



Annual Performance Report For Lakeside EFW Ltd Permit EA/EPR/BT7116IW/V002 2018



Introduction

PPC permit EA/EPR/BT7116IW/V002 requires the following requirements to be reported on annually each year:-

4.2.2 A report or reports on the performance of the activities over the previous year shall be submitted to the agency by 31 January (or the date agreed in writing by the agency) each year. The report shall include as a minimum:

- a) A review of the results of the monitoring and assessment carried out in accordance with the permit including an interpretive review of the data;*
- b) The annual production/ treatment data set out in schedule table 5.2; and*
- c) The performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule.*
- d) The functioning and monitoring of the incineration plant in a format agreed with the Environment Agency. The report shall as a minimum requirement (as required by article 12(2) of the waste incineration Directive) give an account of the running of the process and the emissions into air and water compared with the emissions standards in the WID*

Form S3/0/1 was submitted separately to the Environment agency. The totals for the year are summarised in the table below.

Total waste incinerated (Tonnes)	Total bottom ash produced (Tonnes)	% Bottom ash recycled (Tonnes)	Total APC residues produced (Tonnes)	% APC residue recycled	% Carbon in the bottom ash (TOC) average
431278	77619	100	12478	99.59	0.68

The design capacity of the plant is 411000 tonnes a year.

$$\frac{431278}{411000} \times 100 = 104.93 \% \text{ of design capacity}$$

The percentage bottom ash for the year is 18.00 % of the total waste incinerated with 2.89 % APC residue. All of the bottom ash and more than 99 % of the APC were recycled. The APC has been recycled as an aggregate pellet used in the production of concrete blocks. This equates to a landfill reduction of greater than 99 % of the total waste incinerated.

There is less than 1% total organic carbon in the bottom ash which is within the 3% limit set in WID and demonstrates an efficient burn process.

Downtime and Abnormal Operation

Form S3/0/2 and S3/0/3 were submitted separately to the Environment agency. The totals for the year are summarised below.

	Line A1		Line A2	
	Cumulative Hours of Abnormal operation	Hours of non operation	Cumulative Hours of Abnormal operation	Hours of non operation
January	0	0	0	0.3
February	0	42.5	0	0
March	0	471	0	0
April	6	0	3	421
May	0	0	0	0
June	0	0	0	0
July	0	0	0	61
August	4	0	2	0
September	0	5	0	0
October	3.2	0.1	1.7	21.8
November	0	4	0	0
December	0	0	0	0
Total	13.2	522.6	6.7	504.1
% Availability		94.03		94.24

The downtime for the plant has been minimal and availability has been above 94%. The shutdowns above include minor shutdowns to clear blockages and two maintenance outages which are essential to maintain the running of the plant.

There were 13.2 hours of abnormal operation for A1 and 6.7 for A2 during 2018. These were mainly due to minor CEMs faults.

Noise and Vibration

Form S3/N/1 was submitted separately to the Environment agency. The totals for the year are summarised below.

The levels of noise emitted from the site shall not exceed the limits in table 3.4.1 as measured or assessed at agreed locations specified in the table.

Table 3.4.1 Noise Emission Levels (Permit limits)			Maximum measured value
Location	L _{Aeq} , 5 minute dB(A)		L _{Aeq,T} (dB(A))
Pippins School	39	Bi-Annual	37.4
The Hawthorns	39	Bi-Annual	37.4
Myrtle Close	39	Bi-Annual	37.4

Recorded noise levels were lower than the permitted values. The highest values recorded were with the ACC units on 100% duty.

Odour

There have been no odour releases from site and no odour complaints received during 2018.

Emissions

Forms S3/A/1 were submitted separately to the Environment agency for lines A1 and A2. The average recorded emission values for the year are summarised below for the continuous monitoring.

Substance	Daily emission limit mg/Nm ³	Average annual emission mg/Nm ³ Line A1	Average annual emission mg/Nm ³ Line A2
NO _x	200	145.71	151.2
HCl	10	2.42	1.75
SO ₂	50	1.63	1.35
CO	50	3.09	1.75
VOC	10	0.63	0.71
Ammonia	No limit	0.20	0.10
Active Dust	10	1.33	1.74
Active Dry O ₂	No limit	8.86 %	8.55 %
HF	2	0.021	0.026
CO ₂	No limit	7.93 %	7.23 %

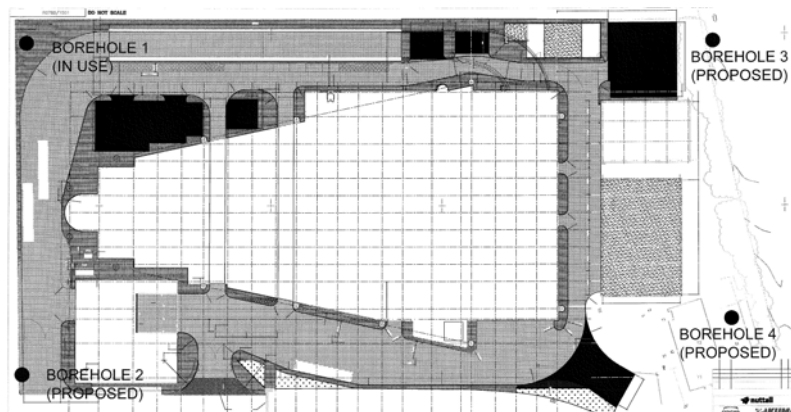
There were the following emission exceedances which were reported to the agency during 2018:

- 12th April 2018 CO 1555.96 mg/m³ Daily 52.69 mg/m³
- 12th August 2018 NO_x 230.62 mg/m³

This was due to very wet waste being delivered to site creating poor burning conditions. Grate speeds were slowed to allow the waste to dry on the grate.

Boreholes

Borehole results for 2018 showed no anomalies from previous years readings. The sample points occupy the 4 corners of the site.



Form S3/P/1 is for the ninth year of running. Comparing the performance data with previous year's data, it shows a slight increase in the amount of electricity used per tonne incinerated. There was a short outage on the turbine. Slightly less lime was used but still showing low amounts of acid gasses discharged through the stack. The amount of carbon used remaining about the same as previous years. The water usage is on a par with previous years.

Parameter	2010	2011	2012	2013	2014	2015	2016	2017	2018
Water usage	0.2111	0.1939	0.188	0.115	0.030	0.116	0.202	0.201	0.201
Energy usage	0.068	0.063	0.069	0.066	0.069	0.065	0.066	0.067	0.068
Steam exported	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Lime used	0.0118	0.0115	0.011	0.0119	0.0124	0.0123	0.0119	0.0113	0.0113
Activated carbon used	0.0004	0.0005	0.0005	0.0005	0.0006	0.0006	0.0006	0.0006	0.0006

Units are in Tonnes/ Tonne incinerated or MWhr/ Tonne incinerated for energy.

REPORTING OF MONITORING DATA

Monitoring summary for the 12 months ending 31 December 2017

Operator: Lakeside Energy from Waste Ltd.

Permit Number: EA/EPR/BT7116IW/V002

Location: Colnbrook, Slough

Incinerator No. A1 and A2

Parameter	Quantity	Units	Performance	Units
Waste Incinerated	431278	tonnes		
Water usage	90939	tonnes	0.201	tonnes/tonne incinerated
Energy usage	29396	MWh	0.068	MWh/tonne incinerated
Steam exported	0	tonnes	N/A	tonnes/tonne incinerated
Total lime used	4862	tonnes	0.0113	tonnes/tonne incinerated
Total activated carbon used	262	tonnes	0.0006	tonnes/tonne incinerated

Permit Number : BT7116IW

Operator : Lakeside EFW Ltd

Facility :


Form Number : performance 1

Reporting of other performance indicators for the period.....01/01/18 to 31/12/18.....

Parameter	Result
Operating hours for the year	8760
Number of periods of abnormal operation	Line A1 - 5 Line A2 - 4
Cumulative hours of abnormal operation for this calendar year	Line A1 13.2 Line A2 6.7

Operator's comments :

The 2018 operating hours were 8760 hours. There were two outages which were staggered allowing continuous running throughout the year.

Signed 
(authorised to sign as representative of Lakeside EFW Ltd)

Date.....16/01/19.....