

SUSTAINABILITY STATEMENT

Construction Details:-

The proposed development will comply with Building Regulations, Part L that requires all newly constructed dwellings to comply with 5 criteria set out in Approved Document L1A unless exempted through the transitional provisions:

- The predicted rate of carbon dioxide emissions from the dwelling is not greater than the Target Emissions Rate (TER). Additionally, the Dwelling Fabric Energy Efficiency (DFEE) is not greater than the Target Energy Efficiency (TFEE);
- The performance of the building fabric and fixed building services should be no worse than the design limits set out in Table 2 of the Approved Document;
- The dwelling has appropriate passive control measures to limit the effect of solar gains on indoor temperatures in summer;
- The performance of the dwelling as built, is consistent with the DER, including site checking that the air permeability is within reasonable limits; and
- The necessary provisions for energy efficient operation of the dwelling are put in place including operating and maintenance instructions aimed at achieving economy in the use of fuel and power in a way that householders can understand.

Accordingly, the Build Fabric / Thermal Performance and Specification will achieve:-

- Cavity wall with insulation to achieve min. U value of 0.25W/m².k
- Ground floor to achieve min. U value 0.18W/m².k
- Roof - ceiling level to achieve min. U value 0.14W/m².k
- Roof - Rafter level to achieve min. U value 0.18W/m².k
- Windows - Argon fill; Low 'E' to achieve min. U value 1.40W/m².k
- External Doors to achieve min. U value 1.40W/m².k
- Air Permeability 6m³/hm²(@50Pa.)
- All insulation materials to have a GWP (global warming potential) of 3 and zero ODP (ozone depletion potential).
- 100% energy efficient lighting.
- Accredited Construction Details to limit thermal bridging.
- White goods to be A+ rated

High performance thermal insulation and thermally efficient windows and doors will minimise heat loss through the main building elements

Heating Details:-

- Gas condensing boiler - Sedbuk A rated with;
- Time and temperature zone control;
- Weather compensator; and
- Radiators with thermostatic values.

Sanitary / Water Usage: 2-Bed duplex

- 2/2.5L dual flush toilet
- 3L/min taps to wash basin and kitchen sink @ 3 bar pressure
- 6L/min shower flow rate @ 3 bar pressure
- 150L to overflow capacity baths
- Baths are to be provided with mixer valves to all taps to ensure the temperature leaving the tap does not exceed 48°C, and close to the final outlet to prevent the colonisation of waterborne pathogens.

Sanitary / Water Usage: Studios

- 1/2.5L dual flush toilet
- 3L/min taps to wash basin and kitchen sink @ 3 bar pressure
- 6L/min shower flow rate @ 3 bar pressure

Waste & Recycling:-

- A communal bin store with 4x240L for general waste / glass and tin / paper and cardboard / garden and food waste.
- Each property to be provided with kitchen food waste cupboard within kitchen to have triple 10L bins to aid segregation of waste and recycling.

Basement:-

- 3600 x 3250 mm² bike store providing 14 spaces to encourage sustainable ways of transport beside private vehicles.

Layout:-

- Open plan studios to minimize the amount of energy needed to acclimatize the units as well as to maintain the character of the building.

Health and Wellbeing:-

- All habitable rooms provided with windows giving good levels of daylight.
- Internal and party walls provided with min levels of sound reduction to comply with Building Regulation Doc
- No new proposed car parking spaces to encourage sustainable ways of transportation.
- Properties designed to be 'approaching' Lifetime homes requirements.

Energy efficiency:-

The whole design is aimed to reduce CO2 emissions as requested Manchester's Core strategy, the following principles have taken in consideration:

- Minimise energy consumption by the right use of natural ventilation through the appropriate use of the openings, as well as from the thermal lag of the constructive elements. The use of good quality materials such as high energy rating windows.
- The layout and design principles have been made in order to maximize the capture of daylight as well as passive solar energy. Openings on opposite sides of the block will provide the chance for crossed natural ventilation, making it easy to reduce the excess of heat.
- Specifying energy efficient systems and appliances such as low energy bulbs and water efficient cisterns and boilers, as well as the elements listed above.

Renewable energy:-

To assist in the reduction of energy demand and the harmful impact of using Non-renewable source, in line with the Core strategy policies, the development will attempt to meet the renewable energy demand on site. In conjunction with the measures suggested above, we propose to reduce the amount of demanded energy by incorporating solar panels. These will have to be located in the other place where the visual impact would not become an issue. Therefore, just the flat roof above the proposed side extension would be suitable to hold the solar panels, with a 49.8 sq.m extension and a South-East orientation is an ideal situation for harvesting solar energy.

An estimated average of 60-80 KWh per residential unit is considered for flats, with a total amount of 5 apartments the total energy demanded is 300-400 Kwh per day. As stated on policies EN4 and EN6 a 20 % of the amount of energy should be provided on site from renewable sources.

Photovoltaic panels performance can provide 200W/sq.m energy, an average of 12 hours of daylight is found in Manchester throughout the year (7.30h Jan/ 9h Feb/ 10.45h Mar/ 13h Apr/ 15h May/ 16.30h Jun/ 17h Jul/ 15.30h Aug/ 13.45h Sep/ 11.30h Oct/ 9.30h Nov/ 8h Dec). Given the location and orientation of the roof, the panels would receive nearly every hour of sunlight.

In order to meet the requested amount of renewable energy, a total of 60-80 KWh is needed to be obtained from the solar panels to provide the requested 20%. Making use of the area on the extension roof a total of 80KWh approximately on average estimating 10 hours of light and 40 square meters of panels.

HOWARD & SEDDON ARIBA
64 WASHWAY ROAD
SALE CHESHIRE
M33 7RE
Tel 0161 973 8296
Email: admin@howardandseddon.co.uk