Leycom Limited

41 Fortess Road
London Borough of Camden
London
NW5 1AD

BREEAM: Domestic Refurbishment

Outstanding
Excellent
Very Good
Good
Pass

Author	V	Rev	Date
IT	1	A	07.10.2013

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1	-	07.10.13	Draft for Issue	IT

Distribution:

V	Rev	Date	Issued to	H	E
1	A	07.10.13	Ko and Partners, Leycom Limited		Y

BREEAM: Domestic Refurbishment Pre-Assessment Estimate on Proposed Development at:

41 Fortess Road, London Borough of Camden, London.

This Pre-Assessment Estimate indicates how a rating of 'Excellent' could be achieved.

BREEAM Level:	**Excellent**
Predicted Score:	**73.33%**
Predicted BREEAM Level Threshold:	70.00%
Mandatory Requirements:	All Met
Assessed Version:	BREEAM Domestic Refurbishment 2012 – 1.0.2
Registered Version:	Registered:

This BREEAM: Domestic Refurbishment Pre-Assessment Estimate has been prepared by SRE for Leycom Limited (Client) and the design team as part of the planning requirements for the proposed refurbishment of an existing dwelling at 41 Fortess Road, Camden. The estimate has been based on details supplied by Ko and Partners (Architect), a desktop study and certain credits have been assessed on best practice and historical data.

This Pre-Assessment Estimate outlines the Proposed schemes assumed specification to meet the required BREEAM Level, and is to be signed by the Client and Contractor (if not the same organisation) in order to confirm that this specification will be implemented on site.

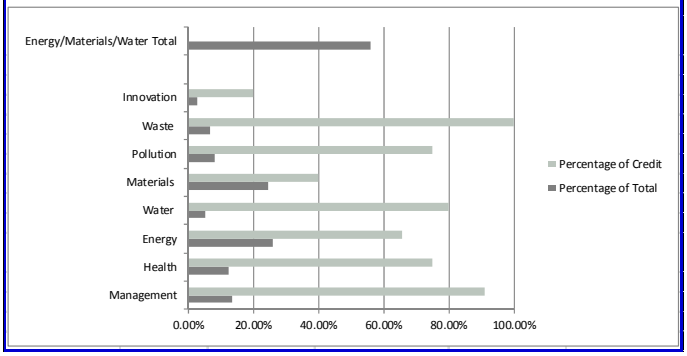
Overview

The Proposed Development at 41 Fortess Road, Camden consists of 9 no. dwellings ranging from studio to 3 bedrooms apartments over 4 floors. The units are required to achieve a minimum of BREEAM 'Excellent' Rating in line with Planning Policy. Efficient water fittings such as low flow showers and flow restricted taps will be required to meet the minimum standards for BREEAM 'Excellent', as well as the provision of correctly sized bike stores and recycling facilities. Other considerations have been taken into account, and certain assumptions of specified items have been made, please see the following pre-assessment for indicative specification.

Summary Score Sheet: BREEAM for Domestic Refurbishment

Section	Credits Available	Target Score	Unit No / Type 41 Fortess Road, Camden - All Units		
Management				**Assumption**	**Confirmed**
Man 1	3	**3**	3	✓	
Man 2	2	**2**	2	✓	
Man 3	1	**1**	1	✓	
Man 4	2	**1**	1	✓	
Man 5	1	**1**	1	✓	
Man 6	2	**2**	2	✓	
	11	**10**	**10**		
Health and Wellbeing					
Hea 1	2	**0**	0	✓	
Hea 2	4	**3**	3	✓	
Hea 3	1	**1**	1	✓	
Hea 4	2	**2**	2	✓	
Hea 5	2	**2**	2	✓	
Hea 6	1	**1**	1	✓	
	12	**9**	**9**		
Energy					
Ene 1	6	**1.5**	1.5		✓ Averaged
Ene 2	4	**3.5**	3.5		✓ Averaged
Ene 3	7	**7**	7		✓ Averaged
Ene 4	2	**0**	0	✓	
Ene 5	2	**2**	2	✓	
Ene 6	1	**1**	1	✓	
Ene 7	2	**2**	2	✓	
Ene 8	2	**1**	1	✓	
Ene 9	2	**1**	1	✓	
Ene 10	1	**0**	0	✓	
	29	**19**	**19**		
Water					
Wat 1	3	**3**	3	✓	
Wat 2	1	**1**	1	✓	
Wat 3	1	**0**	0	✓	
	5	**4**	**4**		
Materials					
Mat 1	25	**10**	10	✓	
Mat 2	12	**0**	0	✓	
Mat 3	8	**8**	8	✓	
	45	**18**	**18**		
Pollution					
Pol 1	3	**3**	3	✓	
Pol 2	3	**1**	1	✓	
Pol 3	2	**2**	2	✓	
	8	**6**	**6**		
Waste					
Was 1	2	**2**	2	✓	
Was 2	3	**3**	3	✓	
	5	**5**	**5**		
Innovation					
Inn 1	10	**2**	2	✓	
	10	**2**	2		
Weighted Total	**110**	**73.33**	73.33		
BREEAM Level		**EXCELLENT**	EXCELLENT		

Percentages



Please note that the summary score sheet above is indicative only and may differ from the actual score – please see the Pre-Assessment Estimator (BRE) towards the rear of this document for the actual score.

Key Assumptions/Notes

The following key assumptions/notes have been made by SRE in calculating the pre-assessment estimate – **they show what will need to be included in the design specification to meet the BREEAM requirements to achieve the required credits**. The BREEAM Pre-Assessment Estimator tool has been included in this report, to show the options available for each credit and how the total was reached.

Credits Ene 1, Ene 2 and Ene 3 will need to be confirmed as the site progresses as these may change as the design changes. Therefore SRE kindly request that we are informed of any plan and/or specification changes, and any revisions are passed on to SRE as soon as possible.

Credits Ene 10 and Hea 1 are contingent on daylight factors of 1.5% being achieved in the living/dining rooms, and the Home Office function being assigned to a room with a daylight factor over 1.5%. Please see the relevant sections below for further details.

Management

Issue	Credits Available	Credits Gained
MAN 1: Home Users Guide	3	3

Credits are awarded here for the provision of guidance to the home owner/occupier/tenant so they can understand how to operate the home effectively and efficiently.

It has been assumed that a Home Users Guide will be provided to the occupier on occupation of the dwelling and the Guide will contain the following information (headings listed only, please contact SRE for full list of requirements within this section):

- About BREEAM for Domestic Refurbishment
- Energy Efficiency in the Home
- Water Use
- Transport Facilities
- Materials and Waste
- Emergency information
- Local Amenities
- provision of the information in alternative formats
- Superhomes Network
- Links and References to Further Information.

Issue	Credits Available	Credits Gained
MAN 2: Considerate Constructor Scheme	2 (+1 Inn.)	2

Credits are awarded here for the management of sites in an environmentally and socially responsible manner.

It has been assumed at this stage that the main contractor for the site will sign up to the Considerate Constructors Scheme and score a minimum of 35, with 7 scored in each section. This will allow 2 credits to be awarded within this section.

Issue	Credits Available	Credits Gained
MAN 3: Construction Site Impacts	1	1

Credits are awarded here for the monitoring and reporting of site impacts to ensure the site is run in an environmentally sound manner in terms of resource use, energy consumption and pollution.

It has been assumed that the following will be undertaken on site for the duration of works to monitor and report the environmental impacts of the site:

- Set objectives for reducing CO_2 production from energy use arising from site activities. This must include:
  - Estimates of the energy use for the duration of works
  - Outline measures for reducing energy use on site
  - Highlight suitable measures which will be implemented on-site in order to reduce energy usage
  - Estimate of how much energy is to be saved through the implementation of the measures highlighted.

- Set objectives for reducing water use arising from site activities. This must include:
  - An estimate of the water use required for site activities throughout the refurbishment works
  - Outline measures which could be used to reduce the water use required for site activities
  - Highlight suitable measures which will be implemented on-site in order to reduce water use.

Further options are available within the Technical Guide. Please contact SRE for further options for compliance.

Issue	Credits Available	Credits Gained
MAN 4 Security	2	1

Credits are awarded here for the meeting of specific security standards to ensure crime, or the fear of crime, does not undermine quality of life or community cohesion.

It has been assumed that the following security ratings will be achieved for all new external doors and windows:

- External Door Sets:
  - PAS 24:2007 or
  - LPS1175 Issue 7 Security Rating 1 or equivalent
- External Windows:
  - BS7950:1997 (36)
  - LPS1175 Issue 7 Security Rating 1 or equivalent

Further credits can be achieved within this section should the dwellings be designed with the principles and guidance of the Secured By Design – Section 2 being complied with. Please confirmed to SRE whether this will be achieved/achievable on site.

Issue	Credits Available	Credits Gained
MAN 5: Protection and enhancement of ecological features	1	1

Credits are awarded here for the protection of any ecological features that are already on site prior to site works.

An ecology report and survey will be undertaken in identify all features of ecological value on the site. All features identified of being of 'ecological significance' will be protected during the demolition and construction phase.

Please note a report/site survey can be undertaken by a member of the Project Team which includes pictures for reference. This report must cover/identify the following features on the site:

- Trees which met one of more of the following requirements
  - Over 100mm trunk diameter
  - Over 10 years old
  - Of significant ecological value
- Mature hedgerows over 1m tall and 0.5m wide
- Natural Areas (e.g. flower rich meadow/grassland and heathland which includes habitat/plants that thrive on acidic soils, such as heather and gorse)
- Watercourses
- Wetlands
- Protected species
- Local priority UK BAP species
- Roosting and/or nesting opportunities in buildings for bats and birds.

It has been assumed at present that the report undertaken (above) will not identify any features of ecological significance and therefore 1 credit can be awarded within this section.

Issue	Credits Available	Credits Gained
MAN 6: Project Management	2 (+1 Inn)	2 +1 Inn

Credits are awarded here for the appropriate project management of the scheme and the involvement of the project team in the decision making process.

It has been assumed that the following will be undertaken on site:

- The project manager will write a project implementation plan and hold an initiation meeting to assign individual and shared responsibilities amongst the project team (including all trades) on site
- A handover meeting will be arranged
- Where 2 or more of the following items have been committed to:
  - A site inspection within 3 months of occupation
  - Conduct post occupancy interviews with building occupants or a survey via phone or posted information within 3 months of occupation
  - Longer term after care e.g. helpline, nominated individual or other appropriate system to support building users for at least the first 12 months of occupation.

The above specification will allow for 2 credits to be gained within this section.

An additional Innovation (Inn) credit has been awarded here do to the appointment of a BREEAM consultant early in the process, prior to the production of a refurbishment spec. Therefore this additional credit has been assumed.

Health and Wellbeing

Issue	Credits Available	Credits Gained
HEA 1: Daylighting	2	0

Credits are awarded here for the safeguarding of existing daylight levels within the key habitable spaces (living room, dining room, kitchen, and home office (Ene 10)). Further credits are awarded for meeting minimum standards of daylighting within these spaces which are: 1.5% Daylight Factor for living room, dining room and home office, and 2% Daylight Factor for kitchens.

Daylight credits cannot be awarded by default at this stage due to the significant change to the windows on the Proposed Dwellings. Outline daylight calculations have been undertake for sample units and these show that living spaces have a Daylight factor of >1.5%, however due to kitchens not scoring the 2% or higher required, no credits can be awarded at this stage.

Issue	Credits Available	Credits Gained
HEA 2: Sound Insulation	4	3

Credits are awarded here for the provision of sound insulation to meet or exceed the current Building Regulations Part E – Resistance to the Passage of Sound.

It has been assumed that sound testing will be undertaken for **all party wall and floor constructions** and that results will show a 3dB improvement over current Building Regulations Requirements. Sound testing report by a UKAS qualified Acoustic Consultant will be required to confirm.

Issue	Credits Available	Credits Gained
HEA 3: Volatile Organic Compounds	1	1

Credits are gained here to encourage a healthy internal environment through the specification of internal finishes and fittings with low emissions of volatile organic compounds (VOCs)

It has been assumed that the internal finishes and fixtures added to the dwelling will comply with best practice as outlined below:

Product	European Standard	Emission level required
Wood panels o Particle board o Fibre board inc. MDF o OSB o Cement bonded particle board o Plywood o Solid wood panel and acoustic board	BS EN 13986:2002	Formaldehyde E11 Verify that regulated wood preservatives are absent and of minimum content.
Timber Structures o Glue Laminated Timber	BS EN 14080:2005	Formaldehyde E11
Wood Flooring o E.g. parquet flooring	BS EN 14342:2005	Formaldehyde E11 Verify that regulated wood preservatives are absent and of minimum content.

Resilient, textile and laminated floor coverings o Vinyl/linoleum o Cork and rubber o Carpet o Laminated wood flooring	BS EN 14041:2004	Formaldehyde E11 Verify that regulated wood preservatives are absent and of minimum content.
Suspended ceiling tiles	BS EN 13964:2004	Formaldehyde E11 No Asbestos
Flooring adhesives	BS EN 13999-1:2007	Verify that carcinogenic or sensitising volatile substances are absent. (2-4)
Wall Coverings o Finished wall papers o Wall vinyl's and plastic wall coverings o Wallpapers for subsequent decoration o Heavy duty wall coverings o Textile wall coverings	BS EN 233:1999 BS EN 234:1989 BS EN 259:2001 BS EN 266:1992	Formaldehyde (5) and vinyl chloride monomer (VCM) (5) release should be low and within the BS EN standard for the material. Verify that the migration of heavy metals (5) and other toxic substances are within the BS EN standard for the material
Adhesive for hanging flexible wall-coverings	BS 3046:1981	No harmful substances and preservatives used should be of minimum toxicity
Decorative paints and varnishes	BS EN 13300:2001 Referred to the requirements of Decorative Paint Directive 2004/42/CE	VOC (organic solvent) content, requirement for Phase 2. Fungal and algal resistance
Testing requirements: 1. BS EN 717-1:2004 2. BS EN 13999-2:2007 – Volatile Organic Compounds (VOCs) 3. BS EN 13999-3:2007 – Volatile Aldehydes 4. BS EN 13999-4:2007 – Volatile diisocyanates 5. BS EN 12149:1997 6. BS EN ISO 11890-2:2006		

Issue	Credits Available	Credits Gained
HEA 4 Inclusive Design	4	2

Credits are awarded here for the adoption of an inclusive design approach to improve the accessibility of the home and its future adaptability to cope with changing needs of a household, such as old age, frailty, a short or long term disability or a debilitating illness.

It has been assumed that an Access Statement – reporting on the access facilities of the site – will be provided by a nominated individual within the design team (which meet the applicable criteria) or an 'Accessibility Expert' which covers the following headings:

Section 1:

- Means of access to the dwelling
- Accessible switches and socket outlets in the dwelling
- WC provision in the entrance storey of the dwelling
- Entrance details (illumination, threshold and coverings)
- Bathroom walls and adaptions capability
- Bathroom Layout requirements
- Height of control fixtures and fittings

Section 2:

- Access and dwelling approach
- Access door requirements
- Corridors , passageways and internal doors
- Vertical circulation
- Passenger lifts and communal stairs
- WC provision in the entrance level of dwelling

Section 3:

- Not required at this stage.

Please see Appendix 1, to the rear of this document for the full list of requirements for this report.

Issue	Credits Available	Credits Gained
HEA 5: Ventilation	2	2

Credits are awarded to here for the provision of adequate ventilation to the dwellings to ensure a healthy internal environment, and avoid problems associated with high humidity and the build up of pollutants without excessive heat loss.

MANDATORY: purge, background and extract ventilation within the dwelling will need to meet Section 7 of Building Regulations Approved Document F, 2010

It has been assumed however that further credits will be sought, and that the dwelling will be refurbished with adequate ventilation installed which will comply with **Section 5, Building Regulations Part F, 2010.**

Issue	Credits Available	Credits Gained
HEA 6: Safety	1	1

Credits are awarded here for the provision of equipment to reduce injury, death and property damage due to fires.

MONDATORY: It has been assumed that the following equipment will be installed to comply with this credit:

- Carbon Monoxide Detector in line with BS EN 50291 – 1:2001 and BS EN 50292:2002 and should carry a British or European approval mark. *Please note that there is a difference in the Carbon Monoxide Sensors used as a fire detection device, and those used to detect faulty combustion equipment – this section requires the former - rather than the latter – device to be fitted.*
- Fire detection and alarm system compliant with BS 58396:2004(40) and at least a Grade D Category LD3 Standard. This will be positioned in accordance with Building Regulations Part B (as outlined for new build properties)
- Both alarms will be mains connected and operated with a battery backup, conforming to BS EN 14604:2005 (42).

NOTE: BS5839-6 LD3 Standard required that the centralised Automatic Fire Detection System be installed within all communal areas, and any rooms which open out into this area. All other alarms within the dwellings will be standard smoke detectors with battery backup.

Confirmation will be required from the relevant contractor that the above requirements have been met at Post Construction Stage.

Energy

Issue	Credits Available	Credits Gained
ENE 1: Improvement in Energy Efficiency Rating	6	1.5

Credits are awarded within this section for the improvement of the Energy Efficiency Rating (as shown on the Energy Performance Certificate and the Provisional Energy Assessment) between the pre-refurbishment conditions and the post-refurbishment conditions

SAP Calculations have been undertaken by SRE on sample units to indicate a group average for the whole site. These show that the average improvement in the Energy Efficiency Rating (SAP Score) have increased by 16, therefore allowing 1.5 credits to be awarded.

Issue	Credits Available	Credits Gained
ENE 2: Energy Efficiency Rating Post Refurbishment	6	3.5

Credits are awarded within this section for the absolute value of the Energy Efficiency Rating of the post-refurbished dwelling. More credits are awarded for a higher score.

MANDATORY: The site must achieve an average Energy Efficiency Rating (EER) of 70 to comply with BREEAM Excellent.

SAP Calculations have been undertaken by SRE on sample units to indicate a group average for the whole site. These show that the average EER of the sampled units is 83, therefore allowing 3.5 credits to be awarded.

Issue	Credits Available	Credits Gained
ENE 3: Primary Energy Demand	7	7

Credits are awarded here for a low Primary Energy Demand figure to promote the reduction in absolute total regulated energy use of a dwelling as a result of the refurbishment – reducing running costs, CO2 emissions and fuel poverty.

SAP Calculations have been undertaken by SRE on sample units to indicate a group average for the whole site. These show that the average Primary Energy Demand for the sampled units is 63.2 kWh/m^2/yr allowing 7 credits to be awarded.

Issue	Credits Available	Credits Gained
ENE 4: Renewable Technologies	2	0

Credits are awarded here for the generation of energy through renewable means to offset CO_2 emissions and reduce energy costs for dwelling operation.

It has been assumed at this stage that renewable technologies will not be specified, and therefore no credits have been awarded.

Issue	Credits Available	Credits Gained
ENE 5: White Goods	2	2

Credits are awarded within this section to promote the use or purchase of energy efficient white goods, reducing CO_2 emissions and energy bills from appliance use within the dwelling.

It has been assumed that White Goods will be supplied to the dwelling to gain credits within this section, and that these will met the following specification:

- Fridge Freezers (or Fridge and Freezer), Washing Machines, and Dishwashers (where installed) carry the **Energy Savings Trust Recommended Label.**
- A leaflet on the EU Energy Efficiency Labelling Scheme is provided to the dwelling to inform residents about the scheme, what it is, and how it works.

Issue	Credits Available	Credits Gained
ENE 6: Drying Space	1	1

Credits are awarded here for the provision of a reduced energy means for drying clothing and therefore reduce the energy demand (and CO_2 emissions) associated with the dwelling

It has been assumed that an internal drying line will be supplied to each unit in the form of a fixed internal drying line within the heated bathroom space. This line will be of min 4m or 6m in total line length for 1 and 3 bed flats respectively, and will be a permanent, fixed fitting.

Ventilation will be provided to the drying area (typically a heated bathroom) in line with Building Regulations Approved Document F.

Issue	Credits Available	Credits Gained
ENE 7: Lighting	2	2

Credits are awarded within this section for the provision of energy efficient internal lighting, reducing CO_2 emissions and associated energy bills for the dwelling.

Internal Lighting: it has been assumed that the dwelling will be fitted with energy efficient internal lighting which has a maximum average wattage across the total floor area of the dwelling of 9 Watts/m^2.

External Lighting: It has been assumed that external space lighting will be provided through energy efficient bulbs/luminaries. Any security lighting (where fitted) mush also be provided through energy efficient bulbs/luminaries.

Issue	Credits Available	Credits Gained
ENE 8: Energy Display Device	1 (+1 Inn.)	1 +1 Inn

Credits are awarded within this section for the specification of an appropriate Energy Display Device to allow residents to monitor energy use thereby encouraging them to reduce the energy use associated with the dwelling.

An Energy Display Device will be installed to each individual dwelling which monitors and displays the current Electricity use of the dwelling. The Energy Display Device must display the following information to the residents:

- Current Energy Consumption (Watts)
- Current Emissions (kg CO_2)
- Current Cost (£ per hour)
- Projected Cost (£ per month and £ per year)

A device which **is capable of recording** (in addition to displaying) the above information will be specified within all dwellings to gain the additional Innovation (Inn) credit.

Issue	Credits Available	Credits Gained
ENE 9: Cycle Storage	2	1

Credits are awarded here for the provision of adequate, weather proof and secure cycle storage to prevent the use of cars for shorter journeys, reducing CO_2 emissions.

Drawings currently show cycle storage provided for 9 no. cycles. This allows 1 credit to be awarded for each dwelling.

The storage provided will secure (each cycle will have the ability to be locked to a fixing (Sheffield stand or other) which is fixed within or to a solid structure/foundation.) and weather proof that allows each cycle to be removed and replace individually.

The above specification allows 1 credit to be awarded to each dwelling.

Issue	Credits Available	Credits Gained
ENE 10: Home Office	1	0

Credits are awarded here for the provision of a dedicated Home Office space within the dwelling to allow for all necessary equipment to be connected - facilitating the occupants working from home, reducing commuting and the associated environmental impacts.

At this stage it has been assumed that a Home Office will not be provided within each dwelling in order to meet the requirements of this section. Should a Home Office wish to be specified, please contact SRE for advice on a suitable room for this purpose.

Water

Issue	Credits Available	Credits Gained
WAT 1: Internal Water Use	3	3

Credits are awarded here for the reduction of water use within the dwelling, below that currently required by Building Regulations - saving water, which is a resource in short supply.

MANDATORY: Water use within the dwelling will be restricted to less than 95 litres/person/day.

It has been assumed however, that water use within the dwelling will be lowered further using reduced capacity baths, toilet cisterns, and reduced flow taps and showers. The dwelling will have restricted capacities/flow rates as follows, to meet the requirements of this section:

- Kitchen sink taps have a flow rate of 5 litres/min or less
- Bathroom basin taps have a flow rate of 4 litres/min or less
- Low Flow Showers (not more than 6 litres/min)
- Dual Flush WC's (4/2.6 Litre)
- Bath: maximum 170 litre
- Washing Machine water use max. 8.17 litres/kg dry load
- Dishwasher water use max. 1.25 litres/place setting
- No water softeners are to be installed

Issue	Credits Available	Credits Gained
WAT 2: External Water Use	1	1

Credits are awarded here for the provision of rainwater collection systems to collect rainwater for non-potable external uses – reducing the potable water use listed within WAT 1 above.

Where units are not specified with secure private or communal external space, or where only balconies are provided this credit is gained by default.

For units where external space is specified, a water butt, connected to the rainwater downpipe will be supplied for irrigation. This will be of min. 150 litres (1 and 2 bed dwellings) or 200 litres (3 + bed dwellings) capacity where applicable.

In all cases, this credit has been assumed.

Issue	Credits Available	Credits Gained
WAT 3: Water Meter	1	0

Credits are awarded here for the specification of a compliant water meter to allow the use of mains potable water to be measured – thereby encouraging water use reduction.

It has been assumed that an internal water meter within each unit will not be provided at this stage and therefore no credits have been awarded.

Materials

Issue	Credits Available	Credits Gained
MAT 1: Environmental Impact of Materials	25	10

Credits are awarded here for the use of low impact materials and those re-used from the existing structure. Credits are also gained for any thermal improvements to existing structures to encourage the re-use of existing structures/materials.

The building specification below has been assumed to represent the proposed development – final specification is to be confirmed. This gains 10 credits within this section.

Element		Description	Green Guide Rating
Roofs		*REFURBISHED/RETAINED*: Timber rafters and joists with insulation, roofing underlay, counterbattens, battens and concrete plain tiles 812410017	A+ Rated
External Walls		*REFURBISHED/RETAINED: twin layer solid brick skin with cement lime mortar 79885267*	A(6)+ Rated
Internal Walls	Party Walls	*NEW:* Metal stud, plasterboard, paint 809760003 Please note the sound requirements for all party walls.	A+ Rated
	Internal Partitions		
Ground Floors (to lower ground floor)		*NEW:* Screed on insulation laid on in situ concrete floor on polyethylene DPM on blinded virgin aggregate sub-base 820100009	D Rated
Upper Floors		*REFURBISHED/RETAINED: T&G floorboards on timber joists 807280023*	C Rated
Windows		*NEW:* PVC-U window with steel reinforcement, double glazed 813100009	A Rated

Please note that the credits and specification above is indicative only and may be subject to change based on building specification. Credits may also be gained once the final thermal performance of each external element (current and proposed) is known.

Issue	Credits Available	Credits Gained
MAT 2: Responsible sourcing of Materials	12	0

Credits are awarded here for the use of ISO14001 or BES6001 certified materials (supply and production) within the construction and finishing process.

MANDATORY: All timber will be sourced from independently verifiable legal and sustainable sources (eg. FSC/PEFC) or FLEGT (forestry law enforcement, governance and trade) sources.

Information on the suppliers of the timber to site will be required from the developer post-construction to confirm.

Issue	Credits Available	Credits Gained
MAT 3: Insulation	8	8

Credits are awarded here for the specification and use of insulation materials which have a low embodied environmental impact relative to its thermal properties.

A full specification has been provided for all units.

An indicative calculation of the insulation materials likely to be used shows that 8 credits can be gained within this section.

The developer will commit to sourcing all insulation materials from an ISO14001 manufacturer in order to gain credits within this section.

Credits are awarded based on the negative environmental impact of the insulation production phase, measured against the positive environmental impact of the insulation once installed.

Indicative calculations based on the specification provided shows that 8 credits are achievable.

Pollution

Issue	Credits Available	Credits Gained
POL 1: Nitrogen Oxides Emissions	3	3

Credits are awarded here for the specification of heating equipment with low Nitrogen Oxides emissions.

All dwellings will have heat and hot water servicing provided through a natural gas condensing boiler with a Nitrogen Oxide (NOx) emissions rate of ≥40mg/kwh. Final specification to confirm.

Issue	Credits Available	Credits Gained
POL 2 Surface Water Run-off	3	1

Credits are awarded here for the reduction of surface water runoff caused by the site development to encourage the reduction in risk of local flooding due to increased impermeable surfacing.

Site drawings show that the effect of Surface water runoff from the site will be neutral due to no increase in the area of external, non-permeable hard landscaping. 1 credit is achieved here – calculations and supporting drawings will be needed to confirm.

Issue	Credits Available	Credits Gained
POL 3 Flooding	2	2

Credits are awarded here for development within an area of low flood risk, or for mitigation of that risk where flooding is more likely.

MANDATORY: a Flood Risk Assessment (FRA) will be undertaken to confirm the flood risk for the site. At this stage the site has been assessed under the Environment Agency's Flood Mapping Service and has been deemed of low risk – full report will be required to confirm.

The Flood Risk Assessment must be written in accordance with PPS 25 by an appropriate engineer. **This will be required as a Mandatory requirement for BREEAM Excellent rating.**

Please note that Flood Risk Assessments compiled in line with the new National Planning Policy Framework (NPPF) do not comply within BREEAM.

Waste

Issue	Credits Available	Credits Gained
WAS 1 Household Waste	2	2

Credits are awarded here for the provision of recycling facilities to reflect the Local Authority's collection scheme to encourage recycling and reduce the amount of waste being sent to landfill.

The London Borough of Camden operates a recyclable waste collection service for more than 3 different recycling streams which is sorted post collection. Therefore, it has been assumed that an internal recycling bin of min 30l in total capacity will be installed, in a dedicated position in the kitchen and will be a permanent fixture to the dwelling. This will be located in a non-obstructive position close to the conventional waste storage location.

The London Borough of Camden also provides a Food Waste Collection Service, therefore a space for the internal 'Kitchen Caddy' will be provided within the kitchen layout (to show that it

fits) and all external bins will be provided for this service in line with LA requirements.

Issue	Credits Available	Credits Gained
WAS 2 Refurbishment Site Waste	3 (+1 Inn)	3

Credits are awarded here for the adoption of a compliant Site Waste Management Plan for the duration of works on site in order to promote resource efficiency and responsible waste disposal.

The cost of the refurbishment work will be greater than £300,000. On this basis, it has been assumed that a compliant Site Waste Management Plan will be implemented which complies with Checklist Was 2 which should include:

- A target benchmark for resource efficiency i.e. m^3 of waste per £100,000 of project value or tonnes of waste per £100,000 of project value
- Procedures and commitments for minimising non-hazardous construction waste in line with the benchmark best practice.
- Specify waste minimisation actions relating to at least 3 key waste groups
- Procedures for minimising hazardous waste
- Procedures for sorting, reusing and recycling construction and demolition waste either on site or through a licensed waste contractor
- Procedures for measuring the amount of construction and demolition waste diverted from landfill.
- License details of waste carrier, and permit details for the site the waste was taken too, if waste is removed from site.
- The name or job titles of the individual responsible for implementing the above.
- Non-hazardous waste generated by the dwellings refurbishment will meet or exceed 26.53m^3 or 16.19 tonnes per £100,000 o project value.
- The amount of waste generated against £100,000 of project value will be recorded within the SWMP
- A Pre-Refurbishment Audit of the existing building will be completed to:
    - Identify the amounts of the key refurbishment materials
    - Potential applications and any related issued for the reuse and recycling of the key refurbishment materials.
- Where the demolition is included as part of the refurbishment programme, then the audit will also cover demolition materials.
- Waste diversion will meet or exceed the following benchmarks:

Waste Types	**Volume**	**Waste**
Non-hazardous construction waste	70%	65%
Non-Hazardous demolition waste	80%	90%

Please contact SRE for a copy of the Was 2 Checklist containing details of what is needed within the SWMP.

Declaration

The Declaration below is to be signed in order to confirm that the above specification for the BREEAM Domestic Refurbishment will be adopted on site, and will be used as part of the Design Stage Assessment as a commitment to comply with the requirements.

We the undersigned agree that the above specification (as stated in: 07.10.2013 - BREEAM Domestic Refurbishment Pre-Assessment Estimate - 41 Fortess Road, Camden V1 RevA) in relation to the BREEAM: Domestic Refurbishment credit requirements for this site will be implemented, that all assumptions will be adopted, and that any deviation from the requirements listed will be agreed with SRE Ltd prior to implementation.

On behalf of the Developer/Contractor:	On behalf of the Client:
Name:……	Name:……
Organisation:……..	Organisation:……
Signature:……	Signature:……
Date:……	Date:……

BREEAM Domestic Refurbishment 2012 Pre-Assessment Estimator v0.5

BREEAM

This assessment and indicative BREEAM rating is not a formal certified BREEAM assessment or rating and must not be communicated as such.
The score presented is indicative of a dwelling's potential performance and is based on a simplified pre-formal BREEAM assessment and unverified commitments given at an early stage in the design process.

Building name	
Indicative building score (%)	73.33%
Indicative BREEAM rating	BREEAM Excellent

Management | Health & Wellbeing | Energy | Water | Materials | Waste | Pollution

	Minimum Standards				
	Pass	Good	Very Good	Excellent	Outstanding
Ene 02	✓	✓	✓	✓	✓
Wat 01	✓	✓	✓	✓	✓
Hea 05	✓	✓	✓	✓	✓
Hea 06	✓	✓	✓	✓	✓
Pol 03	✓	✓	✓	✓	✓
Mat 02	✓	✓	✓	✓	✓

INNOVATION

Section Weighting: 10% — Indicative Section Score: 2.00%

Comments

MANAGEMENT

Section Weighting: 12% — Indicative Section Score: 10.91%

Man 01 Home Users Guide

No. of BREEAM credits available	3	Available contribution to overall score	3.27%
No. of BREEAM innovation credits	0	Minimum Standards applicable:	No

Assessment Criteria

Where a Home Users Guide be provided to all dwellings, covering all issues set out in the 'Users Guide Contents list', three credits may be awarded

Indicative Credits Achieved: 3

Comments

Man 02 Responsible Construction Practices

No. of BREEAM credits available	2	Available contribution to overall score:	2.18%
No. of BREEAM innovation credits	1	Minimum Standards	No

Assessment Criteria

Where a compliant considerate construction scheme will be used, credits are awarded depending the score achieved as outlined below:

Indicative Credits Achieved: 2

Large Scale - project with more than 5 units

	One Credit	Two Credits
Considerate Constructors Scheme	Score of 24 - 31.5	Score of 32 - 35.5
Alternative Compliant Scheme	Compliance	Beyond Compliance

Small Scale - project with 5 units or fewer

	One Credit	Two Credits
Considerate Constructors Scheme	24 - 31.5	32 - 35.5
Alternative Compliant Scheme	Compliance	Beyond Compliance
Checklist A-4	50% of the optional items	80% of the optional items

Exemplary Credit

Considerate Constructors Scheme	Score of >36
Alternative Compliant Scheme	Exemplary Level Compliance
Checklist A-4*	All Items (Optional & Mandatory)

Indicative Innovation Credits Achieved: 0

* Small Scale Project Only

Comments

Man 03 Construction Site Impacts

No. of BREEAM credits available	1	Available contribution to overall score	1.09%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where evidence demonstrate that site impacts will be monitored, as detailed below:

Indicative Credits Achieved: 1

	One Credit
Large Scale	Where there is evidence to demonstrate that **2 or more** of the sections in **Checklist A-5** are completed
Small Scale	Where there is evidence to demonstrate that **2 or more** of the sections in **Checklist A-6** are completed

Sections of Checklist	
Large Scale - Checklist A-5	Small Scale - Checklist A-6
Monitor, report and set targets for CO2 production of energy use arising from site activities	Set objectives for reducing CO2 production from energy use arising from site activities
Monitor, report and set targets for water consumption arising from site activities	Set objectives for reducing water use arising from site activities
A main contractor with an environmental materials policy	Main contractor environmental materials statement
A main contractor that operates an Environmental Management System	80% of site timber is reclaimed, re-used or responsibly sourced
80% of site timber is reclaimed, re-used or responsibly sourced	

Same definition of small and large scale as in Man 02

Comments

Man 04 Security

No. of BREEAM credits available	2	Available contribution to overall score:	2.18%
No. of BREEAM innovation credits	0	Minimum Standards applicable:	No

Assessment Criteria
Where the following requirements will be met:

Indicative Credits Achieved: 1

One Credit Secure windows and doors	External doors and accessible windows meet minimum standards and appropriately certified
Two Credits Secured by design	Principles and guidance of Secured by Design Section 2 are complied with
	A suitably qualified security consultant is consulted at the design stage and their recommendations are incorporated into the refurbishment

Comments

Man 05 Protection and Enhancement of Ecological Features

No. of BREEAM credits available	1	Available contribution to overall score:	1.09%
No. of BREEAM innovation credits	1	Minimum Standards applicable:	No

Assessment Criteria
Where the following requirements will be met:

Indicative Credits Achieved: 1

One Credit Protecting Ecological Features	Site survey carried out to determine presence of ecological features
	Statutory Nature Conservation Organisation notified of protected species
	Features of ecological value protected during refurbishment works
Exemplary Credit **Ecological enhancement**	A suitably qualified ecologist recommends features to enhance ecology of the site
	adopts all general ecological recommendations
	adopts 30% of additional recommendations

Indicative Innovation Credits Achieved: Please Select

Comments

Man 06 Project Management

No. of BREEAM credits available	2	Available contribution to overall score	2.18%
No. of BREEAM innovation credits	2	Minimum Standards applicable	No

Assessment Criteria
Where the following requirements will be met:

Indicative Credits Achieved: 2

One Credit Project Roles and Responsibilities	Where all of the project team are involved in the project decision making
	Small Scale - the project manager assigns individual and shared responsibilities amongst the project team including all trades on site
	Large Scale - the project manager assigns individual and shared responsibilities across the following key design and refurbishment stages: i. Planning and Building control notification ii. Design iii. Refurbishment iv. Commissioning and handover v. Occupation

Small Scale projects: five units or fewer or less than £100k — **Large Scale projects: more than five units or more than £100k**

One Credit Handover and Aftercare	Handover meeting arranged
	2 or more of the following committed to: - A site inspection within 3 months of occupation - Conduct post occupancy interviews with building occupants or a survey via phone or posted information within 3 months of occupation - Longer term after care e.g. a helpline, nominated individual or other appropriate system to support building users for at least the first 12 months of occupation

Indicative Innovation Credits Achieved: 1

Exemplary Credits

One Exemplary Credit Early Design Input	Where A BREEAM Accredited Professional has been appointed to oversee key stages within the project. OR Where a BREEAM Domestic Refurbishment Assessor has been appointed at an early stage of the project, prior to the production of a refurbishment specification
One Exemplary Credit Thermographic Surveying and Airtightness Testing	Where Thermographic surveying and Airtightness testing have been carried out at both pre and post refurbishment stages Where an improved air tightness target has been set at design stage and testing demonstrates that this has been achieved post refurbishment

Comments

HEALTH & WELLBEING

Section Weighting: 17%

Indicative Section Score 12.75%

Hea 01 Daylighting

No. of BREEAM credits available	2	Available contribution to overall score	2.83%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Indicative Credits Achieved: 0

Where the refurbishment results in a neutral impact on daylighting or where minimum daylighting standards are met, up to two credits may be awarded as follows:

For Existing Dwellings and Change of Use Projects

First Credit Maintaining Good Daylighting	The refurbishment results in a neutral impact on the dwellings daylighting levels in the kitchen, living room, dining room and study

Where the property is being extended

First Credit Maintaining Good Daylighting	New spaces achieve minimum daylighting levels
	The extension does not reduce daylighting levels in the kitchen, living room, dining room or study of neighbouring properties

For All Properties

Second Credit Minimum Daylighting	The dwelling achieves minimum daylighting levels in the kitchen, living room, dining room and study

Comments

Hea 02 Sound Insulation

No. of BREEAM credits available	4	Available contribution to overall score	5.67%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Indicative Credits Achieved: 3

To ensure the provision of acceptable sound insulation standards and so minimise the likelihood of noise complaints.

Properties where sound testing has been carried out:

Up to Four Credits	Four credits awarded according to the improvement over building regulations. See table in additional information in Technical Manual

Properties where sound testing is not feasible and not required by the appointed Building Control body

Two Credits	Where existing separating walls and floors are designed to meet the requirements of Building Regulations with compliant construction details
Up to Four Credits	Where a Suitably Qualified Acoustician (SQA) provides recommendations for the specification of all existing separating walls and floors
	SQA confirms in their professional opinion that they have the potential to meet or exceed the sound insulation credit requirements
	Where these recommendations are implemented
	See table in additional information in Technical Manual

Historic Buildings

Up to Four Credits	Where the dwelling is a Historic Building and sound testing results demonstrate existing separating walls and floor meet the Historic Building credit requirements
	See table in additional information in Technical Manual

Detached Properties

Four Credits	By Default

Properties with separating walls or floors only between non habitable rooms OR Testing not required by building control body

Four Credits	By Default

Comments

Hea 03 Volatile Organic Compounds

No. of BREEAM credits available	1	Available contribution to overall score	1.42%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Indicative Credits Achieved: 1

Where the refurbishment avoids the use of VOCs with new products meeting the following requirements:

One Credit Avoiding the use of VOCs	Where all decorative paints and varnishes used in the refurbishment have met the requirement listed in table 5.4 in the Technical Manual
	Where at least five of the eight remaining product categories listed in table 5.4 have met the testing requirements and emission levels for Volatile Organic Compound (VOC) emissions against the relevant standards identified within table 5.4 in the Technical Manual
	Where five or less products are specified within the refurbishment, all must meet the requirements in order to achieve this credit.

Comments

Hea 04 Inclusive Design

No. of BREEAM credits available	2	Available contribution to overall score	2.83%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Indicative Credits Achieved: 2

Where an access statement has been carried out using Checklist A-8 of the Technical Manual to optimise the accessibility of the home as follows:

	Checklist A-8 of the Technical Manual	
	Section 1	**Section 2**
One Credit Minimum Accessibility	Completed with Evidence	
Two Credits Advanced Accessibility	Completed with Evidence	Completed with Evidence

Exemplary Performance

One Credit	Where an access expert suitably qualified member of the design team has completed sections 1, 2 and 3 of Checklist A-8, access statement template with evidence provided of the measures implemented in the refurbishment

Indicative Innovation Credits Achieved: 0

Comments

Hea 05 Ventilation

No. of BREEAM credits available	**2**	**Available contribution to overall score**	**2.83%**
No. of BREEAM innovation credits	**0**	**Minimum Standards applicable**	**Yes**

Assessment Criteria

Where the dwelling meets the following ventilation requirements:

Indicative Credits Achieved → 2

One Credit Minimum Ventilation Requirements	A minimum level of background ventilation is provided (with trickle ventilators or other means of ventilation) for all habitable rooms, kitchens, utility rooms and bathrooms compliant with section 7, Building Regulations Approved Document Part F, 2010
	A minimum level of extract ventilation is provided in all wet rooms (e.g. kitchen, utility and bath-rooms), compliant with section 5, Building Regulations Approved Document Part F 2010.
	A minimum level of purge ventilation is provided in all habitable rooms and wet rooms, compliant with section 7, Building Regulations Approved Document Part F, 2010.
	It is an historic building and meets historic building requirements in CN4 of the technical manual
Two Credits Advanced Requirements	Ventilation is provided for the dwelling that meets the requirements of Section 5 of Building Regulations Part F in full
	Where the building is a historic building and meets the requirements for Historic Buildings in compliance note 4 of the technical manual

Comments

Hea 06 Safety

No. of BREEAM credits available	**1**	**Available contribution to overall score**	**1.42%**
No. of BREEAM innovation credits	**0**	**Minimum Standards applicable**	**Yes**

Assessment Criteria

Where a fire and carbon monoxide (CO) detection and alarm system is specified as follows:

Indicative Credits Achieved → 1

One Credit Fire and Carbon Monoxide (CO) Detection and Alarm Systems	Carbon Monoxide detector installed if dwelling is supplied with mains gas or other fossil fuel
	Where a compliant fire detection and fire alarm system is provided
	Mains supplied fire detection and alarm system if project involves re-wiring
	Battery operated fire detection and alarm system if no re-wiring is to take place

Comments

ENERGY

Section Weighting: 43% **Indicative Section Score 28.17%**

Ene 01 Improvement in Energy Efficiency Rating

No. of BREEAM credits available	**6**	**Available contribution to overall score**	**8.90%**
No. of BREEAM innovation credits	**0**	**Minimum Standards applicable**	**No**

Assessment Criteria

Where the following targets are met for the improvement in Energy Efficiency Rating achieved as a result of refurbishment:

Indicative Credits Achieved → 1.5

Improvement in EER	Credits
≥ 5	0.5
≥ 9	1
≥ 13	1.5
≥ 17	2
≥ 21	2.5
≥ 26	3
≥ 31	3.5
≥ 36	4
≥ 42	4.5
≥ 48	5
≥ 54	5.5
≥ 60	6

Comments

Ene 02 Energy Efficiency Rating Post Refurbishment

No. of BREEAM credits available	**4**	**Available contribution to overall score**	**5.93%**
No. of BREEAM innovation credits	**2**	**Minimum Standards applicable**	**Yes**

Assessment Criteria

Where the following Energy Efficiency Rating benchmarks will be met as a result of refurbishment:

Indicative Credits Achieved → 3.5

EER post refurbishment	Credits	Minimum requirements
≥50	0.5	'Pass' level EER of 50
≥55	1	'Good' level EER of 58
≥60	1.5	
≥65	2	'Very Good level' EER of 65
≥70	2.5	'Excellent' level EER of 70
≥75	3	
≥80	3.5	'Outstanding' level EER of 81
≥85	4	

Exemplary	Credits
≥90	1
≥100	2

Indicative Innovation Credits Achieved → 0

Comments

Ene 03 Primary energy demand

No. of BREEAM credits available	7	Available contribution to overall score	10.38%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the following Primary Energy Demand benchmarks will be met as a result of refurbishment:

Indicative Credits Achieved: 7

Primary Energy Demand Post Refurbishment (kWh/m^2/year)	Credits
≤ 400	0.5
≤ 370	1
≤ 340	1.5
≤ 320	2
≤ 300	2.5
≤ 280	3
≤ 260	3.5
≤ 240	4
≤ 220	4.5
≤ 200	5
≤ 180	5.5
≤ 160	6
≤ 140	6.5
≤ 120	7

Comments

Ene 04 Renewable Technologies

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the dwelling will meet the following % contribution from renewables and primary energy demand targets as a result of refurbishment

Indicative Credits Achieved: 0

Dwelling Type	Primary Energy Demand	Percentage from Renewables	
		1 Credit	2 Credits
Detached	≤ 250 kWh/m^2/year	≥10%	≥20%
Semi-Detached		≥10%	≥20%
Bungalow		≥10%	≥20%
End of Terrace		≥10%	≥20%
Mid Terrace	≤ 220 kWh/m^2/year	≥10%	≥20%
Low Rise Flat		≥10%	≥20%
Mid Rise Flat		≥10%	≥15%
High Rise Flat		≥10%	≥15%

Comments

Ene 05 Energy Labelled White Goods

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where Energy Efficiency White goods are to be provided as follows:

Indicative Credits Achieved: 2

First Credit

Appliance	Appliance provided	Appliance not to be provided
Fridges, Freezers and Fridge-Freezers	Energy Saving Trust Recommended appliances specified	EU Energy Efficiency Labelling Scheme Information Leaflet provided to all dwellings

Second Credit

Appliance	Appliance provided	Appliance not to be provided
Washing Machines and Dishwashers	Energy Saving Trust Recommended appliances specified	Second credit not achieved
Washer-Dryers and Tumble Dryers	Appliances specified with B Rating under EU Energy Efficiency Labelling Scheme	EU Energy Efficiency Labelling Scheme Information Leaflet provided to all dwellings

Comments

Ene 06 Drying Space

No. of BREEAM credits available	1	Available contribution to overall score	1.48%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where adequate, secure internal or external space with posts and footings or fixings is provided with the following:

Indicative Credits Achieved: 1

1 Credit

Number of bedrooms	Drying line required
1-2	4m+
3+	6m+

Comments

Ene 07 Lighting

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where energy efficient internal and external lighting is provided as follows:

Indicative Credits Achieved: 2

External Lighting - 1 Credit

Energy Efficient Space Lighting and Energy Efficient Security Lighting OR
Where Energy Efficient Space Lighting is provided ONLY

Internal Lighting - 1 Credit

Maximum average wattage across the total floor area of the dwelling of 9 watts/m2

Comments

Ene 08 Display Energy Devices

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Where consumption data is displayed to occupants by a compliant energy display device

Indicative Credits Achieved → 1

Electricity usage data displayed	Primary Heating Fuel	
	Electricity	Other
Electricity usage data displayed	2 credits awarded	1 credit awarded
Primary Heating Fuel usage data displayed	N/A	1 credit awarded
Electricity & Primary Heating Fuel usage displayed	N/A	2 credits awarded

Exemplary Credits

One credit Recording consumption data	Where any compliant Energy Display Device is capable of recording consumption data	**Indicative Innovation Credits Achieved** → 1

Comments

Ene 09 Cycle Storage

No. of BREEAM credits available	2	Available contribution to overall score	2.97%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where individual or communal compliant cycle storage is provided as follows:

Indicative Credits Achieved → 1

Dwelling Size	One Credit	Two Credits
Studios/ 1 bedroom	1 per two dwellings	1 per dwelling
2-3 bedrooms	1 per dwelling	2 per dwelling
4 bedrooms	2 per dwelling	4 per dwelling

Comments

Ene 10 Home Office

No. of BREEAM credits available	1	Available contribution to overall score	1.48%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where sufficient space and services will be provided to allow occupants to set up a home office in a suitable room with adequate ventilation

Indicative Credits Achieved → 0

Comments

WATER

Section Weighting: 11% **Indicative Section Score 8.80%**

Wat 01 Internal Water Use

No. of BREEAM credits available	3	Available contribution to overall score	6.60%
No. of BREEAM innovation credits	1	Minimum Standards applicable	Yes

Assessment Criteria

Where the dwellings water consumption meets the following consumption benchmarks, or where terminal fittings meet the following water consumption standards:

Indicative Credits Achieved → 3

Calculated Water Consumption (litres/person/day)	Equivalent terminal fitting standards	Minimum Standard	Credits
>150	Typical baseline performance	N/A	0
140-150	All showers specified to 'Good' **OR** All taps and WC's to 'Good' **OR** Kitchen fittings specified to 'Excellent'	N/A	0.5
129-139	All showers specified to 'Excellent' **OR** All showers and bathroom taps to 'Good'	BREEAM Very Good	1
118-128	All bathroom and WC room fittings specified to 'Good' **OR** All bathroom fittings specified to 'Excellent'	N/A	1.5
107-117	All Bathroom and WC room fittings specified to 'Excellent' **OR** All Bathroom fittings Specified to 'Excellent' and WC room fitting specified to 'Good' **OR** All Bathroom fittings, kitchen and utility sittings specified to 'Good'	BREEAM Excellent	2
96-106	All kitchen, bathroom, utility room and WC room fittings specified to 'Good' **OR** All bathrooms, kitchens and utility rooms specified to 'Excellent'	N/A	2.5
<95	All bathroom fittings specified to 'Excellent' and WC room, kitchen and utility room fittings specified to 'Good'	BREEAM Outstanding	3

NOTE: 'Good' fittings are equivalent to good practice fittings with "Excellent" fittings equivalent to best practice fittings (see the technical manual for full details.

Exemplary Credit	If the water consumption is less than 80l/person/day	**Indicative Innovation Credits Achieved** → 0

Comments

Wat 02 External Water Use

No. of BREEAM credits available	1	Available contribution to overall score	2.20%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where the following requirements will be met:

Indicative Credits Achieved → 1

Requirements:

One Credit	Where a compliant rainwater collection system for external/internal irrigation use has been provided to dwellings. **OR** Where dwellings have no individual or communal garden space.

Comments

Wat 03 Water Meter

No. of BREEAM credits available	1	Available contribution to overall score	2.20%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where an appropriate water meter for measuring usage of mains potable water meter has been provided to dwelling(s), one credit may be awarded

Indicative Credits Achieved → 0

Comments

MATERIALS

Section Weighting: 8%

Indicative Section Score 3.20%

Mat 01 Environmental Impact of Materials

No. of BREEAM credits available	25	Available contribution to overall score	4.44%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Indicative Credits Achieved: 10

Up to 25 credits can be awarded, with credits calculated using the Mat 01 calculator tool. The table below shows the maximum number of credits available for each element:

Elements	Green Guide Rating credits available	Thermal performance credits available*
Roof	5	3
External walls	5	3.8
Internal walls (including separating walls)	5	-
Upper and Ground Floor	5	1.2
Windows	5	2

The full 25 credits represents all of the elements containing refurbished or existing materials that meet the Green Guide Rating of A+(6)

GG Rating	Points for existing / refurbished elements	Points for new elements
A+ (6)	5	
A+ (5)	4.6	
A+ (4)	4.2	
A+ (3)	3.8	
A+ (2)	3.4	
A+	3	3
A	2	2
B	1	1
C	0.5	0.5
D	0.25	0.25
E	0	0

Where the full 25 credits cannot be achieved the score can be 'topped up' with thermal performance credits. The full number of thermal performance credits for each element can be achieved when achieving the minimum U-values shown below.

Elements	Minimum U-Value (W/m2K)
Roof	0.11
External walls	0.15
Internal walls (including separating walls)	-
Upper and Ground Floor	0.15
Windows	1.4

Comments

Mat 02 Responsible Sourcing of Materials

No. of BREEAM credits available	12	Available contribution to overall score	2.13%
No. of BREEAM innovation credits	0	Minimum Standards applicable	Yes

Assessment Criteria

Indicative Credits Achieved: 0

Where new materials are responsibly sourced, up to 12 credits may be awarded where 80% of new materials for an element are responsibly sourced. The credits achieved are dependent on % of point achieved which is based upon the responsible sourcing tier level of each material sourced as detailed below:

Table 1

Tier level	Points
1	4
2	3.5
3	3
4	2.5
5	2
6	1.5
7	1
8	0

Will all new timber used in the project be sourced in accordance with the UK Government's Timber Procurement Policy? **Yes**

Table 2

BREEAM credits	% of available points achieved
12	≥54%
10	≥45%
8	≥36%
6	≥ 27%
4	≥ 18%
2	≥ 9%

Comments

Mat 03 Insulation

No. of BREEAM credits available	8	Available contribution to overall score	1.42%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Indicative Credits Achieved: 8

Where any new insulation specified for use within external walls, ground floor, roof and buildings services meet the following requirements:

Requirements

4 Credits	Where the Insulation Index for new insulation used in the buildings is ≥2
	Where Green Guide ratings are determined using the Green Guide to specification tool

Requirements

4 Credits	Where ≥ 80% of the new thermal insulation used in the building elements is responsibly sourced.

Comments

WASTE

Section Weighting: 3% | Indicative Section Score 3.00%

Was 01 Household Waste

No. of BREEAM credits available	2	Available contribution to overall score	1.20%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Where compliant recycling and composting facilities are provided, up to two credits may be awarded as follows

Indicative Credits Achieved: 2

First Credit - Recycling Facilities	
Scenario	**Internal recycling storage requirements**
Compliant collection scheme in place	3 internal recycling containers provided where recycling is not sorted post collection
	1 internal recycling container provided where recycling is sorted post collection
	Minimum 30 litre total capacity, no single container less than 7 litre capacity
	Dedicated position in accordance with compliance note 1
No compliant collection scheme in place No adequate external storage	3 internal recycling containers provided
	Minimum 60 litre total capacity
	Dedicated position in accordance with compliance note 1
No compliant collection scheme in place Adequate external storage provided	3 internal recycling containers provided
	Minimum 30 litre total capacity, no single container smaller than 7 litre capacity
	Dedicated position in accordance with compliance note 1

Second credit - Composting facilities	
With external space	**Without external space**
Where a composting service or facility is provided for green/garden waste	Where a composting service or facility is provided for kitchen waste
Where a composting service or facility is provided for kitchen waste	Where an interior container is provided for kitchen composting waste of at least 7 litres
Where an interior container is provided for kitchen composting waste of at least 7 litres	

Comments

Was 02 Refurbishment Site Waste Management

No. of BREEAM credits available	3	Available contribution to overall score	1.80%
No. of BREEAM innovation credits	1	Minimum Standards applicable	No

Assessment Criteria

Up to three credits are available depending on the site waste management plan to be implemented as follows

Indicative Credits Achieved: 3

Projects up to £100k

Three Credits	Where waste generated through the refurbishment process is managed in accordance with Checklist A-9
Exemplary Credit	Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place

Indicative Innovation Credits Achieved: 0

Projects up to £300k

Three Credits	Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place
	Where a compliant Level 2; Site Waste Management Plan (SWMP) is in place
Exemplary Credit	Non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the resource efficiency benchmark
	The percentage of non-hazardous construction waste and demolition waste generated by the project has been diverted from landfill and meets or exceeds the refurbishment & demolition waste diversion benchmarks

Projects over £300k

First Credit Management Plan	Where a compliant Level 2; Site Waste Management Plan (SWMP) is in place
Second Credit Good Practice Waste Benchmarks	First credit achieved
	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
Third Credit Best Practice Waste Benchmarks	Where the first two credits have been achieved achieved
	Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the refurbishment & demolition waste diversion benchmarks
Exemplary Credit	Where non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the *exemplary level resource efficiency benchmark*
	Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the exemplary level diversion benchmarks

Comments

POLLUTION

Section Weighting: 6% | Indicative Section Score 4.50%

Pol 01 NOx Emissions

No. of BREEAM credits available	3	Available contribution to overall score	2.25%
No. of BREEAM innovation credits	0	Minimum Standards applicable	No

Assessment Criteria

Credits are awarded on the basis of NOx emissions arising from the operation of space heating and hot water systems for each refurbished dwelling as follows:

Indicative Credits Achieved: 3

	Dry NOx Emissions
One Credit	≤100 mg/kWh (NOx class 4 boiler)
Two Credits	≤70 mg/kWh (NOx class 5 boiler)
Three Credits	≤40 mg/kWh

Comments

Pol 02 Surface Water Runoff

No. of BREEAM credits available	**3**	**Available contribution to overall score**	**2.25%**
No. of BREEAM innovation credits	**1**	**Minimum Standards applicable**	**No**

Assessment Criteria

Where impacts of the refurbishment on surface water runoff are neutralised or where runoff is reduced as a result of refurbishment, up to three credits can be awarded as follows:

Indicative Credits Achieved: 1

Requirements

First Credit Neutral Impact on Surface Water	New hard standing areas must be permeable
	If building on to previously permeable area additional run-off must be managed on site
	Calculations should be carried out by an appropriately qualified professional

Requirements

Second Credit Reducing Run-Off From Site: Basic	Where all run-off from the roof for rainfall depths up to 5 mm, have been managed on site using source control methods
	Include runoff from all existing and new parts of the roof.
	An appropriately qualified professional should be used to design an appropriate drainage strategy for the site

Requirements

Third Credit Reducing Run-Off From Site: Advanced	Where run-off as a result of the refurbishment is managed on site using source control
	An appropriately qualified professional should be used to design an appropriate drainage strategy for the site.
	The peak rate of run-off as a result of the refurbishment for the 1 in 100 year event has been reduced by 75% from the existing site.
	The total volume of run-off discharged into the watercourses and sewers as a result of the refurbishment, for a 1 in 100 year event of 6 hour duration has been reduced by 75%.
	An allowance for climate change must be included for all of the above calculations, in accordance with current best practice (PPS25, 2010).

Requirements

Indicative Innovation Credits Achieved: 0

Exemplary Credit	Where all run-off from the developed site is managed on site using source control
	The peak rate of run-off as a result of the refurbishment for the 1 in 1 year event is reduced to zero.
	The peak rate of run-off as a result of the refurbishment for the 1 in 100 year event is reduced to zero.
	There is no volume of run-off discharged into the watercourses and sewers as a result of the refurbishment, for a 1 in 100 year event of 6 hour duration.
	An allowance for climate change must be included for all of the above calculations, in accordance with current best practice (PPS25, 2010).

Comments

Pol 03 Flooding

No. of BREEAM credits available	**2**	**Available contribution to overall score**	**1.50%**
No. of BREEAM innovation credits	**0**	**Minimum Standards applicable**	**Yes**

Assessment Criteria

Where the dwelling is located in a low flood risk zone, or where in a medium to high flood risk zone and a flood resilience/resistance strategy has been implemented, up to two credits can be awarded as follows:

Indicative Credits Achieved: 2

Minimum Standards	A minimum of two credits must be achieved for this issue at the Excellent and Outstanding levels

Option 1 - Low Flood Risk

Two Credits	Where a Flood Risk Assessment (FRA) has been carried out and the assessed dwellings are defined as having a low annual probability of flooding.

Option 2 - Medium / High Flood Risk

Two Credits	Where a Flood Risk Assessment (FRA) has been carried out and the assessed dwellings are defined as having a medium or high annual probability of flooding.
	Two credits are awarded where as a result of the dwellings floor level or measures to keep water away the dwelling is defined as achieving avoidance from flooding by following Checklist A-10; Decision Strategy Flow Chart.
	Where avoidance is not possible, two credits are achieved where a full flood resilience/resistance strategy is implemented for the dwellings in accordance with recommendations made by a Suitably Qualified Building Professional

Comments

Appendix 1: HEA 4 Accessibility Report Content Requirements.

Section B - E to be completed by access expert
B) Description of Project To include description of proposed works (general project brief)

Section 1	
1. Means of access into the dwelling	
Requirement 2 Access into the dwelling	An accessible threshold is provided into the entrance. Note: The design of an accessible threshold should also satisfy the requirements of Part C2: Dangerous end offensive substances and Part C4: Resistance to weather and ground moisture.
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
	Note: General guidance on design considerations for accessible thresholds has been published separately by The Stationery Office as 'Accessible thresholds in new housing: guidance for house builders and designers'.
2. Accessible switches and socket outlets in the dwelling(s)	
1 Accessible switches and socket outlets in the dwelling(s)	Provides switches and socket outlets for lighting and other equipment in habitable rooms at appropriate heights between 450mm and 1200mm from finished floor level (see diagrams 29 within Approved Document.
	Provision at pre-development, along with details of restrictions or limitations:

Section 1	
	Description of practical solution achieved at post-development to meet requirement:
3. WC provision in the entrance storey of the building	
1 WC provision in the entrance storey of the building	1. a WC is provided in the entrance storey of a dwelling which contains a habitable room; or where the dwelling is such that there are no habitable rooms in the entrance storey, if a WC is provided in either the entrance storey or the principal storey 2. the door to the WC compartment opens outwards, and is positioned to enable wheelchair users to access the WC and has a clear opening width in accordance with (door openings wider than the minimum in in accordance with the table allow easier manoeuvring and access to the WC by wheelchair users); and 3. the WC compartment provides a clear space for wheelchair users to access the WC (see diagrams 31 and 32 within Approved Document) and washbasin is positioned so that it does not impeded access
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
4. All entrances should: a. be illuminated b. have level access over the threshold and c. have a covered main entrance	
Criterion 4 Entrances	The threshold upstand (any vertical change in level at the threshold) should not exceed 15mm. Applicability: All forms of dwelling – 4 a.. All entrances to dwellings and all communal entrances to blocks of dwellings 4 b. All entrances to dwellings, all communal entrances to blocks of dwellings and all associated communal doors 4 c. Main entrances to dwellings and main entrances to blocks of dwellings
	Provision at pre-development, along with details of restrictions or limitations:

Section 1	
	Description of practical solution achieved at post-development to meet requirement:
5. Walls in bathrooms and toilets should be capable of taking adaptations such as handrails	
Criterion 11 Bathroom & WC Walls	Wall reinforcements should be located between 300 and 1500mm from the floor Applicability: All forms of dwelling
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
6. The bathroom should be designed to incorporate ease of access to the bath, WC and wash basin	
Criterion 14 Bathroom Layout	Although there is not a requirement for a turning circle in bathrooms, sufficient space should be provided so that a wheelchair user can use the bathroom Applicability: All forms of dwelling
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:

Section 1	
7. Switches, sockets, ventilation and service controls should be at a height usable by all (i.e. between 450 and 1200mm from the floor)	
Criterion 16 Controls Fixtures & Fittings	This applies to all rooms including the kitchen and bathroom Applicability: All forms of dwelling
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:

Section 2	
1. Means of access to the dwelling	
1) Approach to the dwelling	Within the plot of the dwelling, a suitable approach is provided from the point of access to the entrance The point of access should be reasonably level and the approach should not have crossfalls greater than 1 in 40. The whole, or part, of the approach may be a driveway.
	Provision at pre-development, along with details of restrictions or limitations:
	Describe the approach to the dwelling before project work commenced. Site layout plans or other design documentation may be referred to. Identify areas of non-conformity with the requirements of Part M.
	Description of practical solution achieved at post-development to meet requirement:

<table>
<tr><th colspan="2">Section 2</th></tr>
<tr><td></td><td></td></tr>
<tr><td></td><td>Describe improvements made to meet Part M requirement as far as practical, explaining why further improvements to achieve the required / desired Standard for each element were not possible due to pre-development restrictions.</td></tr>
<tr><td rowspan="3">2) Access Doors</td><td>An external door providing access for disabled people has a minimum clear opening width of 775mm.</td></tr>
<tr><td>Provision at pre-development, along with details of restrictions or limitations:</td></tr>
<tr><td>Description of practical solution achieved at post-development to meet requirement:</td></tr>
<tr><td colspan="2">2. Circulation within the entrance storey of the dwelling(s)</td></tr>
<tr><td>1) Corridors, passageways and internal doors within the entrance storey</td><td>A corridor or other access route in the entrance storey or habitable room containing a WC (which may be a bathroom) on that level, has an unobstructed width in accordance with the following table:
<table>
<tr><th colspan="2">: Minimum Widths of Corridors and Passageways for a Range of Doorway widths</th></tr>
<tr><td>Doorway Clear Opening Width (mm)</td><td>Corridor/Passageway width (mm)</td></tr>
<tr><td>750 or narrower</td><td>900 (when approached head-on)</td></tr>
<tr><td>750</td><td>1200 (when approached not head-on)</td></tr>
<tr><td>775</td><td>1050 (when approached not head-on)</td></tr>
<tr><td>800</td><td>900 (when approached not head-on)</td></tr>
</table>
</td></tr>
</table>

Section 2	
	A short length (no more than 2m) of local permanent obstruction in a corridor such as a radiator, would be acceptable provided that the unobstructed width of the corridor is not less than 750mm for that length and the local permanent obstruction is not placed opposite a door to a room if it would prevent a wheelchair user turning into or out of the room; and Doors to habitable rooms and a room containing a WC have minimum clear opening widths shown in , when accessed by corridors or passageways whose widths are in accordance with those listed in the table.
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
2) Vertical circulation within the entrance storey	In exceptional circumstances, where severely sloping plots are involved, a stepped change of level within the entrance storey may be unavoidable. In those instances, the aim should be to provide a stair of reasonable width for ambulant disabled people to negotiate the steps with assistance and for handrails on both sides. Approved Document K of the Building Regulations contains guidance on the design of private stairs in dwellings. A stair providing vertical circulation within the entrance storey of the dwelling will satisfy requirement M1 if: a. it has flights whose clear widths are at least 900mm; b. there is a suitable continuous handrail on each side of the flight and any intermediate landings where the rise of the flight comprises three or more rises: and c. the rise and going are in accordance with the guidance in the Approved Document for part K for private stairs.
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:

Section 2	
3. Passenger lifts and common stairs in blocks of flats	
1) Passenger lifts and common stairs in blocks of flats	A building containing flats, in which a passenger lift is not be installed, is provided with a suitable stair, with: 1. all step nosings distinguishable through contrasting brightness; 2. top and bottom landings whose lengths are in accordance with Part K1; 3. steps with suitable tread nosing profiles (see Diagrams 30 within Approved Document) and uniform rise of each step, which is not more than 170mm; 4. uniform going of each step, which is not less than 250mm, which for tapered treads should be measured at a point 270mm form the inside of the tread; In a building, or part of a building which contains flats above the entrance storey, any lift access with a minimum load capacity of 400kg must: 1. has a clear landing at least 1500mm wide and at least 1500mm long in front of its entrance; 2. has a door or doors which provide a clear opening width of at least 800mm 3. has car whose width is at least 900mm and whose length is at least 1250mm (other dimensions may satisfy Requirement M1 where shown by test evidence or experience in use, or otherwise, to be suitable for an unaccompanied wheelchair user); 4. has landing and car controls which are not less than 900mm and not more than 1200mm above the landing and the car floor, at a distance of at least 400mm from the front wall; 5. is accompanied by suitable tactile indication on the landing and adjacent to the lift call button to identify the storey in question; 6. has suitable tactile indication on or adjacent lift within the car to confirm the floor selected; 7. incorporates a signalling system which gives visual notification that the lift is answering a landing call and a 'dwell time' of five seconds before its doors beginning to close after they are fully open; the system may be overridden by a door re-activating device which relies on appropriate electronic methods, but not a door edge pressure system, provided that the minimum time for a lift door to remain fully open is 3 seconds; and 8. when the lift serves more than three storeys, incorporates visual and audible indication of the floor reached.
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:

Section 2	
4. WC provision in the entrance storey of the building	
1) WC provision in the entrance storey of the building	1. a WC is provided in the entrance storey of a dwelling which contains a habitable room; or where the dwelling is such that there are no habitable rooms in the entrance storey, if a WC is provided in either the entrance storey or the principal storey 2. the door to the WC compartment opens outwards, and is positioned to enable wheelchair users to access the WC and has a clear opening width in accordance with (door openings wider than the minimum in accordance with the table allow easier manoeuvring and access to the WC by wheelchair users); and 3. the WC compartment provides a clear space for wheelchair users to access the WC (see diagrams 31 and 32 within Approved Document) and washbasin is positioned so that it does not impeded access
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:

Section 3	
5. Where there is car parking adjacent to the home, it should be capable of enlargement to attain 3300mm width	
Criterion 1 Car parking width	The general provision for a car parking space is 2400mm width. If an additional 900mm width is not provided at the outset, there must be provision (e.g. a grass verge) for enlarging the overall width to 3300mm at a later date. Applicability: Usually only houses – all dwellings that have a parking space within the designated plot boundary for that particular dwelling

<table>
<tr><th colspan="2">Section 3</th></tr>
<tr><td rowspan="2"></td><td>Provision at pre-development, along with details of restrictions or limitations:</td></tr>
<tr><td>Description of practical solution achieved at post-development to meet requirement:</td></tr>
<tr><td colspan="2">6. The distance from the car parking space to the home should be kept to a minimum and should be level or gently sloping</td></tr>
<tr><td rowspan="3">Criterion 2 Access from car parking</td><td>It is preferable to have a level approach. However, where the topography prevents this, the following table highlights the maximum gradients dependent on the distance*

<table>
<tr><th>Distance</th><th>Gradient</th></tr>
<tr><td><5m</td><td>1:12</td></tr>
<tr><td>5–10m</td><td>1:15</td></tr>
<tr><td>>10m</td><td>1:20</td></tr>
</table>
Paths should be a minimum of 900mm width

Applicability: All forms of dwelling – all parking spaces, for any type of dwelling, whether that space is within the boundary or not</td></tr>
<tr><td>Provision at pre-development, along with details of restrictions or limitations:</td></tr>
<tr><td>Description of practical solution achieved at post-development to meet requirement:</td></tr>
<tr><td colspan="2">7. The approach to all entrances should be level or gently sloping</td></tr>
<tr><td>Criterion 3 The approach to all</td><td>See specification and dimensional requirements of standard 2 above for the definition of gently sloping</td></tr>
</table>

Section 3	
entrances should be level or gently sloping	Applicability: As standard 2 above
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
8. Communal stairs should provide easy access and where homes are reached by a lift, it should be fully accessible	
Criterion 5 Communal stairs and lifts	Minimum dimensions for communal stairs; — Uniform rise not more than 170mm; — Uniform going not less than 250mm; — Handrails extend 300mm beyond top and bottom step; — Handrail height 900mm from each nosing;
	Minimum dimensions for lifts; — Clear landing entrances 1500mm x 1500mm; — Minimum internal dimensions 1100mm 3 1400mm; — Lift controls between 900 and 1200mm from the floor and 400mm from the lift's internal front wall; Applicability: Flats and maisonettes – any dwelling approached via a communal stair and/or a passenger lift. If a lift is provided, the communal stairs must still conform to the requirements stated in the Specification column.
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
9. The width of the doorways and hallways should conform to the specifications in the next row	

<table>
<tr><th colspan="2">Section 3</th></tr>
<tr><td>Criterion 6 Door-ways & Hallways</td><td>
<table>
<tr><th>Doorway clear opening width (mm)</th><th>Corridor/passageway width (mm) (minimum)</th></tr>
<tr><td>750 or wider</td><td>900 (when approach is head-on)</td></tr>
<tr><td>750 or wider</td><td>1200 (when approach is not head-on)</td></tr>
<tr><td>750 or wider</td><td>1050 (when approach is not head-on)</td></tr>
<tr><td>900 or wider</td><td>900 (when approach is not head-on)</td></tr>
</table>
Applicability: All forms of dwelling – all doorways and hallways/passageways/ landings on all storeys within all dwellings, whatever form, on whatever storey, and all communal areas within a block of dwellings

The clear opening width of the front door should be 800mm.

Applicability: All front doors to all dwellings and communal entrance doors to blocks of dwellings

There should be 300mm to the side of the leading edge of doors at entrance level.

Applicability: All communal entrance doors to blocks of dwellings, all communal doors within a block of dwellings (on any storey), and all doors on the entrance level of each dwelling (i.e. all doors on the entrance level of houses/maisonettes and every door within a flat)
</td></tr>
<tr><td></td><td>Provision at pre-development, along with details of restrictions or limitations:</td></tr>
<tr><td></td><td>Description of practical solution achieved at post-development to meet requirement:</td></tr>
<tr><td colspan="2">10. There should be a space for turning a wheelchair in dining areas and living rooms and adequate circulation space for wheelchairs elsewhere</td></tr>
<tr><td>Criterion 7 Wheel-chair Accessibility</td><td>A turning circle of 1500mm diameter or a 1700mm x 1400mm ellipse is required Applicability: All forms of dwelling</td></tr>
</table>

Section 3	
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
11. The living room should be at entrance level	
Criterion 8 Living room	Applicability: All forms of dwelling – Living room/living area
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
12. In houses of two or more storeys, there should be space on the entrance level that could be used as a convenient bed-space	
Criterion 9 Entrance Level Bed-space	Applicability: Houses/maisonettes – dwellings with more than one storey
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
13. There should be; a wheelchair accessible entrance level WC, with drainage provision enabling a	

Section 3	
	Description of practical solution achieved at post-development to meet requirement:
15. The design should provide a reasonable route for a potential hoist from a main bedroom to the bathroom	
Criterion 13 Tracking Hoist Route	Most timber trusses today are capable of taking a hoist and tracking. Technological advances in hoist design mean that a straight run is no longer a requirement Applicability: All forms of dwelling
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:
16. Living room window glazing should begin at 800mm or lower and windows should be easy to open/operate	
Criterion 15 Window Specification	People should be able to see out of the window whilst seated. Wheelchair users should be able to operate at least one window in each room Applicability: All forms of dwelling
	Provision at pre-development, along with details of restrictions or limitations:
	Description of practical solution achieved at post-development to meet requirement:

Signatures
The following declaration should be signed by the project team member responsible for ensuring that the dwelling(s) meets the recommendations of the Access Statement; the completing access

Signatures
expert; and appointed BREEAM Assessor.
Name of access expert:
Signature:
Name of project team member:
Signature:
Name of assessor:
Signature:
Date: