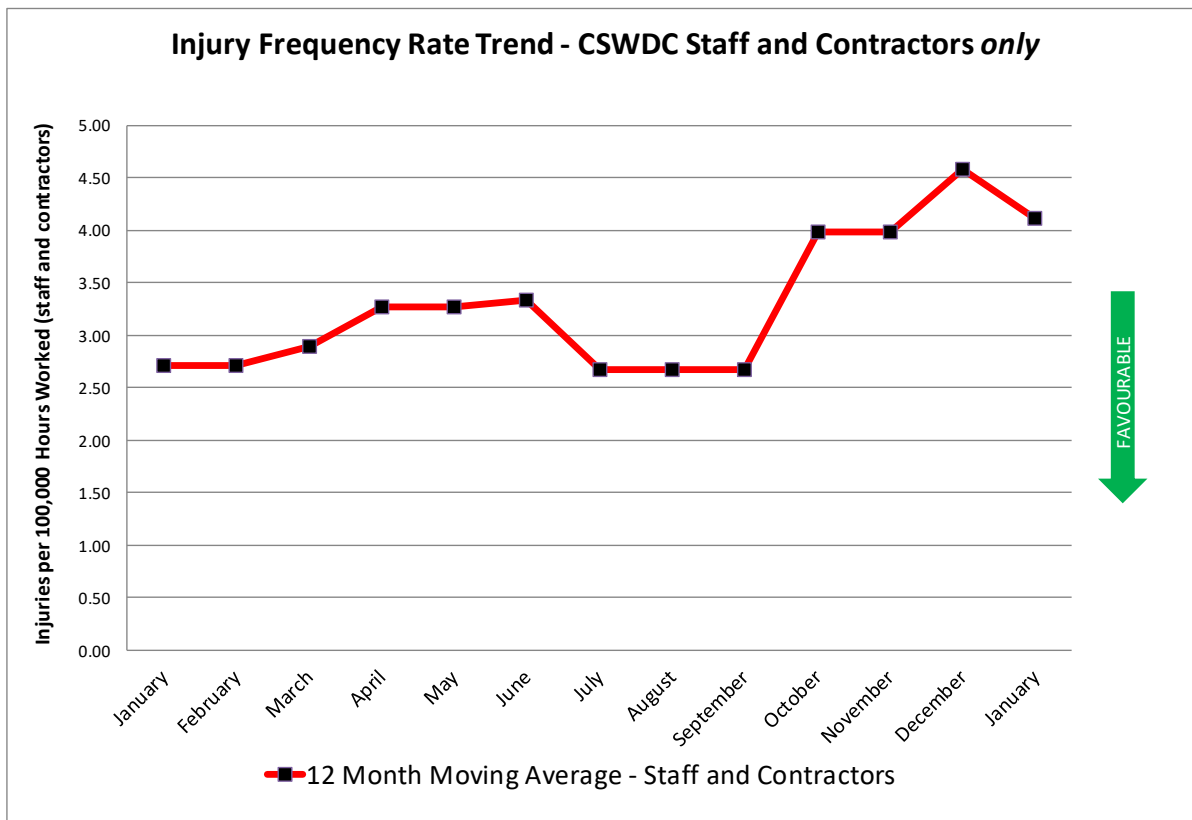
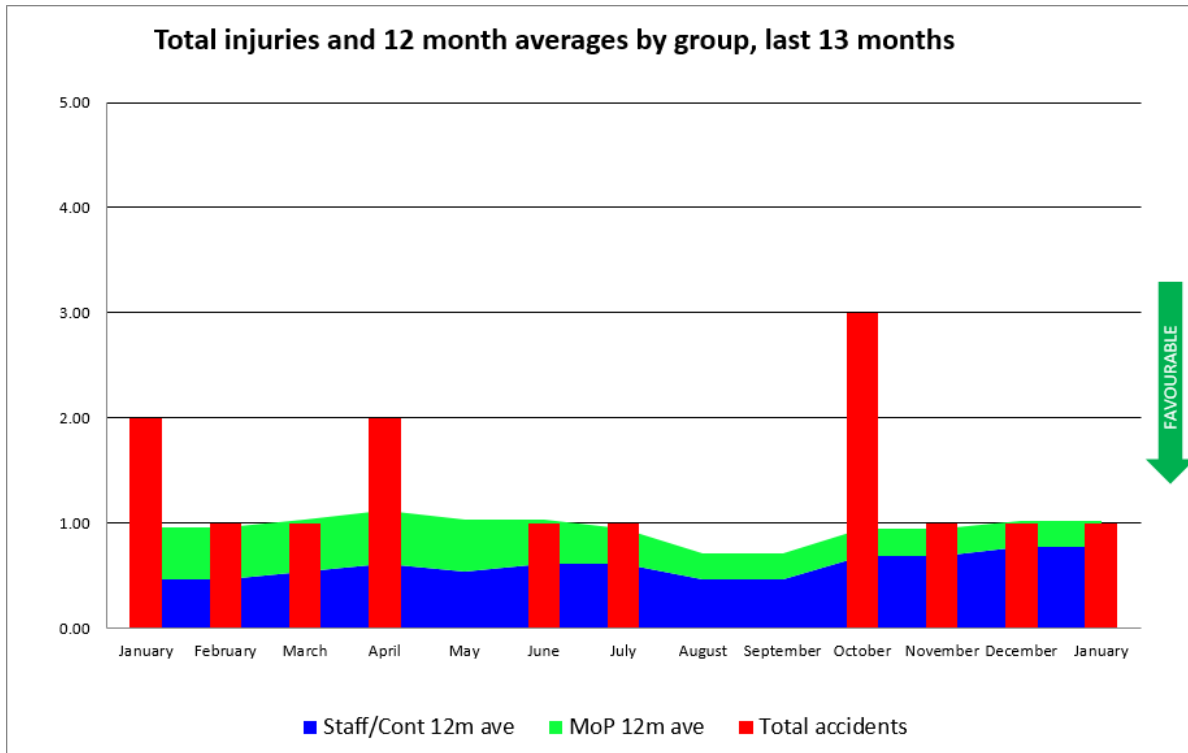
The number of complaints improved, with none being received in the year. There was also a reduction in the number of permit breaches.

None of the original actions on the 2019 improvement programme (Appendix 5) have been carried over to 2020.

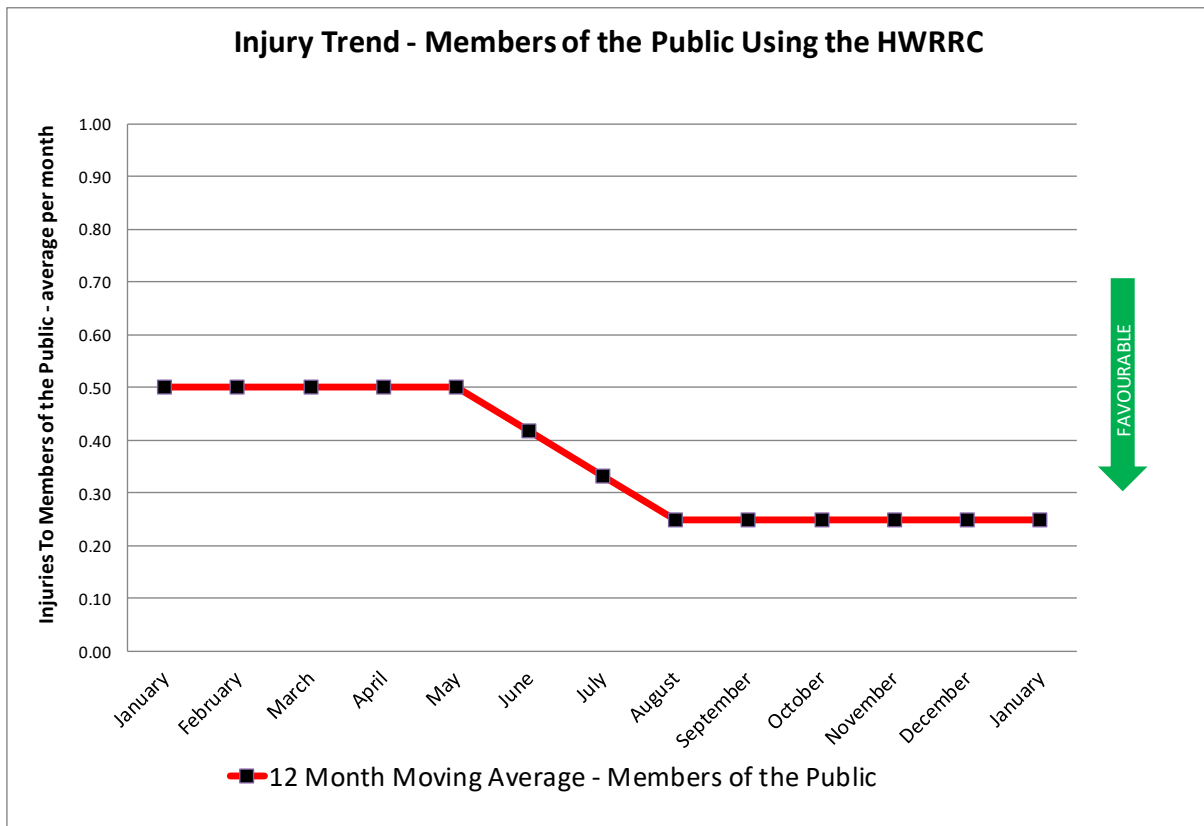
Objectives, targets and the improvement plan for 2019 can be found in Appendix 6 which will again seek to improve on last year's performance.

## APPENDIX 1 - INJURY STATISTICS 2019

### Injury trends 2019

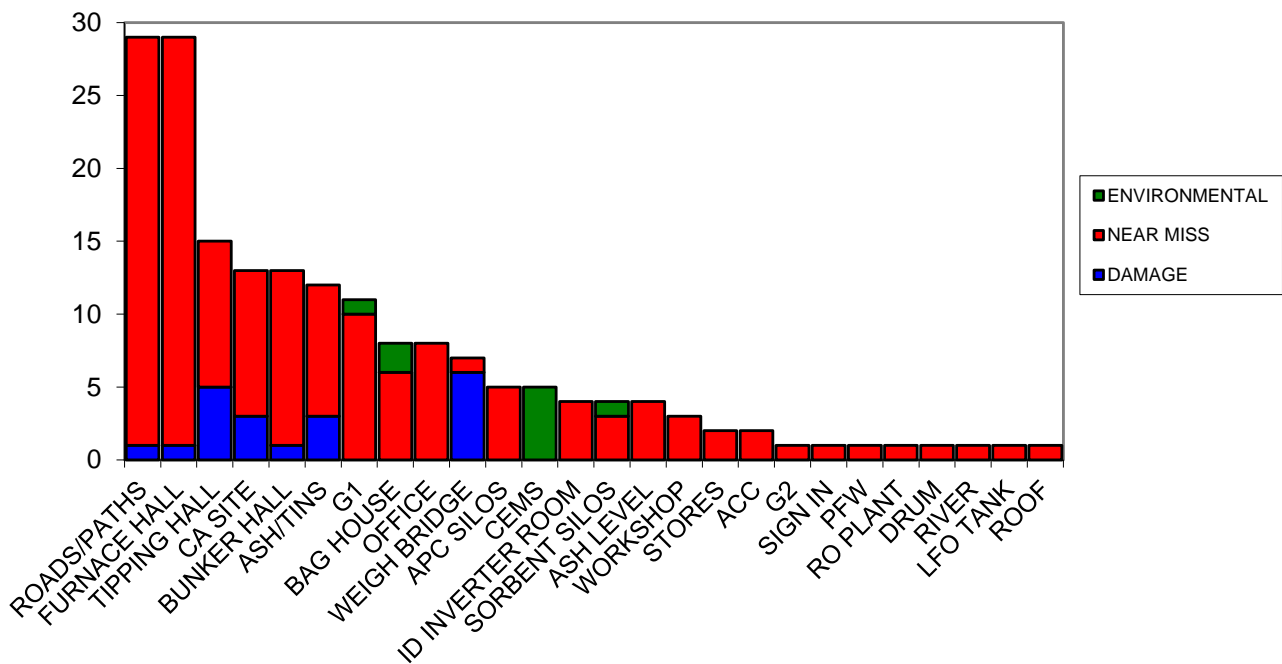




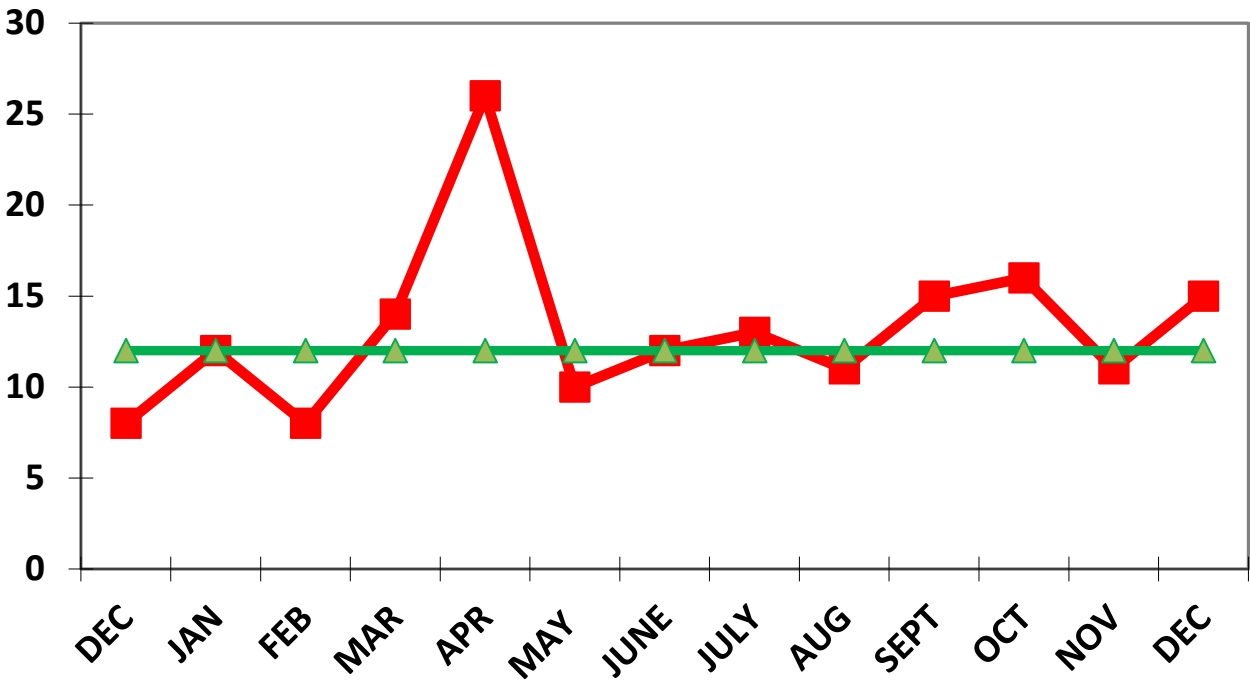


## APPENDIX 2 – INCIDENT & NEAR MISS SUMMARY 2019

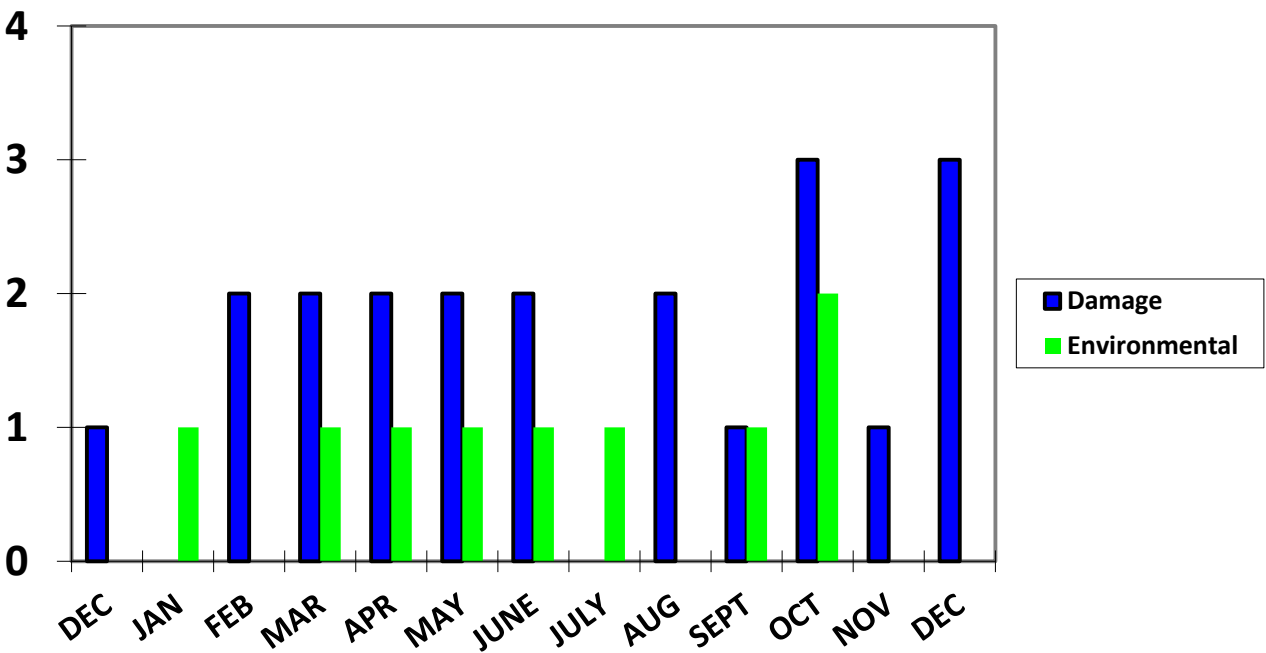
### Incidents, Hazards & Near Misses by location:



Hazard and Near Miss trend 2019



Damage and Environmental incident trends 2019



# APPENDIX 3 - ENVIRONMENTAL PERFORMANCE

## KEY PERFORMANCE INDICATORS 2019

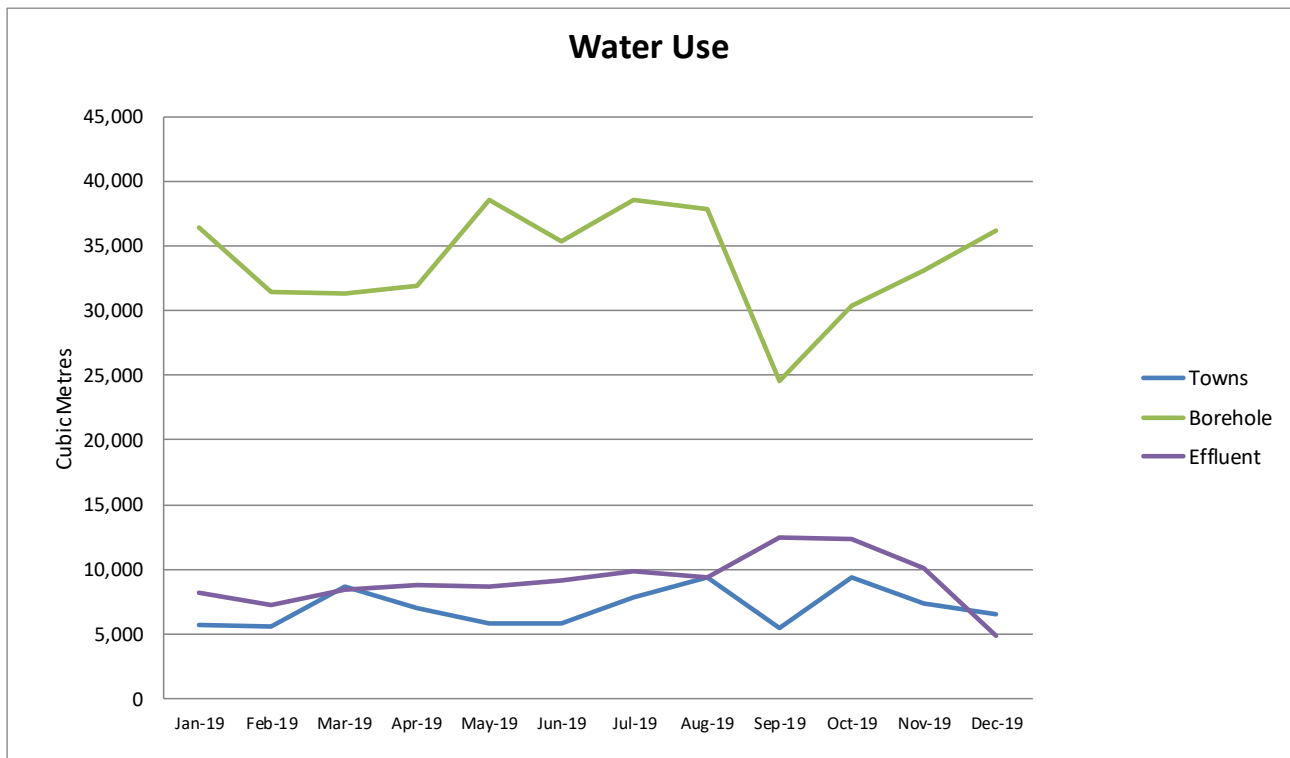
### Gross resource use

	Type	2019	2018	2017	2016	2015
<b>Waste Disposal (tonnes)</b>	Waste Throughput	298854	288976	292989	282849	273728
	APC	11661	10450	10384	10924	10402
	Bottom Ash	44065	44217	45176	45992	44247
	Incinerated Metal	7697	7155	7575	8020	7527
<b>Electrical Generation (MWh)</b>	Exported	110071	109581	95245	102062	104135
<b>Water Usage (m<sup>3</sup>)</b>	Town's supply used	84650	81887	82489	80341	132687
	Site abstracted - river + borehole	405917	424614	340484	377356	409966
<b>Water Discharges (m<sup>3</sup>)</b>	Effluent to Sewer	109390	114150	112804	209026	261503
<b>Gas Usage (ft<sup>3</sup>)</b>	Site Consumed	2994700	2493800	2089700	1613700	2956900
<b>Electricity Usage (MWh)</b>	Site Consumed	21928	22142	18789	22720	20942
<b>Steam Flows</b>	Total Steam Flow (t)	919066	913,824.0	859,668.0	907,172.0	902288
	Steam /t waste	3.08	3.16	2.93	3.21	3.30
	Steam (t)/MWh <sub>Export</sub>	8.35	8.34	9.03	8.89	8.66

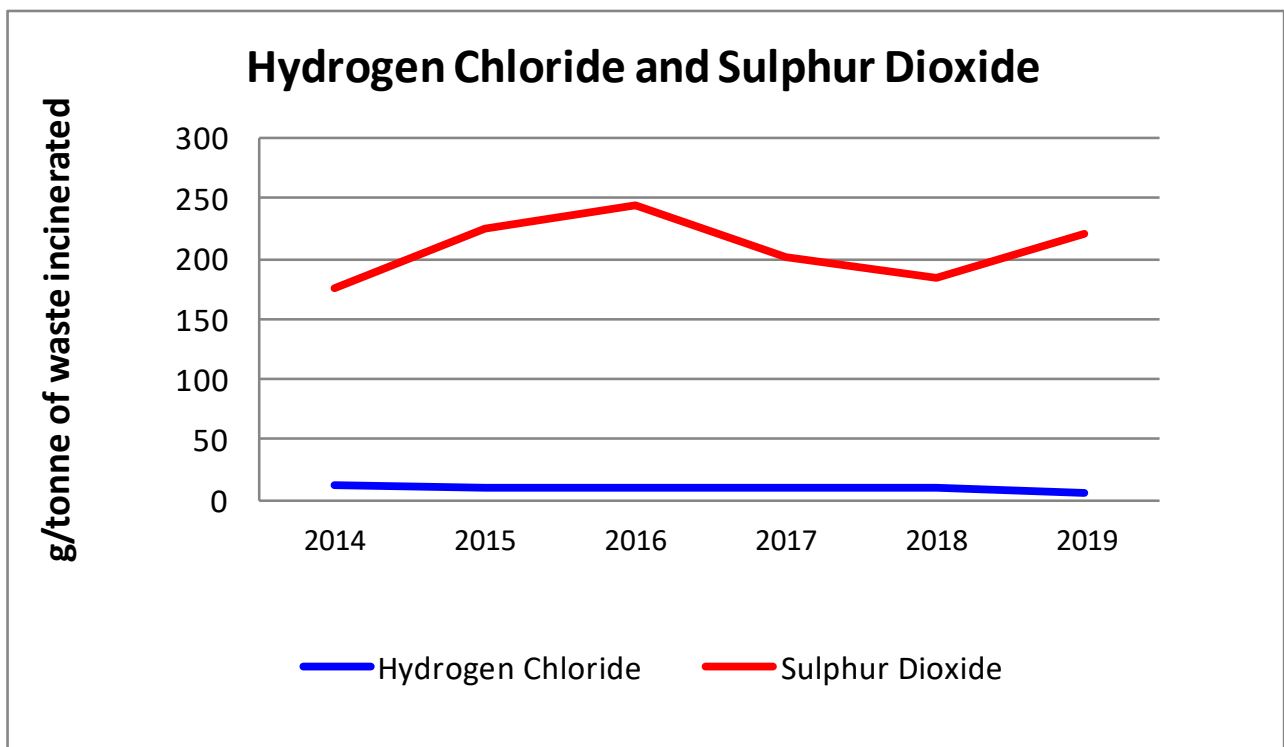
### Indicators per tonne of waste processed

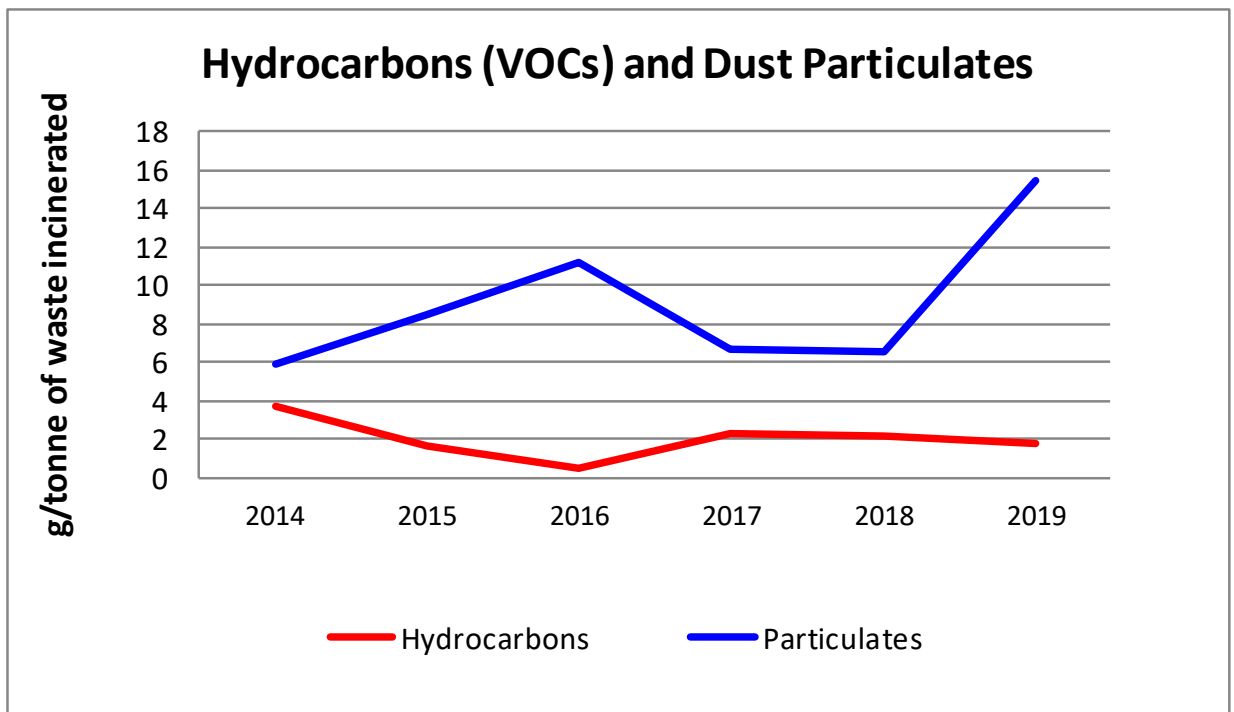
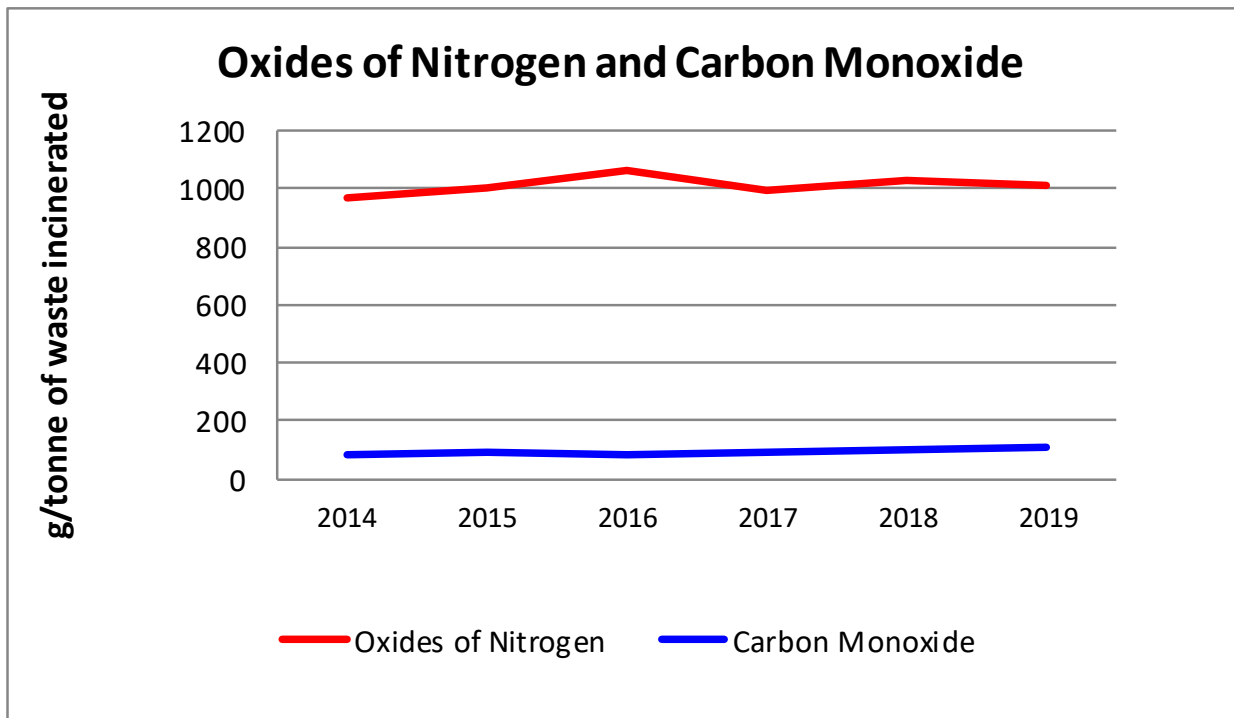
INDICATORS PER TONNE OF WASTE PROCESSED	2019	2018	2017	2016	2015
Incinerated metal (tonnes)	0.026	0.025	0.026	0.028	0.027
APC Residue (tonnes)	0.039	0.036	0.035	0.039	0.038
Bottom Ash (tonnes)	0.15	0.15	0.15	0.16	0.16
<b>Electrical Generation</b>	<b>MWh</b>	<b>MWh</b>	<b>MWh</b>	<b>MWh</b>	<b>MWh</b>
Electrical energy exported	0.37	0.38	0.33	0.36	0.38
Electrical energy consumed	0.07	0.08	0.06	0.08	0.08
<b>Water Usage/Discharges</b>	<b>M<sup>3</sup></b>	<b>M<sup>3</sup></b>	<b>M<sup>3</sup></b>	<b>M<sup>3</sup></b>	<b>M<sup>3</sup></b>
Town's water consumed	0.28	0.28	0.28	0.28	0.48
River/Borehole water abstracted	1.36	1.47	1.16	1.33	1.50
Effluent discharged to sewer	0.37	0.40	0.39	0.74	0.96
<b>Gas Usage</b>	<b>Cu ft</b>	<b>Cu ft</b>	<b>Cu ft</b>	<b>Cu ft</b>	<b>Cu ft</b>
Gas consumed	10.02	8.63	7.13	5.71	10.80

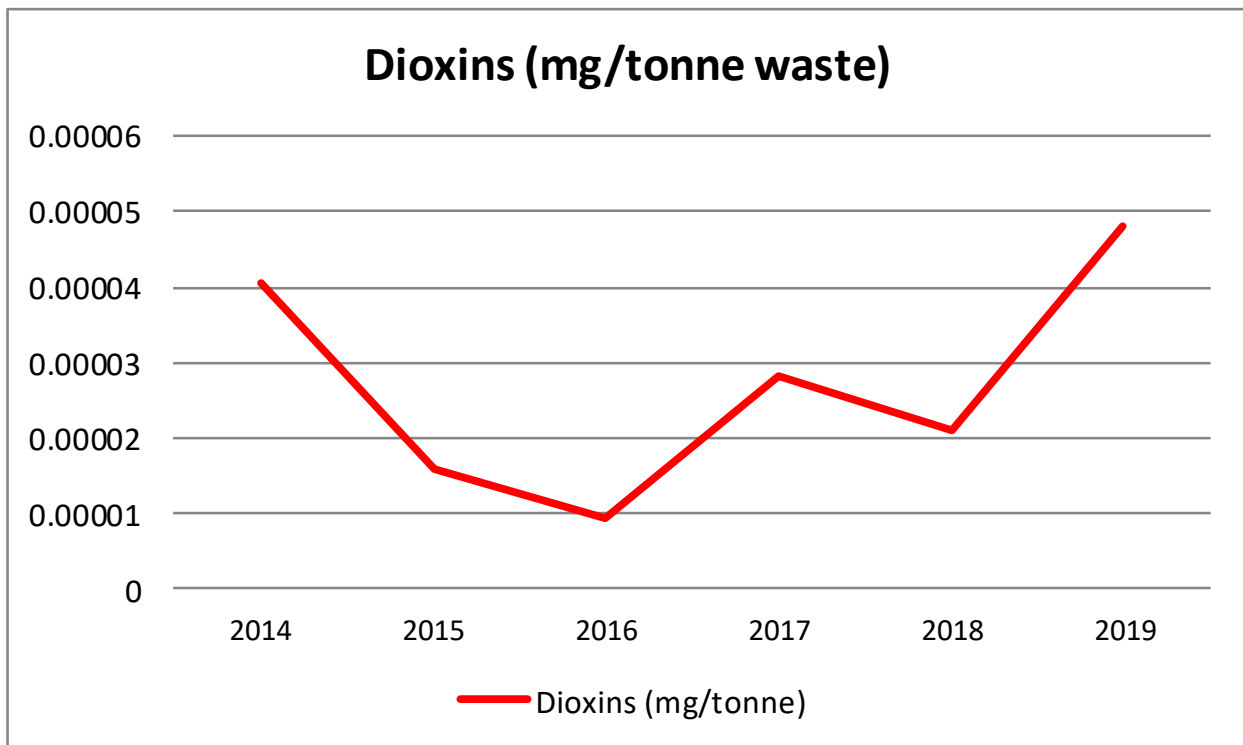
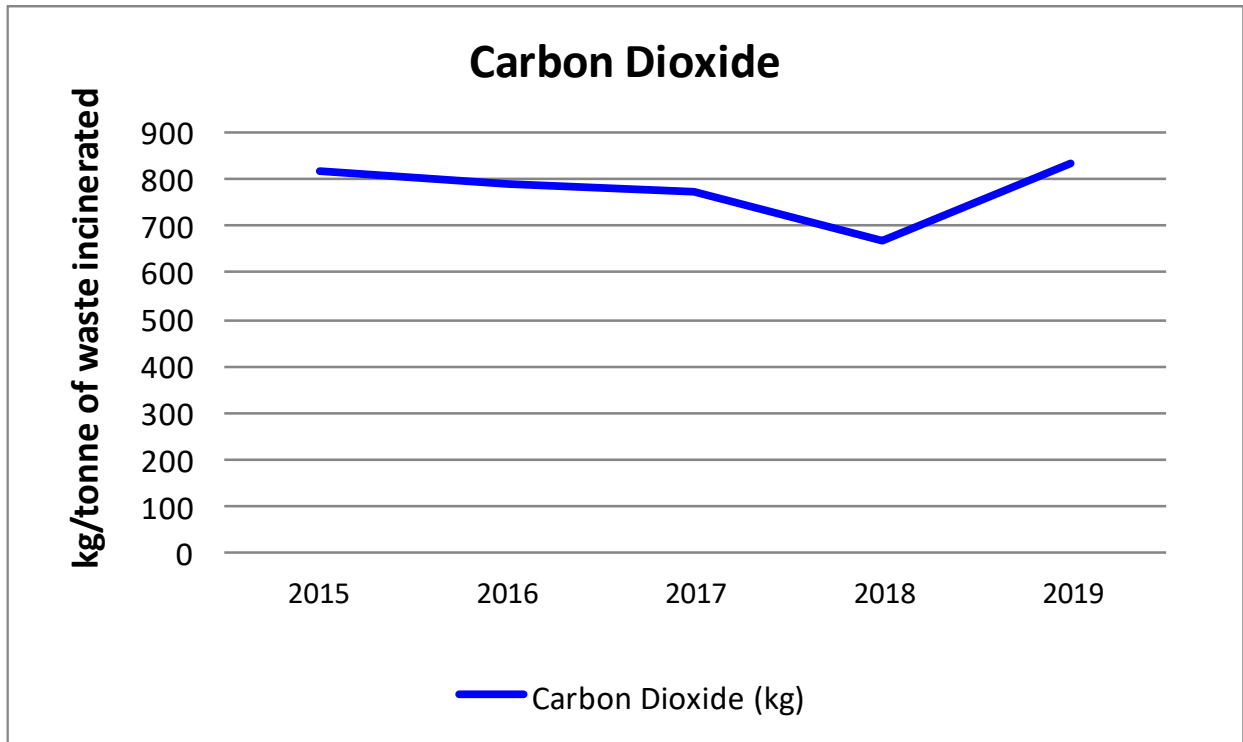
## Water use trends 2019



## APPENDIX 4 – EMISSION PERFORMANCE (last 5 years)







## APPENDIX 5 - SAFETY HEALTH AND ENVIRONMENT IMPROVEMENT PLAN 2019

#	Objective	Project Description	Due date	Who?	Information / Comment	Status
1	Safety Improvement	Review pedestrian safety; possible improvements including safe refuges at places of poor visibility, improved crossings, hand railings to prevent straying off paths, etc.	Dec-19	MS/DL	Complete.	✓
2	Safety Improvement	Tipping door physical barrier feasibility study as a further improvement following the loading shovel incident Aug 2017	Nov-19	BM	Complete.	✓
3	Safety Improvement	Site Security review	Sep-19	KS	Complete.	✓
4	Health Improvement	Office ventilation improvements on levels 2 and Level 3	Sep-19	RS/DC	Complete.	✓
5	Safety Improvement	Tins bay crane safety/access control to ensure safety of persons below the ash crane when loading tins.	Mar-19	DL	Complete.	✓
6	Environmental Improvement	Vary the site Permit to change the CO ELV to a 10 minute average	Feb-19	MS/RS	Complete.	✓
7	Safety Improvement	Arc flash study to confirm the standards needed for workwear for HV/LV	Dec-19	CD	Complete	✓
8	Environmental Improvement	De-aerator feasibility study to reduce chemical usage in the steam system and maximise protection within the boiler system	Dec-19	CD/BM	Complete.	✓
9	Environmental and Health Improvement	Odour suppression to be added to the tipping hall following summer 2018 odour complaints	Apr-19	RS/BM	Complete.	✓
10	Environmental and Health and Safety Improvement	Business continuity desktop exercise to provide an awareness of how best to manage a significant event affecting the business	Apr-19	ALL	Complete.	✓
11	Environmental Improvement	Increase size of ammonium hydroxide tank, to provide a more reliable stock level	Dec-19	DP	Complete.	✓
12	Environmental Improvement	PAC dosing feasibility study and upgrade	Sep-19	BM	Complete.	✓
13	Safety Improvement	Client crew toilet facility relocate to before weighbridge to minimise pedestrians accessing the apron and tipping hall areas	Mar-19	RS/DL	Complete.	✓
14	Accident reduction	Review/improve onsite car parking	Dec - 19	KS/BM	Complete.	✓

## APPENDIX 6 OBJECTIVES AND TARGETS FOR 2020

### 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.

### Targets:

Env 1	Maintain breaches of permit at 2 or less for the year		H&S 1	Improve on 2019 levels of injuries to persons	
Env 2	Improve energy efficiency in office and operational areas		H&S 2	Reduce the injury frequency rate for staff and contractors in line with injury target for the year. Target 4.0/100,000 hours worked	
Env 3	Maintain valid environmental complaints to 1 for the year		H&S 3	Reduce RIDDOR reportable injuries to zero for the year	
Env 4	Prevent pollution risk to watercourses		H&S 4	To maintain near miss reporting at its current level. Target is 144 or more 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 2020

#	Objective	Project Description	Due date	Who?	Information / Comment	Status
1	Health	Air conditioning for HWRC cabins to improve working environment in hot weather	Jun-20	Projects	Simple install provided infrastructure can handle the additional loading	
2	Safety	HWRC Signage improvements to clarify bays and zones for staff and MOPs	Nov-20	Waste	Needs more info from HWRC supervisors, reduction and simplification to help MoPs	
3	EHS	New HWRC kiosk at Public Site, existing is old and in need of improvement	Dec-20	Projects	TBC	
4	Environment	BREF - second trial of NOx and SNCR to gather further data on reliability of the relation between the SNCR dosing and resulting NOx values	Oct-20	CPC	TBC	
5	Safety	Assess the need to raise bunker wall height to meet current standard for handrails 1100mm. Existing is 900-950mm which does not give adequate protection in all cases	Dec-20	Projects	Build-up concrete wall or fit railing.	
6	Health and safety	Fit CCTV to the ash cab to improve ergonomics and grab control for drivers	Oct-20	Projects	Installation - should enable operators to drive the crane whilst maintaining good posture, thus reducing risk of musculoskeletal disorders	
7	Environment	Bulk water tank over flow outlet flows to the river. Although this is essentially clean water, as it is process effluent, it should be diverted to sewer instead of river.	Sep-20	Projects	Pipework and valves etc. - consider discharge consent volume change?	
8	EHS	Implement ISO45001 to replace the OHSAS18001 standard that is being phased out	May-20	EHS	Needs to be done as we MUST obtain the new standard by the required time	
9	Safety	Consider installation of further traffic calming measures	Jun-20	Projects	Visual or physical reminders for all drivers when they use excessive speed	

## **GLOSSARY OF TERMS**

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