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Cross Lane, Hoylandswaine

ENERGY REPORT – ADDENDUM

Application ref: 2017/0100

February 2018



Executive Summary

This report has been prepared by Award Energy Consultants on behalf of Conroy Brook Developments in relation to the proposed housing development of 10 residential properties at Cross Lane, Hoylandswaine.

It has been produced to address Barnsley Metropolitan Borough Council's planning requirements as outlined in Condition 12 of planning application ref: 2017/0100. In particular, it outlines how the site-wide carbon emissions can be reduced by a minimum of 15.02% over that required by Building Regulations through enhancement of the fabric specification and the application of Photovoltaics.

Site Layout



Carbon Reduction Strategy

Conroy Brook is committed to considering measures to reduce the energy demand and carbon emissions of the proposed development at Cross Lane, Hoylandswaine. Each house type within the development has been rigorously assessed under SAP 2012 and all thermal, mechanical and electrical elements are considered against minimum requirements within the current Building Regulations. Products are chosen with lowering the carbon footprint and energy demand of the development in mind. In order to meet the carbon reductions required for the Cross Lane development, Award Energy developed an enhanced specification from the baseline under Building Regulations Part L1a 2013. The specifications are shown in Table 1.

Table 1

Element	Part L1a 2013 Requirements* (u-value)	Conroy Brook enhanced specification (u-value)	% betterment over Part L1a 2013
Walls (Main)(w/m ² k)	0.30	0.25	16.67%
Walls (Garage)(w/m ² k)	0.30	0.23	23.33%
Roofs (average) (w/m ² k)	0.20	0.13	35%
Floors (w/m ² k)	0.25	0.18	28%
Windows (w/m ² k)	2.00	1.4	30%
Doors (w/m ² k)	2.00	1.4	30%
Thermal Bridging	0.15	0.04	40%

For U-values: See Approved Document L1a 2013 Building Regulations

Carbon Reduction Strategy cont.

Table 2

Plot	Carbon Emissions Baseline specification t/yr	Carbon Emissions Enhanced specification t/yr	Photovoltaics kWp	Carbon Emissions Enhanced specification + PV t/yr	% reduction in Carbon Emissions
1	3.64	3.25	0.37	3.09	15.11%
2	3.63	3.23	0.35	3.08	15.20%
3	2.56	2.35	0.43	2.17	15.23%
4	2.99	2.84	0.70	2.54	15.05%
5	3.64	3.25	0.37	3.09	15.11%
6	3.63	3.23	0.35	3.08	15.20%
7	3.63	3.23	0.35	3.08	15.20%
8	2.56	2.35	0.43	2.21	15.23%
9	3.64	3.25	0.37	3.09	15.11%
10	3.51	3.15	0.39	2.98	15.10%
Total	33.43	30.13	4.11	28.41	
Site-wide Carbon Reduction					15.02%

*calculated using SAP2012 software. Award Energy can provide reports from SAP2012 as supporting evidence for these results, on request

As can be seen in Table 2 above, the Cross Lane, Hoylandswaine development is predicted to achieve a site-wide carbon reduction that is **15.02%** better than that targeted in the 2013 Building Regulations, thereby exceeding the requirements of Barnsley MBC's development policies and Condition 12 of planning application ref: 2017/0100.

Conclusion

In conclusion, Barnsley MBC be assured that the proposed development at Cross Lane, Hoylandswaine will achieve a site-wide reduction in carbon emissions by 15.02% through an enhanced fabric specification and the application of a minimum of 4.11 kWp of photovoltaic panels.

CAVEAT

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