

Preliminary Assessment

BREEAM Domestic

Refurbishment

St Martin's House

65-75 Monmouth St

Document information:

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Executive Summary

BREEAM Domestic Refurbishment

St Martin's House

65-75 Monmouth St

Introduction:

Eight Associates have been appointed, as registered BREEAM Domestic Refurbishment assessors, to undertake an outline stage review of the likely BREEAM rating for the proposed development at St Martin's House, 65-75 Monmouth Street, in the London Borough of Camden. The results of this report are based on discussions held with the design team in April 2016.

Score Summary:

The site reviewed currently scores a **VERY GOOD** rating, at **59.51%**. The London Borough of Camden requires all residential refurbishment or change of use developments of five or more dwellings (or greater than 500 m² floor space) to achieve an 'Excellent' rating under BREEAM Domestic Refurbishment.

Eight Associates recommend a safety margin of between 3 and 5% to safeguard the rating at post-construction stage.

Building Summary:

The proposed development is located in the London Borough of Camden and comprises the refurbishment of St Martin's House, 65-75 Monmouth Street. The current building is mixed use, with A1 retail at basement and ground floor level, with B1 offices on first to fourth floors. The proposed scheme involves retaining retail units but replacing some of the office space with five apartments. This assessment concerns the residential units only.

St Martin's House falls within the Seven Dials Conservation Area and is Grade II listed; the 'historic building' requirements under BREEAM Domestic Refurbishment (for ventilation, security and sound insulation) are therefore applicable.

Score Breakdown

BREEAM Domestic Refurbishment

St Martin's House

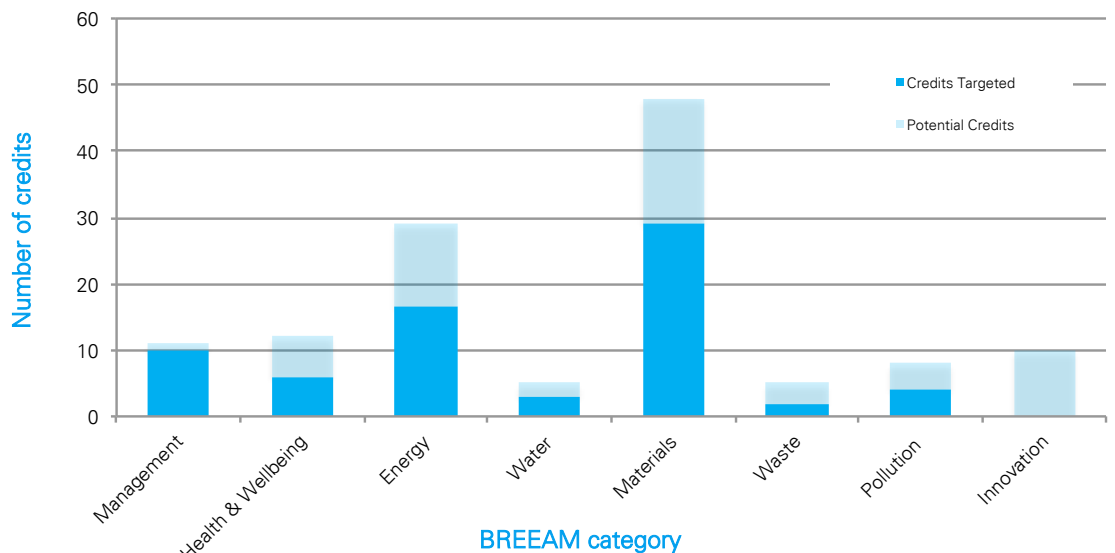
65-75 Monmouth St

Summarised Score:

	Score	Credits available	% Achieved	Weighting Factor	Credits Score
Management	10.0	11	90.91	0.12	10.91
Health & Wellbeing	6.0	12	50.00	0.17	8.50
Energy	16.5	29	56.90	0.43	24.47
Water	3.0	5	60.00	0.11	6.60
Materials	29.0	48	60.42	0.08	4.83
Waste	2.0	5	40.00	0.03	1.20
Pollution	4.0	8	50.00	0.06	3.00
Innovation	0.0	10	0.00	0.1	0.00
Total					59.51
				Rating	VERY GOOD

Graphic Breakdown:

The graph below shows the credits targeted in the proposed scheme (dark blue) and the potential credits that are achievable (light blue) under BREEAM. Please see the remaining portions of the report for further details of BREEAM requirements.



Management

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Man 01 – Home Users Guide:

The design team has confirmed that a Home Users Guide will be provided, informing the occupants on the correct operation of the building's various systems. The guide will contain all information listed in the 'Home Users Guide Contents List', as detailed by BREEAM, and will be non-technical in nature.

3 of 3

Three of three credits are targeted.

Man 02 – Responsible Construction:

The design team has confirmed that the site will be registered with the Considerate Constructors Scheme and will achieve a score of ≥ 35 , with at least 7 points in each section.

2 of 2

Two of two credits are targeted.

Man 03 – Construction Site Impacts:

The design team has confirmed that the chosen contractor will operate an environmental materials policy and at least 80% of site timber will be reclaimed, re-used or responsibly sourced. In addition, the design team has confirmed that site energy and water use will be logged during the construction phase and targets will be set for usage.

1 of 1

One of one credit is targeted.

Man 04 – Security:

The design team has confirmed that all doors and windows are to be replaced, and that all new units will meet the security ratings set out by BREEAM.

1 of 2

One of two credits is targeted.

Management

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Man 05 – Ecological Features:

The design team has confirmed that none of the following features of ecological value were present on site prior to the commencement of construction activities.

1 of 1

- Trees of significant ecological value (i.e. trunk diameter $\geq 100\text{mm}$, ≥ 10 years old or species of significance);
- Mature hedgerows over 1m tall and 0.5m wide;
- Natural areas (e.g. flower-rich meadow / grassland / heathland);
- Watercourses (rivers / streams / canals);
- Wetlands;
- Protected species;
- Local priority UK BAP species;
- Roosting / nesting opportunities for birds / bats.

One of one credit is targeted.

Man 06 – Project Management:

The design team has confirmed that all members of the project team will be involved in project decision-making, and individual/shared roles and responsibilities will be assigned across the following key design and refurbishment stages for one credit:

2 of 2

- Planning and Building Control notification;
- Design;
- Refurbishment;
- Commissioning and handover;
- Occupation.

In addition, the design team has confirmed that a handover meeting will take place, and that at least two of the following items will be undertaken to evaluate project success:

- A site inspection within three months of occupation;
- Post-occupancy interviews with building occupants (by phone or by post) within three months of occupation;
- A commitment to providing longer-term aftercare e.g. a helpline, nominated individual or other appropriate system to support building users for at least the first twelve months of occupation.

Two of two credits are targeted.

Health and Wellbeing

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Hea 01 – Daylighting:

The design team has confirmed that BREEAM minimum daylighting levels will be achieved in all kitchens, living rooms and dining rooms. The design team has confirmed that no apartments have studies. **2 of 2**

Two of two credits are targeted.

Hea 02 – Sound Insulation:

The design team has confirmed that an acoustic consultant (who is a member of the Institute of Acoustics) will be appointed to confirm that Building Regulations Approved Document Part E will be met in full. **2 of 4**

Two of four credits are targeted.

Hea 03 – Volatile Organic Compounds:

The design team has confirmed that the credit for this issue will not be targeted. **0 of 1**

No credits are currently targeted.

Hea 04 – Inclusive Design:

The design team has confirmed that it will not be possible to meet the inclusive design criteria as set out by BREEAM. **0 of 2**

No credits are currently targeted.

Hea 05 – Ventilation:

MINIMUM OF ONE CREDIT REQUIRED FOR ALL BREEAM RATINGS **1 of 2**

Due to the late stage at which a BREEAM assessment was requested it was not possible for pre-refurbishment air tightness testing or a structural moisture survey to be carried out.

However, the design team has committed to meeting the requirements of Building Regulations Approved Document Part F in full. A surface moisture test will be carried out post-refurbishment on sample areas of retained walls, floors and ceilings to ensure that ventilation levels are appropriate for preventing the build up of moisture and mould growth.

One of two credits is targeted.

Health and Wellbeing

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Hea 06 – Safety:

MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM 'VERY GOOD'

1 of 1

The design team has confirmed that compliant fire and (where mains gas or any other form of fossil fuel is used within the building) carbon monoxide detection systems will be installed. These will be hard-wired into the building's mains electricity supply and will feature battery back up. In addition, the systems will meet Part B of the Building Regulations for new build, in line with the following requirements:

- Fire detection and alarm systems will be in accordance with BS5839-6:2004 and to at least a Grade D, Category LD3 standard. The system will be positioned in accordance with the Building Regulations Part B, Fire Safety Volume 1 – Dwelling houses 2006, Section 1, Paragraphs 1.11 – 1.18.
- Carbon monoxide detection systems will meet BS EN 50291-1:2001 and be positioned in accordance with BS EN 50292:2002. Systems should carry a British or European approval mark. Where smoke and carbon monoxide detectors are combined, they should also meet the LPS 1282 standard.

One of one credit is targeted.

Energy

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Ene 01 – Improvement in EER:

The design team has confirmed that efforts will be made to improve the energy efficiency of the dwelling, thus reducing the associated CO₂ emissions. The project will aim to improve each dwelling's Energy Efficiency Rating by ≥ 13 , for which one and a half credits will be achievable. **1.5 of 6**

One and a half of six credits are targeted.

Ene 02 – EER Post Refurbishment:

The design team has confirmed that each dwelling will target an Energy Efficiency Rating of $\geq 65_z$ for which two credits will be achievable. **2 of 4**

Two of four credits are targeted.

Ene 03 – Primary Energy Demand:

The design team has confirmed that efforts will be made to reduce the absolute total regulated energy demand of the dwelling, as a result of refurbishment. **4 of 7**

Each dwelling will target a post-refurbishment Primary Energy Demand of ≤ 240 kWh/m²/year, for which four credits will be achievable.

Four of seven credits are targeted.

Ene 04 – Renewable Technologies:

The design team has confirmed that, due to heritage constraints, credits for renewable technologies will not be targeted. **0 of 2**

Zero of two credits are targeted.

Ene 05 – Energy Labelled White Goods:

The design team has confirmed that all white goods will have the following ratings under the EU Energy Efficiency Labelling Scheme: **2 of 2**

- Fridges/freezers = A+
- Washing machines = A++
- Dishwashers = A+
- Washer driers and tumble dryers = A
- Where no white goods are provided to the dwelling(s) but the EU Energy Efficiency Labelling Scheme Information Leaflet is provided to each dwelling

Two of two credits are targeted.

Energy

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Ene 06 – Drying Space:

The design team has confirmed that the credit for this issue will not be targeted. **0 of 1**

No credits are targeted.

Ene 07 – Lighting:

The design team has confirmed that the energy required for internal lighting will be minimised through the provision of a maximum average wattage across the total floor area of the dwelling of 9 Watts/m². In addition, the BREEAM criteria for external lighting (luminous efficacy and control systems) will be met. **2 of 2**

Two of two credits are targeted.

Ene 08 – Energy Display Devices:

The design team has confirmed that a compliant energy display device will be specified. This device will be capable of displaying and recording current electricity and primary heating fuel consumption data. **2 of 2
+ 1**

Two of two credits and one innovation credit are targeted.

Ene 09 – Cycle Storage:

The design team has confirmed that storage will be provided for six cycles (one per studio flat and two for the two-bedroom flat), therefore two credits are achievable. **2 of 2**

Two of two credits are targeted.

Ene 10 – Home Office:

The design team has confirmed that the space and services necessary for residents to be able to work from home will be provided, in line with BREEAM criteria for a home office. The room will incorporate the following services: **1 of 1**

- Two double power sockets;
- One telephone point;
- One data point;
- A window with an openable casement of no less than 0.5m² and whose width or height is not less than 450mm.

One of one credit is targeted.

Water

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Wat 01 – Internal Potable Water Use:

MINIMUM OF ONE CREDIT REQUIRED FOR A BREEAM 'VERY GOOD'

1 of 3

The design team has confirmed that internal water use attenuation measures will be implemented. Although a number of options are available to achieve one credit for this issue, Eight Associates recommend the following specification:

- All taps with a flow rate of 5 litres per minute or less;
- Showers with a flow rate of 12 litres per minute or less;
- Baths with a capacity of no more than 150 litres to overflow;
- 6/4 litre, dual flush WCs;
- Dishwashers with a consumption of no more than 1.5 litres per place setting;
- Washing machines with a consumption of no more than 7 litres per kg of dry load;
- No waste disposal units to be installed;
- No water softening devices to be installed.

Adoption of the above specification will ensure that the required water consumption level of <140 litres/person/day will be achievable and the mandatory credit is awarded.

One of three available credits is targeted.

Wat 02 – External Water Use:

The design team has confirmed that no individual or communal garden space will be provided. One credit can therefore be awarded by default.

1 of 1

One of one credit is targeted.

Wat 03 – Water Meter:

The design team has confirmed that a BREEAM-compliant water meter and display unit will be specified for each apartment.

1 of 1

Each meter will provide a visible display of mains potable water consumption to occupants. Meters will be a permanent feature secured in a visible location and capable of recording and displaying historic water consumption to allow water consumption to be monitored over time. Meters will be capable of displaying current consumption either instantaneously or at half hourly intervals.

One of one credit is targeted.

Materials

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Mat 01 – Environmental Impact of Materials:

The design team has confirmed that many of the building's existing elements will be retained and their performance enhanced. Where new materials are required, those with the optimal balance of low environmental impact and high thermal performance will be specified.

12 of 25

Where used, concrete will be specified to comprise the highest possible proportions of ground granulated blast furnace slag (GGBS), pulverised fuel ash (PFA) and recycled aggregate (RCA).

Twelve of the twenty-five available credits are targeted, based on the Green Guide rating of works to the external, internal and separating walls and roofs.

Mat 02 – Responsible Sourcing of Materials:

MINIMUM STANDARDS APPLY TO TIMBER PROCUREMENT

9 of 15

The design team has confirmed that all timber used on site will be 'legally harvested and traded' (see design guide for further details). **This is a pre-requisite; no credits can be awarded unless compliance with this criterion is confirmed.**

The principle contractor will source materials for the projects in accordance with a documented sustainable procurement plan (see design guide for further details).

The design team has confirmed that efforts will be made to reuse materials where feasible, and that where required, new materials will be responsibly sourced. All concrete will be BES 6001 certified and any other material will be ISO 14001 certified for both key processes and supply chain extraction processes.

Nine of fifteen credits are targeted.

Mat 03 – Insulation:

The design team has confirmed that where thermal insulation is required, responsibly sourced materials with a low embodied environmental impact relative to its thermal properties will be specified, in line with BRE requirements.

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All insulation will be A+ rated under the Green Guide (including insulation for building services) and responsibly sourced from a manufacturer with ISO14001 (for manufacture and sourcing) or BES6001 (to at least a 'Very Good' standard) certification.

Eight of eight credits are targeted.

Waste

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Was 01 – Household Waste:

The design team has confirmed that household recycling facilities will be provided alongside those for non-recyclable waste, thus diverting household waste from landfill or incineration.

1 of 2

The London Borough of Camden operates a recycling service where waste is sorted post-collection, therefore two containers (one for general waste and one for recyclable waste) with a capacity of no less than 30 litres each (i.e. 60 litres in total), installed in a fixed location in the dwelling will be sufficient to gain one credit for this issue.

Credits for composting will not be targeted at this stage, due to the limited external space for such facilities and the fact that Camden does not operate a compostable waste collection scheme for domestic properties.

One of two credits is targeted.

Was 02 – Refurbishment Site Waste:

The design team has confirmed that a pre-refurbishment waste audit was carried out to establish materials that can be recovered, re-used and recycled. In addition, the contractor will be required to operate a site waste management plan in line with BREEAM criteria.

1 of 3

At present the credits for waste generation and diversion from landfill are not targeted.

One of the available three credits is targeted.

Pollution

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Pol 01 – NO_x Emissions:

The design team has confirmed that low NO_x emission boilers will be installed; **3 of 3** the dry NO_x emissions of space heating and hot water systems will be less than 40 mg/kWh.

Three of three credits are targeted.

Pol 02 – Surface Water Runoff:

The design team has confirmed that there will be no increase in impermeable area as a result of the development. **1 of 3**

One of three credits is targeted.

Pol 03 - Flooding

The design team has confirmed that the credits for this issue will not be targeted. **0 of 2**

No credits are currently targeted.

Conclusion

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Conclusion

St Martin's House was not designed to meet a specific BREEAM target as part of the original scheme. The requirement to complete a BREEAM preliminary assessment was triggered by the addition of one flat at first floor level.

Given the late stage at which BREEAM was considered (part way through construction), and the building's Grade II Listed status, it has not been possible to achieve an 'Excellent' rating. Even with significant changes to the design the project may still fall short of the 70% required to achieve this rating.

Where feasible sustainability features have been incorporated into the design, with the development scoring 59.51%, comfortably within the 'Very Good' bracket.
