



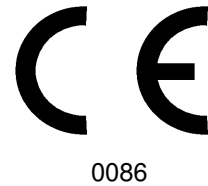
# Fly ash Test Report

United Kingdom

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**Aberthaw** Fly ash BS EN 450-1  
Fineness category:N, Loss on ignition category:A  
Monthly average data for **April 2011**

A) Physical and chemical properties of the fly ash sample

Test Property	Test result	BS EN 450-1
Fineness (%)	<b>15.6</b>	declared value 22.0
Sulfuric anhydride (%)	<b>0.2</b>	max 3.0
Loss on ignition (%)	<b>2.9</b>	0.0 to 5.0
Chloride (%)	<b>0.01</b>	max 0.1
Calcium oxide (%)	<b>3.3</b>	max 10.0
SiO <sub>2</sub> +Al <sub>2</sub> O <sub>3</sub> +Fe <sub>2</sub> O <sub>3</sub> (%)	<b>84.0</b>	min 70.0
Free Lime (%)	<b>0.32</b>	max 1.0
Acid soluble alkali (%)	<b>2.34</b>	max 5.0
Additional information:		
Declared particle density (kg/m <sup>3</sup> )	<b>2270</b>	

B) Physical properties of a 25:75 blend of the fly ash with a reference Portland cement

PC Source: **Ribblesdale**  
PC Initial setting time (min): **160**  
PC 28 day strength (MPa) **60.9**

Test Property	Test result	BS EN 450-1
Activity index @ 28 days	<b>83</b>	min 75
Initial Setting Time (min)	<b>220</b>	max 120min more than PC

Note: This report has been produced from data supplied by the manufacturer, Celtic Ash

For and on behalf of Lafarge Cement UK :

National Commercial Technical Manager