



**Annual Performance Report
For Lakeside EFW Ltd
Permit EA/EPR/BT7116IW/V002
2014**



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)
453552	85490.88	100	14107.46	77.18	0.68 % For three samples

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

$$\frac{453552}{411000} \times 100 = 110.4 \text{ \% of design capacity}$$

The percentage bottom ash for the year is 18.85 % with 3.11 % APC residue. All of the bottom ash is recycled and whereas previously, APC has gone to landfill; this year around 77% has been recycled as a product in 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
February	0	0	0	0
March	0	0	0	0
April	0	0	0	0
May	0	0	0	0
June	4	0	0	0
July	0	0	0	96
August	0	9	0	0.5
September	0	0	0	0
October	0	0	0	138.5
November	0	212	0	0
December	0	0	0	4
Total	4	221	0	239
% Availability		97.48		97.275

The downtime for the plant has been minimal and availability has been above 97%. The shutdowns above include minor outage work which is essential to maintain the running of the plant.

There were 4 hours of abnormal operation during June on line A1 when the carbon feeder failed. Carbon was manually dosed while the feeder was being cleared of a blockage which turned out to be a Stanley knife.

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	37.1
The Hawthorns	39	Bi-Annual	37.1
Myrtle Close	39	Bi-Annual	37.6

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 2014.

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	164.14	172.16
HCl	10	2.37	2.13
SO ₂	50	2.08	2.13
CO	50	1.90	1.30
VOC	10	0.36	0.67
Ammonia	No limit	0.08	0.03
Active Dust	10	0.36	0.27
Active Dry O ₂	No limit	8.72%	8.61%
HF	2	0.02	1.34
CO ₂	No limit	11.44 %	10.73 %

There were no emission exceedences during 2014.

Form S3/P/1 is for the fourth year of running. Comparing the performance data with previous years data, it shows a slight increase in the amount of electricity used per tonne incinerated. Slightly more lime and carbon were used which is mirrored by the 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 decreased greatly now that a new calibrated meter has been fitted. Boilers were not drained during 2014 saving more water.

Parameter	2010	2011	2012	2013	2014	Units
Water usage	0.2111	0.1939	0.188	0.115	0.030	Tonnes/tonne incinerated
Energy usage	0.068	0.063	0.069	0.066	0.069	MWh/tonne
Steam exported	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	Tonnes/tonne incinerated
Activated carbon used	0.0004	0.0005	0.0005	0.0005	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	453552	tonnes		
Water usage	13444	tonnes	0.030	tonnes/tonne incinerated
Energy usage	31183	MWh	0.069	MWh/tonne incinerated
Steam exported	0	tonnes	N/A	tonnes/tonne incinerated
Total lime used	5638	tonnes	0.0124	tonnes/tonne incinerated
Total activated carbon used	287	tonnes	0.0006	tonnes/tonne incinerated