

d+b facades

**LIVERPOOL JOHN MOORES UNIVERSITY
JAMES PARSONS BUILDING PHASES 1 AND 2
ACTUAL ENERGY SAVINGS FROM OVERCLADDING**

Gas Consumption kWh													
Meter No	Jun-08	Jul-08	Aug-08	Sep-08	Oct-08	Nov-08	Dec-08	Jan-09	Feb-09	Mar-09	Apr-09	May-09	TOTAL
CD49289	109599	102860	84841	73328	346103	495127	448262	810796	776807	693732	504785	23045	4469285
Meter No	Jun-10	Jul-10	Aug-10	Sep-10	Oct-10	Nov-10	Dec-10	Jan-11	Feb-11	Mar-11	Apr-11	May-11	TOTAL
CD49289	inc in July	175834	inc in Oct	inc in Oct	350907	466045	525140	553017	200073	342649	189400	77,843	2880908

Assume that June-July meter readings are for hot water alone and thus baseline
Baseline = 108834 kWh per month
Heating energy consumption data = meter readings minus baseline

Heating energy consumption Jan - May 2009 prior to overcladding 2264995 kWh
 Cost of heating (£) at current average gas price 2.8p per kWh £63,420

Heating energy consumption Jan - May 2011 after overcladding 818812 kWh
 Cost of heating (£) at current average gas price 2.8p per kWh £22,927

Heating energy saving Jan - May = 1,446,183 kWh
Heating energy saving at 0.028p / kWh = £40,493
% saving on heating energy during this period = 64%

COMMENTARY:

1. This is comparing performance post-overcladding in one of the coldest winters for decades with the same period in a more representative winter. Energy savings will be further enhanced in a more typical winter
2. At the time of these meter readings the heating control strategy post-refurbishment was not optimised - this will yield additional heating energy savings

CONCLUSION - HEATING ENERGY SAVINGS OF 70% PER ANNUM ARE DELIVERABLE