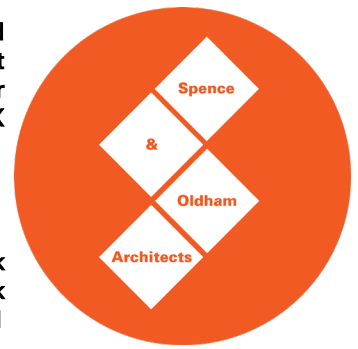




Ref:0054/02/Admin/LA.03
08th January 2024
Revised 23rd January 2024

Land between 24 and 26 Sedgley Road, Manchester, M8 5AG New build detached house ENVIRONMENTAL STANDARDS STATEMENT

1.0 INTRODUCTION

This document has been prepared to discharge condition 12 of application 136012/FO/2023 for 1 no. new build dwelling to land between 24 and 26 Sedgley Road which states:

12) Prior to above ground development commencing, an Environmental Standards Statement shall be submitted to, and approved in writing by, the City Council, as Local Planning Authority. The statement shall demonstrate measures to be incorporated into the development to achieve energy efficiency and approved measures shall be implemented in the construction of the approved development.

Reason - In order to minimise the environmental impact of the development, pursuant to policies DM1 and SP1 of Manchester's Core Strategy and the National Planning Policy Framework."

The following paragraphs demonstrate how the proposed dwelling at land between 24 and 26 Sedgley Road will comply with Building Regulation Part L1A (2013), including the June 2022 changes, and how the overall design considers sustainability and energy efficiency.

2.0 THE BUILDING FABRIC

The proposed new building's fabric elements shall be in compliance with the Approved Building Regulations Part L1A (2013), including the June 2022 changes which request higher performance U-Values as follows:

New Thermal Elements for new build dwellings - Target 'U-value' by element:

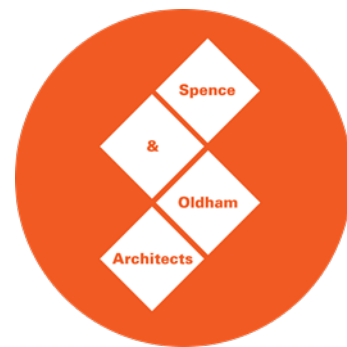
Pitched roof – insulation at ceiling level	0.11 W/m ² K
Pitched roof – insulation at rafter level	0.11 W/m ² K
Wall	0.18 W/m ² K
Floor	0.13 W/m ² K

The specification of the external envelope is to be as follows to achieve the above values:

EXTERNAL WALLS – NEW BRICK CAVITY WALLS

Wall construction to be approx. 327.5mm total thickness (not including finishes) comprising;

- 102.5mm Clay facing Brickwork. Samples to be submitted for approval prior to construction). Bond/Coursing to match existing.
- 125mm Cavity to be fully filled with 115mm Celotex Thermaclass Cavity Wall 21 (or equal approved). 10mm residual cavity.
- 100mm block work (min 7N/mm²) inner leaf



- 15mm wet plaster and paint finish or plasterboards on dot and dab (Moisture resistant boards to WC and kitchen) with skim finish (to cavity walls only).
- Cavity wall insulation to extend min. 225mm down in cavity beyond top of insulation to ground floor

Overall wall construction to achieve a min U-Value of 0.18W/m²K

NEW BEAM AND BLOCK GROUND FLOOR:

Generally to be;

- Spanterm precast insulated concrete flooring or equal approved.
- 375mm Spanterm precast insulated concrete beams with integral EPS insulation.
- Beam specification and layout to Manufacturer's design.
- DPM (shown)
- 75mm non-structural sand/cement screed over.
- 25mm Perimeter insulation strip to all edges of screed. All to be installed in line with manufacturer's recommendations.
- Min 250mm sub floor ventilation void.

Overall floor construction to achieve a min U-Value of 0.13W/m²K

PITCHED ROOF – NEW WARM

Unventilated roof covering: to new pitched roofs

- New tiles to match existing, fixed with stainless steel nails, min head lap of 50mm, on 25x38mm tandalised timber tiling battens
- On Proctor Roof shield breathable membrane installed in accordance with the manufacturers guidelines.
- Rafters - See Structural Engineers' calculations.
- Insulation to be 150mm Celotex XR4000 (or equal approved) between rafters with minimum 25mm ventilation above.
- 25x47mm counter battens fixed to underside of joists to create service void.
- Celotex PL4065 (60+12.5mm) insulated plasterboard (or equal approved) to be screwfixed through to underside of rafters. 25x47mm timber battens to be fixed to rafters to create service void. Insulated boards to be taped as VCL.
- Skim finish.
- Where applicable, timber wall plates to be bedded on mortar and strapped to wall with 30x5x1000mm galvanised mild steel straps at 1200mm c/s.

Roof construction to provide a target 'U' value of 0.11W/m²K

PITCHED ROOF – NEW COLD

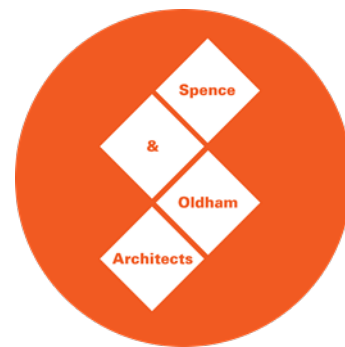
Unventilated roof covering: to existing cold pitched roof voids.

- New tiles to match existing, fixed with stainless steel nails, min head lap of 50mm, on 25x38mm tandalised timber tiling battens
- On Proctor Roof shield breathable membrane installed in accordance with the manufacturer's guidelines.
- Rafters - See Structural Engineers' calculations.
- Ceiling joists - See Structural Engineers' calculations.
- 150mm Rockwool Rollbatts to be installed between joists. 2no layers (1no 150mm + 1no 100mm) Rockwool insulation batts to be installed over joists perpendicular to direction of joists.
- 12.5mm BG Wallboard (or equal approved) (Moisture resistant boards to WCs, bathrooms, kitchens and utility's) to be fixed to ceiling joists and taped as VCL.
- Skim and paint finish.

Roof construction to provide a target 'U' value of 0.11 W/m²K.

WINDOWS, ROOF LIGHTS, EXTERNAL DOORS

Windows & Doors to be double glazed units. To achieve a U-Value no greater than 1.2 W/m²K.



A design air permeability rate has been set at 4m³/m²/hr at 50Pa.

3.0 HEATING

The residential premises will utilise an air source heat pump to serve the heating requirements of the new dwelling. Subject to how the space heating will be provided this will be sized to cover load, a provisional allowance for background heating in the region of 13 kW. The areas within the building shall be suitably zoned for space heating provision.

The hot water generation shall be supplied by the same air source heat pump system that serves the building heating systems.

4.0 LIGHTING & VENTILATION

The new dwelling provides windows to all spaces throughout to maximise the use of natural lighting, reducing the needs for artificial lighting. Additional rooflights to living space maximises this further in the main habitable part of the dwelling.

Lighting provided is to be mainly energy efficient LED spotlight fittings throughout.

All windows proposed are to be double glazed, achieving Part L1A U-Value requirements as set out in section 2.0.

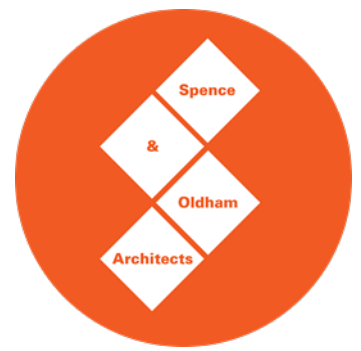
5.0 CYCLE PARKING

Cycle parking is to be provided in line with condition 13(b). This will be provided via a lockable external bicycle store / shed to the property, promoting the use of this sustainable mode of transport.

6.0 RENEWABLE TECHNOLOGY ASSESSMENT

An assessment of multiple renewable technologies has been carried out in order to determine the suitability of their application at this site.

Renewable Technology	Feasibility	Reason
Photovoltaics	N	Area of south facing pitched roof is deemed insufficient to host the quantity of solar PV required to supplement a gas boiler.
Solar Hot Water	N	Hot water load will be sufficiently supplied by air source heat pump
Ground Source Heat Pumps	N	Insufficient external site area and cost inhibiting
Air Source Heat Pumps	Y	In order to achieve SAP compliance an air source heat pump is deemed necessary instead of a gas boiler
Wind Turbines	N	Insufficient wind speeds and space available at site
Combined Heat and Power	N	Heat load throughout the year is not consistent enough to justify use of CHP plant
Biomass Boilers	N	Location does not lend itself practically to either regular delivery of fuel, nor for the storage space needed



7.0 CONCLUSION

This brief report has outlined the compliance of the design with approved document L1A and additional design measures taken to ensure the proposed dwelling meets energy efficiency standards, and has demonstrated how active technologies have been considered and where suitable implemented.