

**BREEAM Domestic Refurbishment Assumptions: 3 - 7 Frederick Street**  
**Draft for information only NOT FOR SUBMISSION TO COUNCIL**

**12/07/2019**

*The figures listed below are assumptions only, based on a combination of best judgement at design stage and information from the design team where appropriate. It is the Contractor's responsibility to ensure the specification meets the required credits to achieve BREEAM Domestic Refurbishment 'Excellent' overall. All information detailed in this design note is a basic recommendation at the Design Stage BREEAM assessment. It should be noted that this document is not exhaustive and the contractor should allow for flexibility on site where necessary.*

	Credits Assumed	Assumptions
<b>Management</b>		
Man 01 Home Users Guide	3	Home user guide to be provided.
Man 03 Construction Site Impacts	1	Refurbishment site is managed in an environmentally sound manner, with evidence that the following are completed: - Monitor, report and set targets for CO2 production of energy use arising from site activities. - Monitor, report and set targets for water consumption arising from site activities.
Man 04 Security	1	Retained external doors and accessible windows to comply with minimum security requirements. Doors and windows in strong, good condition with a minimum of double glazing for all accessible glazed areas.
Man 05 Protection and Enhancement of Ecological Features	1	Site survey to be carried out by a suitable member of the team to determine ecological value and presence of ecological features. All general ecological recommendations will be adopted.
Man 06 Project Management	1	The project manager assigns individual and shared responsibilities across the key design and refurbishment stages (planning and building control notification, design, refurbishment, commissioning and handover, occupation).
<b>Health and Wellbeing</b>		
Hea 01 Daylighting	1	The refurbishment results in neutral impact on the dwellings daylighting levels in the kitchen, living room and dining room.
Hea 02 Sound Insulation	1	Airborne sounds insulation values and impact sound insulation values are no worse than the values determined pre-refurbishment
Hea 03 Volatile Organic Compounds	1	All internal finishes and fittings are required to comply with testing requirements and emissions levels for volatile organic compounds (VOCs). Finishes and fittings include paints, varnishes, wood panels, timber structures, wood flooring, floor coverings, ceiling tiles, flooring adhesives.
Hea 05 Ventilation	1	Where an assessment is carried out to establish the current levels of air tightness and structural moisture prior to the specification of fabric measures and heating systems. The assessment should establish the appropriate level of ventilation for the building.
Hea 06 Safety	1	Carbon monoxide detector installed and compliant fire detection and fire alarm system is provided.
<b>Energy</b>		
Ene 01 Improvement in Energy Efficiency Rating	1.5	As per SAP calculation: improvement in EER $\geq$ 11
Ene 02 Energy Efficiency Rating Post Refurbishment	1.5	As per SAP calculation: EER post-refurbishment 64
Ene 03 Primary Energy Demand	3	As per SAP calculation: primary energy demand post refurbishment 260.38 kWh/m <sup>2</sup> /year
Ene 05 Energy Labelled White Goods	1	Where white goods are not provided, leaflets on the EU Energy Labelling System are provided to dwellings.
Ene 06 Drying Space	1	Provide either internal or external drying space in all dwellings. Dry line length should be 4m+ for 2 bedroom dwellings and 6m+ for 3 bedroom dwellings.
Ene 07 Lighting	2	External Space lighting: Assumed all external light fittings to be energy efficient with appropriate control systems to ensure they are switched off during daylight hours (e.g. motion detection, 'dusk to dawn' daylight sensors, time switches)  External Security lighting: If security lighting will be installed, designed for energy efficiency and is adequately controlled such that all burglar security lights have a maximum wattage of 150W and movement detecting control devices (PIR), and daylight cut-off sensors. All other security lighting to be provided by dedicated energy efficient fittings and fitted with daylight cut-off sensors or a time switch
Ene 08 Energy Display Device	2	Energy display devices will be installed into dwellings to monitor electricity and heating fuel consumption.
Ene 10 Home Office	1	Sufficient space and services should be provided allowing occupants to set up a home office, with the intent to reduce the need to commute to work. Sufficient services include two double power sockets, telephone point, window and adequate ventilation. Sufficient space is considered a minimum of 1.8m of wall length to allow a desk, chair and filing cabinet or bookshelf to be installed.  For dwellings with three bedrooms, the home office should be located in a room other than the kitchen, living room, master bedroom or bathroom. For dwellings with one or two bedrooms, the home office should be located in any room other than the kitchen, living room or bathroom.
<b>Water</b>		

Wat 01 Internal Water Use	2.5	Dwelling water consumption to be no more than 105 litres/person/day.
Wat 03 Water Meter	1	Appropriate water meters for measuring usage of mains potable water use will be provided to each dwelling.

#### Materials

Mat 01 Environmental Impact of Materials	10	The following Green Guide ratings are assumed: - Roof: B rating - External walls: A+ rating - Upper and ground floors: C rating - Internal walls: A rating - Windows: A rating
Mat 02 Responsible Sourcing of Materials	6	Building and finish elements will be responsibly sourced- based on a number of BREEAM tiered sourcing certificates. It is assumed that EMS certificates for the key process and supply chain or BRE Global certification 'pass' level will be obtained for 80% of each of the building element materials.
Mat 03 Insulation	8	80% of the new thermal insulation used in the building elements is responsibly sourced. The Insulation Index for new insulation used in the building is greater than 2. Green Guide ratings determined using the Green Guide to specification

#### Waste

Was 01 Household Waste	2	Adequate storage of household waste and internal waste is provided and composting service or facility is provided for kitchen waste, including composting facilities for dwellings with gardens.
Was 02 Refurbishment Site Waste	2	A compliant Level 1 SWMP is produced. Good practice waste benchmarks are met, evidence that criterion below have been met with resource efficiency benchmarks: - Non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the resource efficiency benchmark. - Amount of waste generated against £100,000 of project value is recorded in the SWMP. - Pre-refurbishment audit of the existing building is completed. - If demolition is included as part of the refurbishment programme, then the audit should also cover demolition materials. A Compliant Level 1 SWMP is produced - Procedures and commitments for minimising non-hazardous construction waste - Procedures for sorting, reusing and recycling construction waste into key defined waste groups. - Licence details for the waste carrier, and permit details for the site the waste is taken to, if waste is removed offsite. - The name/job title of the individual responsible for implementing the above.

#### Pollution

Pol 01 Nitrogen Oxide Emissions	3	Low NOx emission (<40mg/kWh) individual gas combi boilers assumed.
Pol 02 Surface Water Runoff	1	Neutral impact on surface water is assumed as the building footprint remains unchanged.
Pol 03 Flooding	2	The development lies in an area of low flood risk.

#### Innovation

Man 06, Ene 08, Was 02 - requirements as above	3	
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**Total BREEAM Credits to achieve 'Good' 52.59%**