COMPLETE ENERGY CONSULTANCY

- Air testing
- SAP/SBEM calculations
- EPC
- Code for sustainable homes
- Solar & day lighting calculations

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Complete Energy Consultancy – Complete Building Regulation compliance under one roof.

Environmental Standards Statement – 35 Houldsworth Street, Manchester

Energy Efficiency

It has been shown that the new residential units will achieve a 25% reduction in energy use. Please refer to the sample SAP outputs. This will be achieved by a combination of the following:

High standards of energy efficiency will be employed in the building fabric and choice of appliances, controls and fittings. Key items:

- Fabric U values as listed in SAP ouput showing an improvement over the Building Regulations Part L1B elemental U values.
- Worcester Greenstar 25si compact with time & temp zone controls (removed if CHP)
- 100% energy efficient lighting
- Solar PV or CHP

The proposals ensure that reliance on energy using equipment is minimised. This will be achieved through the specification and installation of A rated appliances and sanitary fittings and taps etc that minimise energy and water usage.

The existing building is of substantial thermal mass, this coupled with the provision of natural background and purge ventilation ensures there is no requirement for air conditioning.

Where possible:

Positioning of trees and soft landscaping on and around the development and within buildings with be considered to provide natural shading, insulation and air conditioning

Integrate energy efficient micro-generation and community heating schemes, such as combined heat and power (CHP)

Site layout and building design principles should maximise the capture and use of daylightand passive solar energy, whilst avoiding excessive solar gain in summer

Renewable Energy

The only practical and viable installation due to site space constraints would be solar PV.

Solar PV

The roof will allow for a south facing array, it is proposed that a 10 peak kW will be installed. This installation will allow at least 20% of energy demand to be supplied through renewable sources.

Other options that have been considered and discounted:

CHP & boiler (pellet fuel source)

The basement area can accommodate a CHP unit or a standard boiler using renewable fuels capable of servicing all units. This installation will allow at least 20% of energy demand to be supplied through renewable sources. This form of power unit will require a flue. This form of heating using wood pellet is contrary to local air pollution controls.

Wind turbine

This form of renewable energy is not suitable due to the site conditions, having regard to a lack of consistent wind speeds and also noise generation affecting surrounding buildings.

Air source heatpump

This form of heating will not provide the 20% of energy demand to be supplied through renewable sources.

Solar water heating

This form of renewable technology has been discounted due to nature of the development. Solar collectors would need to be located on the roof and have very long pipe runs to individual units making the systems inefficient. This form would not give the required 20% of energy demand to be supplied through renewable sources.

Environmental Design

BREEAM Refurbishment Domestic Buildings pre assessment estimator tool has been utilised. This is the applicable environmental rating scheme for material change of use schemes such as this, the Code for Sustainable Homes if for new build only.

Please see the pre estimator tool as a separate appended document. The units have been shown to potentially achieve a 'Very Good' rating as specified.

Please also refer to the sample design stage SAP calculations which have informed the BREEAM pre assessment estimator tool.

Water Management and Weather Resilience

Sustainable drainage systems (SUDS) will be included where possible and the amount of hard surfacing minimised. This will be informed by at a later stage by a suitably qualified professional.

A Flood Risk Assessment will be provided.

The developments will seek to use water efficiently, through specification of water efficient devices and through the use of rainwater harvesting and grey water recycling where possible.

Waste Management

A fully WRAPS compliant site waste management plan will be formulated and adhered to on site during construction.

Suitable provision has been made externally for the storage of refuse and recycling containers.

Suitable provision will made internally to each new residential unit for the storage of recycling.

Construction Management

The scheme will show consideration of the need to use materials with a reduced energy input.

This will include considering the re-use of existing onsite materials, recycled materials, or through reference to BRE Green Guide.

BRE Green Guide A rated materials will be specified wherever possible.

Use of the Considerate Constructor scheme will be made as part of the BREEAM process.

Biodiversity

This section will be informed by the Ecology Report, not yet completed.

Waterways

The development is not within close proximity of a waterway.

Report complied by:



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