

### 2014 Environmental Objectives and Targets

Item No.	Environmental Objective
1	<p>To better by 2% the KWh of energy per KWh of production against that of 2013 results. 2014 target = 47KW energy per KWh of production.</p> <p>51.0KW/KW of production was achieved in 2014 therefore the target was not met however it was affected by a reduction in production volume in mid 2014.</p>
2	<p>Reduce the scrap level from the 2013 figure of 1.09% to 0.85% in 2014.</p> <p>The actual result achieved in 2014 is 0.68% therefore the target has been met.</p>
3	<p>Maintain total waste at around the same level as that of 2013 therefore the target for 2014 will be a performance indicator of &lt;0.0651712.</p> <p>The performance indicator for total waste between 1<sup>st</sup> January and 31<sup>st</sup> December 2014 is 0.0781783 therefore the target has not been met therefore it will be targeted for improvement in 2015.</p>
Item No.	Environmental Tracking Items
1	<p>Maintain total trade effluent discharge at around the same level as that of 2013 therefore in 2014 it will be targeted for a maximum of 21,913m<sup>3</sup> or a performance indicator of around 1.1290533.</p> <p>In quarter 4 2014, the total effluent discharged amounted to 40,717m<sup>3</sup> or a performance indicator of 2.5245194 therefore the target has not been met. It will be targeted for improvement in 2015.</p>
2	<p>Maintain Lead in effluent results at around the same level as that of 2013. The mass Lead to effluent in 2013 was an annual total of 59.8124kgs therefore in 2014 it will be targeted for &lt;59.8124kgs.</p> <p>The mass Lead emission to sewer for the period 1<sup>st</sup> January to 31<sup>st</sup> December 2014 is 181.2768kgs or a performance indicator of 0.0112394 therefore the target has not been met. It will be targeted for improvement in 2015.</p>
3	<p>Maintain the 2013 total water per unit output at around the same level therefore by the end of 2014 the target is a performance indicator of around 4.5238391.</p> <p>In the period 1<sup>st</sup> January and 31<sup>st</sup> December 2014, the performance indicator for total water is 3.7313187 therefore the target has been met. However, the last three quarters results of 2014 have been used to calculate an average water consumption for quarter one due to a malfunction with the Dwr Cymru water meter.</p>

## 2015 Environmental Objectives and Targets

Item No.	Environmental Objective
1	<i>To better by 4% the KWh of energy per KWh of production against that of 2014 results. 2015 target = 49KW energy per KWh of production.</i>
2	<i>Reduce the scrap level from the 2014 figure of 0.68% to 0.5% in 2015.</i>
3	<i>Maintain total waste at around the same level as that of 2013 therefore the target for 2015 will be a performance indicator of &lt;0.0651712.</i>
4	<i>Maintain total trade effluent discharge at around the same level as that of 2013 therefore in 2015 it will be targeted for a maximum of 21,913m<sup>3</sup> or a performance indicator of around 1.1290533 as the volume of trade effluent significantly affects the mass of Lead and COD.</i>
Item No.	Environmental Tracking Items
1	<i>Maintain the 2013 total water per unit output at around the same level therefore by the end of 2015 the target is a performance indicator of around 3.9280113.</i>
2	<i>Maintain Lead in effluent results at around the same level as that of 2013. The mass Lead to effluent in 2013 was an annual total of 59.8124kgs therefore in 2015 it will be targeted for &lt;59.8124kgs.</i>



## ENERGY MANAGEMENT

### ENERGY MONITORING AND TARGETING

Yuasa Battery (UK) Ltd has improved its energy efficiency by 57% since its energy monitoring and improvements started in 2004.

In 2014, Yuasa has continued to internally monitor energy usage; we now have full confidence in the readings we are obtaining and our partner energy monitoring company has assisted in reinforcing our shut-down procedures however no large projects have been undertaken. In 2015 we do have a large project planned that will significantly reduce our energy and costs.

We still continue to strive to push energy costs even lower through improved efficiency procedures and more controlled management. The company's main objectives are to raise awareness, improve efficiency levels, reduce costs and keep within the Climate Change Levy (CCL) milestone targets previously set before the company became exempt from it.

The two lists below indicate some of the projects which were undertaken in 2014, as well as proposed further actions for 2015. These projects were identified in order to further drive down costs and improve environmental management and monitoring.

#### ***Improvements completed in 2014:***

- Continued to monitor and introduce energy reduction projects in tandem with our energy monitoring provider.
- Installed a UPS that will allow peak loads to be taken from part of the factory.

We obviously continue to repair any compressed air leaks in a timely manner and monitor our shut down procedures continuously.

#### ***In addition, the following is planned in 2015:***

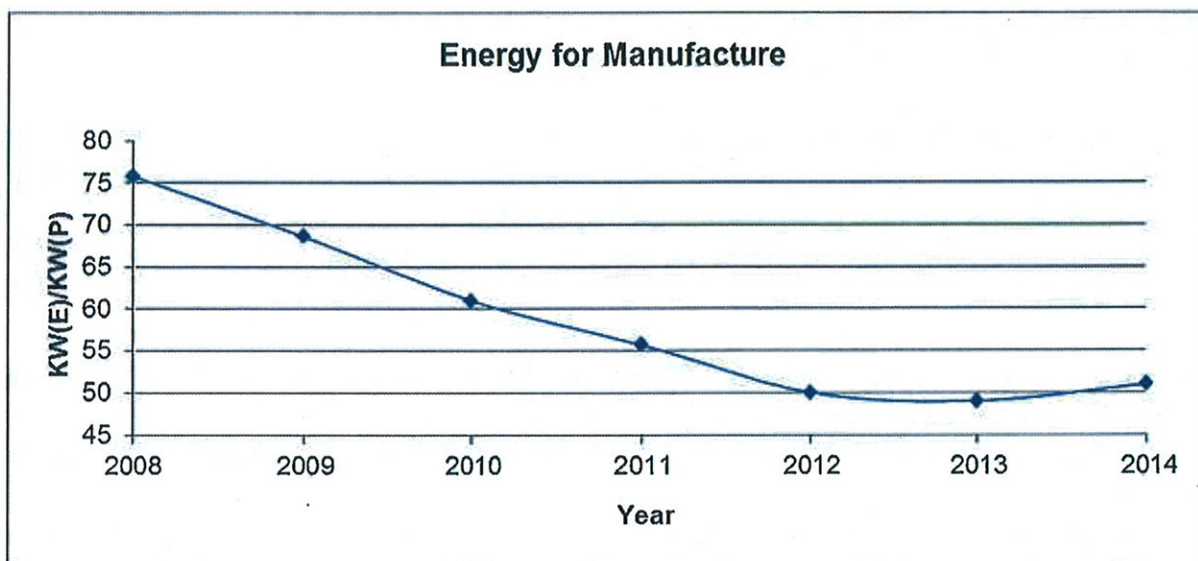
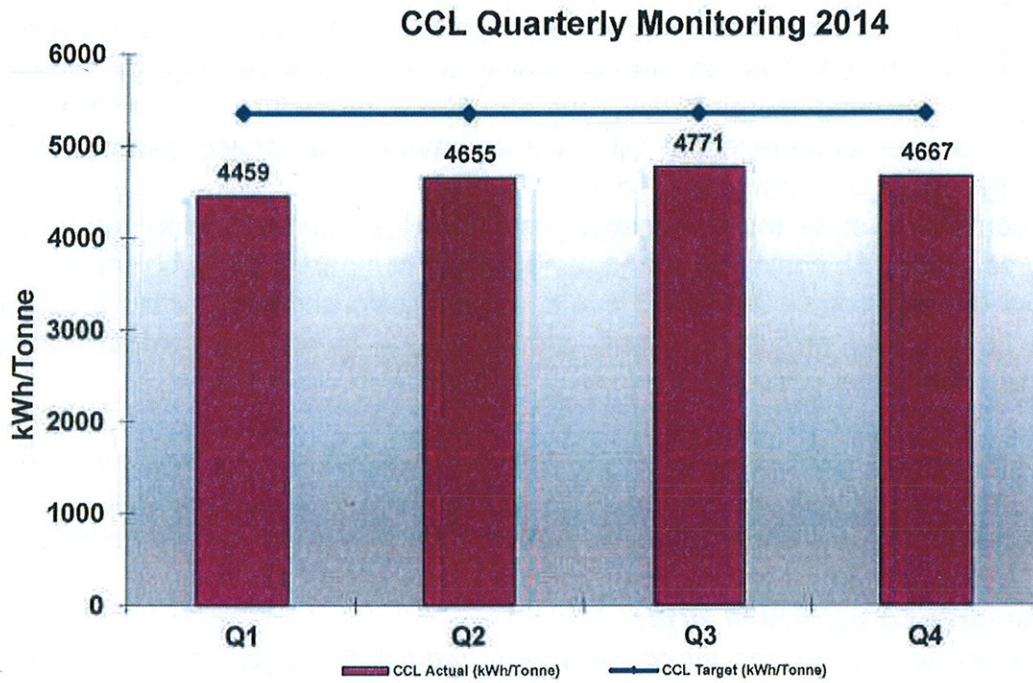
- To install new lighting in areas of the factory still using SON equipment at factory Nos. 1, 3, 4 & 5 as well as external factory lighting.
- Return our energy use to the same level as 2013 by ensuring good shut downs in all areas.

In 2013 our CCL target reduced by 265KWh/T however we still achieved a saving of 2888KWh/tonne in 2014 against 3887KWh/tonne in 2013.

Below is a graph showing the company CCL monitoring throughout the CCL year which operates from January to December.

The second graph shows the reduction in KWh of energy used to manufacture KWh of production (Battery capacity measurement) over the last 5 years which shows a reduction of 35% in the energy required to manufacture 1KW of battery power. However in 2014 we lost some of the improvements we had made in previous years

which is considered to be due to a reduction in manufacturing output that occurred during the middle of the year resulting in our base load of energy not being covered by the manufacturing output.



**Yuasa Battery (UK) Ltd - Standard Industrial Classification of Economic Activities (SIC) Code from 2007 - 27.20**  
**Permit Ref EPR/BV5386IX - Hazardous Waste Registration No. MAC076**

**Hazardous/Non-Hazardous Waste - Actual Weights to be Reported**

Waste Type	EWC Code	D & R Code	SIC Code	Q1	Q2	Q3	Q4	2014 Total	Unit	Classification	Carrier	E.A Cert No.	Exp. Date
Lead Oxide incl. Paste and Stack Dust	06 03 15	R4	31.40	53	57	38	21	169	Tonnes	Hazardous	Matlock/H.J. Enthoven	NEI217	14/07/2015
Lead Plates, Cells & Off cuts	06 04 05	R4	31.40	36	82	29	23	170	Tonnes	Hazardous	Matlock/H.J. Enthoven	NEI217	14/07/2015
Sump Sludge	06 05 02	R4	31.40	2	3	2	3	10	Tonnes	Hazardous	Matlock/H.J. Enthoven	NEI217	14/07/2015
Liquid Resins (Styrene/methyl methacrylate)	08 04 09	R13	31.40	0	0.2	0	0	0.2	Tonnes	Hazardous	Castle Waste Services	CB/VN5271YZ	26/03/2016
Lead Dross	10 04 02	R4	31.40	90	93	121	127	431	Tonnes	Hazardous	Matlock/H.J. Enthoven	NEI217	14/07/2015
Waste Oil/Water/Antifreeze	13 01 01	R13	31.40	0	1.28	0	0	1.28	Tonnes	Hazardous	Castle Waste Services	CB/VN5271YZ	26/03/2016
Waste Cardboard/Paper	15 01 01	R3	27.20	10.85	6.99	5.68	5.14	28.363	Tonnes	Non Hazardous	Adrian Lewis	CB/CP3912DT	16/03/2016
Waste Plastic	15 01 02	R5	27.20	5.49	6.99	4.829	0	17.309	Tonnes	Non Hazardous	KP Plastic Recycling	CB/FE5743TT	16/03/2016
Waste Wood	15 01 03	R3	27.20	21.7	20.91	6.95	4.38	53.64	Tonnes	Non Hazardous	WestGate Pallets Ltd	CB/ZM3550DA	03/07/2016
Polypropylene Red Lead IBC. (Bag and Sealed metal drum)	15 01 10	D15	31.40	0	0	0	0	0	Tonnes	Hazardous			
Waste Metal Resin Containers	15 01 10	D9	31.40	0	0.56	0	0	0.56	Tonnes	Hazardous	Castle Waste Services	CB/VN5271YZ	26/03/2016
Used Filters Containing Lead/Oil	15 02 02	D9	31.40	0	0.945	0	0	0.945	Tonnes	Hazardous	Castle Waste Services	CB/VN5271YZ	26/03/2016
Acid/Glassmat	15 02 02	D15	31.40	0	0	0	0	0	Tonnes	Hazardous	Castle Waste Services	CB/VN5271YZ	26/03/2016
Waste Oil Absorbent Materials	15 02 02	R13	31.40	0	0.54	0	0	0.54	Tonnes	Hazardous	Castle Waste Services	CB/VN5271YZ	26/03/2016
Lead Cell Test, Chloride and Iron Waste (Water Plant)	16 05 06	D15	31.40	0.035	0	0	0	0.035	Tonnes	Hazardous	Natural Solutions	CB/FE5907TW	16/05/2017
Batteries	16 06 01	R4	31.40	113	7	22	21	163	Tonnes	Hazardous	Matlock/H.J. Enthoven	NEI217	14/07/2015
Dilute Sulphuric Acid	16 06 06	D9	31.40	54	0	27	27	108	Tonnes	Hazardous	Qualitech Env. Services	CB/UE5701TV	13/05/2015
Spent Fire Extinguishers	17 04 07	R10	31.40	0	0	0	0	0	Tonnes	Non Hazardous	Blackwood Fire	CB/JP3213JH	15/02/2016
Fluorescent Tubes and Lamps	20 01 21	R13	31.40	0.07	0	0.08	0	0.15	Tonnes	Hazardous	A N Supplies Ltd	NPP399	26/02/2015
Waste Metals	20 01 40	R4	27.20	3.54	1.09	0	1.26	5.89	Tonnes	Non Hazardous	Adrian Lewis	CB/CP3912DT	16/03/2016
General Waste	20 03 01	D1	27.20	26.54	29	20.46	24.32	100.32	Tonnes	Non Hazardous	Veolia ES (UK) Ltd	CB/FE5190ST	21/12/2017
<b>Weights of Reportable Hazardous and Non-Hazardous Wastes</b>				<b>416.225</b>	<b>310.208</b>	<b>276.699</b>	<b>257.1</b>	<b>1260.232</b>	<b>Tonnes</b>				

**Non-Hazardous Waste Reportable as Below the Reporting Threshold (brt)**

Waste Type	EWC Code	D & R Code	SIC Code	Q1	Q2	Q3	Q4	2014 Total	Unit	Classification	Carrier	E.A Cert No.	Exp. Date
Sharps. (E)	18 01 01	D10	27.20	0.0025	0.0025	0.0025	0.0025	0.01	Tonnes	Non Hazardous	Cathedral Leasing	CB/XN5813TD	28/07/2015
Used Swabs, Dressing etc. (E)	18 01 04	D10	27.20	0.002	0.002	0.002	0.002	0.008	Tonnes	Non Hazardous	Cathedral Leasing	CB/XN5813TD	28/07/2015
Sanitary Waste (E)	20 01 99	D10	27.20	0.002	0.002	0.002	0.002	0.008	Tonnes	Non Hazardous	Cathedral Leasing	CB/XN5813TD	28/07/2015
Discarded WEEE.	20 01 36	R4	27.20	0	0.65	0	0	0.65	Tonnes	Non Hazardous	Adrian Lewis	CB/CP3912DT	16/03/2016
<b>Weights of Non-Hazardous Waste Below the Reporting Threshold</b>				<b>0.0065</b>	<b>0.6565</b>	<b>0.0065</b>	<b>0.0065</b>	<b>0.676</b>	<b>Tonnes</b>				
<b>Total Hazardous Waste Weight</b>				<b>348.105</b>	<b>245.625</b>	<b>239.08</b>	<b>222</b>	<b>1054.71</b>	<b>Tonnes</b>				
<b>Total Non-hazardous Waste Weight</b>				<b>68.1265</b>	<b>65.3395</b>	<b>37.6255</b>	<b>35.1065</b>	<b>206.198</b>	<b>Tonnes</b>				
<b>Total of All Waste</b>								<b>1260.908</b>	<b>Tonnes</b>				
<b>Hazardous Waste Transferred for Disposal</b>								<b>109.54</b>	<b>Tonnes</b>				
<b>Hazardous Waste Transferred for Recovery</b>								<b>945.17</b>	<b>Tonnes</b>				
<b>Non-Hazardous Waste Transferred for Disposal</b>								<b>100.346</b>	<b>Tonnes</b>				
<b>Non-Hazardous Waste Transferred for Recovery</b>								<b>105.852</b>	<b>Tonnes</b>				
<b>Net Total Waste Produced</b>								<b>209.886</b>	<b>Tonnes</b>				

**Performance Indicators**  
 Cumulative Battery Tonnage  
 Q1 - 4769.302  
 Qs 1 & 2 - 8508.28  
 Qs 1 to 3 - 12278.93  
 Qs 1 to 4 - 16128.614

Non-hazardous waste weights reportable if above a 5 tonne threshold but record brt if below.  
 All hazardous waste to be reported regardless of weight.

REPI - Resource Efficiency Physical Index  
 EWC Code - European Waste Catalogue Code  
 D & R Code - Disposal and Recovery Code  
 E - Estimate based on 2007 figures (carrier does not weigh waste)

**NB. Waste Transfer and Consignment Notes must show the appropriate codes and Permit Number as highlighted above**

