

Environmental Standards & Waste Management Verification Statement

Introduction

This statement is regarding the verification of the construction of 27no apartments and 4no semi-detached houses at the Kingsway Hotel Site, Moseley Road, Manchester and outlines the approach to sustainability. The report aims to record the incorporation of measures identified in the 'Environmental Standards Statement & Waste Management Statement – rev A' which formed part of the approved documents referred to in the planning decision document.

Energy Efficiency

As outlined within the City Council's Guide to Development in Manchester SPD/SPG, (chapter 4) and Core Strategy policies EN4 and EN6 the thermal performance of the proposed development was based on a fabric first approach, with low air permeability & excellent U-values to satisfy the requirements of the current Approved Documents (Building Regulations)

The development aimed to reduce energy use and, more critically, carbon emissions using the following methods:

1. House - U Values as follows
 - a. Walls *target = 0.19*
 - i. Actual u-value of 0.22
 - ii. Shown by **House - Rockwool Uvalue.jpg (in appendix 1)**
 - b. Party walls *target = 0.00*
 - i. Knauf Earthwool timber frame Party Wall Slab installed as part of Robust Detail E-WT-1 contributes to zero effective U-value.
 1. see table on page 1 of **House – Party Wall.pdf (in appendix 1)**
 - c. Floors *target = 0.18*
 - i. P/A =0.7
 - ii. 150mm Recticel PIR
 - iii. Actual u-value of 0.13
 1. Shown on page 9 of **Floor Specification Guide – recticel.pdf (in appendix 1)**
 - d. Roof *target = 0.11*
 - i. Pitched roof section
 1. 150mm Kingspan K7 with 62.5mm Kooltherm K18 insulated plasterboard underdrawn.
 2. U-value of 0.12
 - a. Shown in **House Pitched roof u-value.pdf (in appendix 1)**
 - ii. Attic roof section
 1. 400mm Knauf Earthwool loft roll 44
 2. U-value of 0.11
 3. calc shown in **House – Attic Roof calculation.pdf (in appendix 1)**

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- e. Windows + doors *target = 1.44*
 - i. **Jade windows – House Order 23.11.19** confirms overall u-value of house windows is 1.4 on page 32. (in appendix 2)
- 2. Apartment - U Values as follows
 - a. Walls *target = 0.17*
 - i. Brickwork walls
 - 1. 100mm Kingspan Thermawall as insulated sheathing on 150 SFS Steel frame walls at 600mm centres.
 - 2. Actual u-value is 0.16
 - 3. Shown on page 5 of **Apartment Wall – Thermawall TW55.pdf (in appendix 1)**
 - ii. Render walls
 - 1. K-rend system on 300mm EPS insulation.
 - 2. Actual u-value is 0.12
 - 3. Shown on **U-Value Calculator - K Systems – EPS.pdf (in appendix 1)**
 - b. Party walls – apt / corridor *target = 0.21*
 - i. U-value calc shows 0.21
 - ii. Shown in **Apartment Party Wall.pdf (in appendix 1)**
 - c. Floors *target = 0.15*
 - i. P/A = 0.3
 - ii. 150mm Recticel PIR
 - iii. Actual u-value of 0.12
 - 1. Shown on page 9 of **Floor Specification Guide – recticel.pdf (in appendix 1)**
 - d. Roof *target = 0.15*
 - i. 150mm Kingspan TR27 on timber deck = 0.15
 - ii. See page 3 of **Apartment roof – Kingspan TR27.pdf (in appendix 1)**
 - e. Windows + doors *target = 1.44*
 - i. **Jade windows – Apartment Order 10.06.20** confirms overall u-value of the apartment windows is 1.4 on the final page of each floor level. (Pages 16, 31, 46, 63 and 80) (in appendix 2)
- 3. A high level of airtightness was achieved of 6m³/hr/m² at 50 Pa (average).
 - a. Evidence of this is provided in the **Combined Air permeability tests**, which tested 3 apartments and two houses. (in appendix 3)
 - b. The resulting figure is slightly worse than the 5m³/hr/m² targeted but compares favourably against the 10m³/hr/m² limit set by Building Regulations.
- 4. PIR & MVHR ventilation was provided to allow occupants control over their environments.
 - a. **Vectaire MVHR designs** and **MVHR commissioning** documents provide information on this equipment installed within the apartments. (in appendix 4)

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5. The large windows maximise daylighting and minimise the need for reliance on artificial lighting.
 - a. Photo **IMG_0894.jpg** reveals the satisfactory level of daylight within a typical apartment, without switching on the artificial lighting. **(in appendix 5)**
6. Low energy appliances, including high efficiency electric boilers for the apartments and gas combination boilers for the houses.
 - a. Information on the electric hot water cylinders is provided in the following docs:-
 - i. **Boiler Commission - Flats 1 to 27 (in appendix 6)**
 - ii. **G00019-Stainless-ES-Brochure_2020 (in appendix 6)**
 - iii. **Gledhill-Stainless-ES-Design-Installation and servicing instructions (in appendix 6)**
 - iv. The models are confirmed as Gledhill ES direct 150 litre cylinder (for 1bed) and 170 litre cylinder (for 2Bed)
 - b. Information on the electrical radiators in the apartments is provided in the **Adax Neo pdf. (in appendix 7)**
 - c. Information on the electrical towel rail in the apartments is provided in the **Bray Electric Towel Rail.pdf (in appendix 8)**
 - d. Information on the gas combination boilers for the houses is provided in the **Boiler Commission – Houses.pdf (in appendix 9)**

Renewable Energy

Photovoltaics were installed on the uppermost roof of the apartment building, to provide 29.82kWp from approximately 84 panels. Supporting information is provided in the **Low Carbon Energy - PV system.pdf (in appendix 10)**

Sustainable Transport

Links to the City Centre are good and there are several public transport options available.

1. The location of the development is directly adjacent to the no. 168 & 169 bus routes linking to trams at Chorlton & West Didsbury & trains at Levenshulme & Belle Vue giving further access to Manchester city centre and beyond.
 - a. Photo **IMG_0797.jpg** shows the direct proximity of the bus stop with the building. **(in appendix 11)**
2. The site is 9 mins walk to Levenshulme railway station with direct trains to Manchester city centre. See **walk map to Levenshulme train station.jpg (in appendix 11)**
3. Secure enclosed space for 27no cycles is provided. Space for 20 cycles is provided externally in a timber-clad store. 7 additional secure cycle spaces are within the proposed building. The site is less than 300 meters from the traffic free national cycle routes no. 6 & 60 which link to the rest of the cycle network.
 - a. The **internal bike store photo** shows the 7 internal cycle spaces. **(in appendix 12)**
 - b. The **external bike store video** and **stills** show the 20 cycle spaces provided in the timber clad store. **(in appendix 12)**

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Biodiversity

Bird and bat boxes were included within the development to enhance the overall biodiversity of the area.

Photo '**Bat box photo.jpg**' (in **appendix 13**) shows the location of 3x Ibstock Bat Box 'C' installed at high level in the brickwork of the East facing wall (facing the car park + bin store)

The planting choices made within the landscaping enhanced the site's biodiversity & mitigated any impact or loss of habitat due to the development a mixture of native & non-native tree and ornamental tree & shrub planting was proposed throughout the site. Ornamental shrub species were chosen as attractive wildlife friendly options with a mix of deciduous & evergreen providing year-round interest.

Water Management

Levels of water usage were reduced through the specification of water saving products such as WCs, baths, showers, and taps in accordance with Approved Documents (Building Regulations).

Datasheets for the specific products installed are provided in **Appendix 14**.

Waste Management Statement

In line with Core Strategy Policy EN19 and 'Waste Storage and Collection Guidance for New Developments' refuse and recycling will be accommodated as follows: -

Apartment block – Communal waste and re-cycling Euro bins is provided in a storage enclosure area located adjacent to the Moseley Road car park entrance. 7No bins total (3No General waste, 2No Pulpable waste and 2No Mixed recycling). These are shown in the **Images of Kingsway Bin Store pdf** (in **appendix 15**). Collection of these is through the local refuse collection provider.

Houses – a hard standing area was provided in the secure rear gardens of each property to accommodate the required 5No bins (General waste, Pulpable, Mixed recycling, garden and food). Regrettably, these hard standing areas are now within sold private rear gardens, so access for photographs proved limited.