

# Carbon Emission Data Verification 2011

<b>Date of Review</b>	January 26, 2011																																
<b>Scope / purpose of Review</b>	The purpose of this review is to verify the Carbon Emission data produced via periodic meter readings, utility billing and purchase orders for the period January 1, 2010 to December 31, 2010 and to approve the data for publication in the Company's Annual Report and website.																																
<b>Evidence</b>	<p>The figures stated in this report are taken from a number of verifiable sources as shown below.</p> <table border="1"> <thead> <tr> <th>Product:</th> <th>Information Source:</th> <th>Responsible Person:</th> </tr> </thead> <tbody> <tr> <td colspan="3"><b>Scope 1 – Direct Emissions</b></td> </tr> <tr> <td><b>Gas Oil</b></td> <td>Goods Received Notes</td> <td>Buying Department</td> </tr> <tr> <td rowspan="2"><b>Natural Gas</b></td> <td>Meter Readings*</td> <td>Office Manager</td> </tr> <tr> <td>Utility Bills (<i>Check</i>)</td> <td>Accounts Department</td> </tr> <tr> <td rowspan="2"><b>Diesel (DERV)</b></td> <td>Fuel Cards</td> <td>Plant Department</td> </tr> <tr> <td>Account Data</td> <td>Accounts Department</td> </tr> <tr> <td rowspan="2"><b>Petrol</b></td> <td>Fuel Cards</td> <td>Plant Department</td> </tr> <tr> <td>Account Data</td> <td>Accounts Department</td> </tr> <tr> <td colspan="3"><b>Scope 2 – Indirect Emissions (electricity &amp; import)</b></td> </tr> <tr> <td rowspan="2"><b>Electricity</b></td> <td>Meter Readings*</td> <td>Office Manager</td> </tr> <tr> <td>Utility Bills (<i>Check</i>)</td> <td>Accounts Department</td> </tr> </tbody> </table> <p><i>*Where practicable meter readings are recorded monthly within all owned or operated offices, with utility bills used to check and verify data.</i></p>	Product:	Information Source:	Responsible Person:	<b>Scope 1 – Direct Emissions</b>			<b>Gas Oil</b>	Goods Received Notes	Buying Department	<b>Natural Gas</b>	Meter Readings*	Office Manager	Utility Bills ( <i>Check</i> )	Accounts Department	<b>Diesel (DERV)</b>	Fuel Cards	Plant Department	Account Data	Accounts Department	<b>Petrol</b>	Fuel Cards	Plant Department	Account Data	Accounts Department	<b>Scope 2 – Indirect Emissions (electricity &amp; import)</b>			<b>Electricity</b>	Meter Readings*	Office Manager	Utility Bills ( <i>Check</i> )	Accounts Department
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<b>Approach / Key Assumptions</b>	All values on the report were converted into a kgCO <sub>2</sub> e equivalent using accepted conversion factors set out by the Carbon Trust. A summary of the data is presented in the following table																																

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Description	Quantity:				Conversion Factor kgCO <sub>2</sub> /Unit	CO <sub>2</sub> e (Tonnes):				
	2008	2009	2010	2011		2008	2009	2010	2011	
Gas Oil (Litres)	3,254,268	2,535,083	1,374,923	1,632,811	2.762	8,988	7,002	3,798	4,510	
Natural Gas (m <sup>3</sup> )	20,256	26,994	6,163	4,667	2.009	41	54	12	10	
Diesel (Litres)	804,944	783,876	786,730	757,006	2.639	2,124	2,069	2,076	1,998	
Petrol (Litres)	47,260	82,900	96,652	92,988	2.304	109	191	223	214	
Electricity (kWh)	322,859	302,232	588,488	593,095	0.541	175	164	318	321	
	Total:						11,437	9,480	6,427	7,053
	Tonnes CO <sub>2</sub> e per £100,000 turnover						12.03	11.02	7.82	6.72

\*2011 data based on £105m turnover figure.

## Findings

The key findings were: -

- Gas oil use has increased slightly since 2011 due to increased ground work schemes (This is also reflected in the waste data), although remains much lower than in previous years when we were more active in the landfill sectors.
- Some fuel data had to be estimated due to problems accessing vehicle fuel card data via Arval. However this data is still accurate, based on financial accounts.
- Electric consumption at Durham office increased significantly due partly to a 30% increase in personnel and largely due to the use of electric heaters during early 2011 when the gas heating system was awaiting repair. (This also showed a significant reduction in gas use at the office.)
- Changes to fleet vehicle choice have resulted in a more petrol engine vehicles, however this has been offset by greater efficiencies brought about by the more stringent emission and efficiency criteria for vehicle selection.
- Turnover has increased by circa £20m more than offsetting additional the significant additional gasoil and small increase in electricity use.

## Reviewers

David Ridley BSc (Hons) MSc  
Environmental Advisor

Jonathan Cain BEng (Hons) MBA CEng MICE  
Director (QES)