



Annual Performance Report For Lakeside EFW Ltd Permit EA/EPR/BT7116IW/V002 2016



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
435844.54	80033.4	100	12653.58	100	0.55

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

$$\frac{435845}{411000} \times 100 = 106.05 \% \text{ of design capacity}$$

The percentage bottom ash for the year is 18.36 % with 2.90 % APC residue. All of the bottom ash is recycled and whereas previously, APC has gone to landfill; this year is the first year 100 % has been recycled as an aggregate pellet used in the production of concrete blocks. This equates to a landfill reduction of 100% 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
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	0	50	0	0
July	0	0	0	0
August	0	0	0	0
September	0	0	0	118
October	0	399	0	442
November	0	0	0	0
December	0	0.25	0	0
Total	0	449.25	0	560
% Availability		94.89		93.62

The downtime for the plant has been minimal and availability has been above 93%. The shutdowns above include major outage work in October which is essential to maintain the running of the plant.

There were 0 hours of abnormal operation during 2016.

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	37.3
The Hawthorns	39	Bi-Annual	37..3
Myrtle Close	39	Bi-Annual	37.2

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 2016.

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
NOx	200	134.95	172.43
HCl	10	1.67	1.86
SO ₂	50	2.19	2.03
CO	50	3.96	2.63
VOC	10	0.57	0.58
Ammonia	No limit	0.16	0.18
Active Dust	10	0.75	1.08
Active Dry O ₂	No limit	8.32%	8.71%
HF	2	0.13	0.95
CO ₂	No limit	11.04 %	11.46%

There were the following emission exceedances which were reported to the agency during 2016:

- 3rd June 2016 VOC 20.21 mg/m³
- 7th September 2016 VOC 21.30 mg/m³

On both occasions the VOC was exceeded on start up. Both exceedances were above the limit of 20 mg/m³. The daily average of 10 mg/m³ was not breached on either day.

Form S3/P/1 is for the seventh year of running. Comparing the performance data with previous year's data, it shows a slight decrease in the amount of electricity used per tonne incinerated. 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 has increased greatly now that a new calibrated meter has been fitted.

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

REPORTING OF MONITORING DATA

Monitoring summary for the 12 months ending 31 December 2014

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	432138	tonnes		
Water usage	87153	tonnes	0.202	tonnes/tonne incinerated
Energy usage	28362	MWh	0.066	MWh/tonne incinerated
Steam exported	0	tonnes	N/A	tonnes/tonne incinerated
Total lime used	5153	tonnes	0.0119	tonnes/tonne incinerated
Total activated carbon used	275	tonnes	0.0006	tonnes/tonne incinerated