Energy Statement

Proposed Residential Development, Land at Rosebank Farm, Manchester

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Planning Policy
The recently adopted Manchester City Council Core Strategy seeks to mitigate the impacts of climate change, including managing increased localised flood risk, higher summer temperatures and solar gains, as well as setting the benchmarks for low carbon development within the plan area.

For residential developments larger than 10 units, the Council set a CO2 emissions reduction target of 15% on Part L 2010

Energy Hierarchy
The proposed dwellings will be developed using the following hierarchy:

- to reduce the need for energy through design features that provide passive heating, natural lighting and cooling
- to reduce the need for energy through energy efficient features such as improved insulation and glazing
- to meet residual energy requirements through the use of low or zero carbon energy generating technologies

Achieving the Reduction
The dwellings have been designed to utilise solar gain, natural ventilation and good daylighting. These passive technologies will reduce the need for artificial ventilation, heating and lighting reducing the energy usage. It is proposed that the dwelling with aim to achieve the following daylight factors:

- Kitchen – At Least 2%
- Living & Dining Rooms – At least 1.5%
- Studies – At least 1.5%

The principle of a fabric first approach will be taken, with substantially improved u-values proposed for the external elements (walls, roof, floor, windows and doors) to improve the fabric energy efficiency (kWh/m2/yr) of the dwelling. Improved air permeability, high efficiency services (boiler and hot water stores etc) and utilising 100% of dedicated low energy light fittings will also help to reduce to CO2 emissions from the dwellings.

Following thermal and SAP modelling of the individual dwellings, once the passive technologies have been fully utilised, renewable technologies will be investigated and integrated into the properties as appropriate. Depending upon the nature of reductions required the technologies could incorporate Mechanical Heat & Ventilation Recovery, Waste Water Heat Recovery, Solar Thermal, Photovoltaic and Air Source Heat pumps as examples.

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