

BREEAM Domestic Refurbishment 2012 Pre-Assessment Estimator v0.6: Results Summary

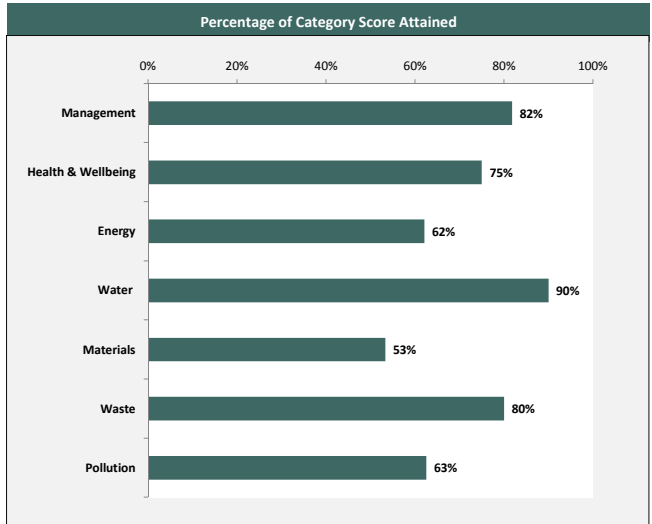


Building name	49 Fitzjohns Avenue, Camden, London
Indicative Building Score	71.57%
Indicative Building Rating	BREEAM Excellent

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.

Issue	Credits Available	Indicative Credits Achieved	Weighting	Section Score	
<b>Management</b>	Man 01	3	3	12%	9.82%
	Man 02	2	1		
	Man 03	1	1		
	Man 04	2	2		
	Man 05	1	1		
	Man 06	2	1		
<b>Health and Wellbeing</b>	Hea 01	2	1	17%	12.75%
	Hea 02	4	4		
	Hea 03	1	1		
	Hea 04	2	1		
	Hea 05	2	1		
	Hea 06	1	1		
<b>Energy</b>	Ene 01	6	4	43%	26.69%
	Ene 02	4	2.5		
	Ene 03	7	2.5		
	Ene 04	2	0		
	Ene 05	2	2		
	Ene 06	1	1		
	Ene 07	2	1		
	Ene 08	2	2		
	Ene 09	2	2		
	Ene 10	1	1		
<b>Water</b>	Wat 01	3	2.5	11%	9.90%
	Wat 02	1	1		
	Wat 03	1	1		
<b>Materials</b>	Mat 01	25	12	8%	4.27%
	Mat 02	12	8		
	Mat 03	8	4		
<b>Waste</b>	Was 01	2	2	3%	2.40%
	Was 02	3	2		
<b>Pollution</b>	Pol 01	3	2	6%	3.75%
	Pol 02	3	1		
	Pol 02	2	2		
<b>Innovation</b>	10	2	N/A		2.00%

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



### BREEAM Domestic Refurbishment 2012 Pre-Assessment Estimator v0.7

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	Minimum Standards				
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Wat 01	✓	✓	✓	✓	✗
Hea 05	✓	✓	✓	✓	✓
Hea 06	✓	✓	✓	✓	✓
Pol 03	✓	✓	✓	✓	✓
Mat 02	✓	✓	✓	✓	✓

Management	Health & Wellbeing	Energy	Water	Materials	Waste	Pollution
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**INNOVATION** Section Weighting: 10% Indicative Section Score: 2.00%

Comments

**MANAGEMENT** Section Weighting: 12% Indicative Section Score: 9.82%

<b>Man 01 Home Users Guide</b>		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: 3

Comments  
A Home User Guide will be created and provided to the ultimate owner/ occupier of the dwelling. The user guide will be in accordance with the BREEAM criteria as set out in Man 01.

<b>Man 02 Responsible Construction Practices</b>		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: 1

	One Credit	Two Credits
<b>Large Scale - project with more than 5 units</b>		
Considerate Constructors Scheme	Score of 25-34 with a score of 5 in each section	Score of 35-39 with a score of 7 in each section
Alternative Compliant Scheme	Compliance	Beyond Compliance

	One Credit	Two Credits
<b>Small Scale - project with 5 units or fewer</b>		
Considerate Constructors Scheme	Score of 25-34 with a score of 5 in each section	Score of 35-39 with a score of 7 in each section
Alternative Compliant Scheme	Compliance	Beyond Compliance
Checklist A-3	50% of the optional items	80% of the optional items

<b>Exemplary Credit</b>		Indicative Innovation Credits Achieved
Considerate Constructors Scheme	Score of 40 or more with a score of 7 in each section	Please Select
Alternative Compliant Scheme	Exemplary Level Compliance	
Checklist A-3*	All Items (Optional & Mandatory)	

\* Small Scale Project Only

Comments  
One credit is assumed here as the project will be registered with the Considerate Constructors Scheme with a target score of 34.

<b>Man 03 Construction Site Impacts</b>		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: 1

	One Credit
<b>Large Scale</b>	Where there is evidence to demonstrate that <b>2 or more</b> of the sections in <b>Checklist A-4</b> are completed
<b>Small Scale</b>	Where there is evidence to demonstrate that <b>2 or more</b> of the sections in <b>Checklist A-5</b> are completed

Sections of Checklist	
Large Scale - Checklist A-4	Small Scale - Checklist A-5
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  
A minimum of 80% of the timber used to facilitate construction will be sustainable sourced in accordance with the UK Governments Timber Procurement Policy.

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			Indicative Credits
Where the following requirements will be met:			2
One Credit Secure windows and doors	External doors and accessible windows meet minimum standards and appropriately certified		
	Principles and guidance of Secured by Design Section 2 are complied with		
Two Credits Secured by design	A suitably qualified security consultant is consulted at the design stage and their recommendations are incorporated into the refurbishment		
Comments			
It is assumed that the external doors and accessible windows meet minimum standards and are appropriately certified. It is also assumed that the Secured by Design principles are implemented and that a Police Architectural Liaison officer is consulted during detailed design.			
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			Indicative Credits
Where the following requirements will be met:			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		Indicative Innovation Credits Achieved
	adopts all general ecological recommendations		
	adopts 30% of additional recommendations		
Comments			
Assumes that a SQE is appointed to complete site survey and features of ecological value are protected during refurbishment. Final detailed design adopts relevant recommendations applicable to the location			
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			Indicative Credits
Where the following requirements will be met:			1
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 and less than £100k		Large Scale projects: more than five units and 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		
Exemplary Credits			Indicative Innovation Credits Achieved
One Exemplary Credit Early Design Input	Where A BREEAM Accredited Professional has been appointed to oversee key stages within the project.		1
	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			
Assumes one standard credit and one innovation credit can be achieved through the specification of thermographic surveying and air tightness testing pre and post refurbishment			

HEALTH & WELLBEING		Section Weighting: 17%		Indicative Section Score 12.75%	
<b>Hea 01 Daylighting</b>					
No. of BREEAM credits available	2	Available contribution to overall score	2.83%		
No. of BREEAM innovation credits	0	Minimum Standards applicable	No		
<b>Assessment Criteria</b>					<b>Indicative Credits</b>
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:					1
<b>For Existing Dwellings and Change of Use Projects</b>					
<b>First Credit</b> Maintaining Good Daylighting		The refurbishment results in a neutral impact on the dwellings daylighting levels in the kitchen, living room, dining room and study			
<b>Where the property is being extended</b>					
<b>First Credit</b> Maintaining Good Daylighting		New spaces achieve minimum daylighting levels			
		The extension does not significantly reduce daylighting levels in the kitchen, living room, dining room or study of neighbouring properties			
<b>For All Properties</b>					
<b>Second Credit</b> Minimum Daylighting		The dwelling achieves minimum daylighting levels in the kitchen, living room, dining room and study			
<b>Comments</b>					
Assumes the refurbishment will achieve at minimum one credit with no adverse impact on daylighting.					
<b>Hea 02 Sound Insulation</b>					
No. of BREEAM credits available	4	Available contribution to overall score	5.67%		
No. of BREEAM innovation credits	0	Minimum Standards applicable	No		
<b>Assessment Criteria</b>					<b>Indicative Credits</b>
To ensure the provision of acceptable sound insulation standards and so minimise the likelihood of noise complaints.					4
<b>Properties where sound testing has been carried out:</b>					
<b>Up to Four Credits</b>		Four credits awarded according to the improvement over building regulations. See table in additional information in Technical Manual			
<b>Properties where sound testing is not feasible and not required by the appointed Building Control body</b>					
<b>Two Credits</b>		Where existing separating walls and floors are designed to meet the requirements of Building Regulations with compliant construction details			
<b>Up to Four Credits</b>		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			
<b>Historic Buildings</b>					
<b>Up to Four Credits</b>		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			
		Where sound testing is not feasible and not required by the appointed Building Control body meeting criteria 2 and 3 using Table 12			
		Properties where sound testing has been carried out, credits awarded according to the improvement over building regulations. See table in additional information in Technical Manual			
		Where the dwelling is a detached property			
		Where the dwelling is a property with separating walls or floors only between non habitable rooms OR Testing not required by building control body			
<b>Detached Properties</b>					
<b>Four Credits</b>		By Default			
<b>Properties with separating walls or floors only between non habitable rooms OR Testing not required by building control body</b>					
<b>Four Credits</b>		By Default			
<b>Comments</b>					
The dwelling is detached and so four credits can be awarded by default. There is a linking corridor between the dwelling and the adjacent school however there is no physical connection.					
<b>Hea 03 Volatile Organic Compounds</b>					
No. of BREEAM credits available	1	Available contribution to overall score	1.42%		
No. of BREEAM innovation credits	0	Minimum Standards applicable	No		
<b>Assessment Criteria</b>					<b>Indicative Credits</b>
Where the refurbishment avoids the use of VOCs with new products meeting the following requirements:					1
<b>One Credit</b> 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.			
<b>Comments</b>					
The contractor will commit to meeting the requirements as set out in the technical manual.					
<b>Hea 04 Inclusive Design</b>					
No. of BREEAM credits available	2	Available contribution to overall score	2.83%		
No. of BREEAM innovation credits	1	Minimum Standards applicable	No		
<b>Assessment Criteria</b>					<b>Indicative Credits</b>
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:					1

**Checklist A-8 of the Technical Manual**

	Section 1	Section 2
<b>One Credit</b> Minimum Accessibility	Completed with Evidence	
<b>Two Credits</b> Advanced Accessibility	Completed with Evidence	Completed with Evidence

**Exemplary Performance**

<b>One Credit</b>	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
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**Indicative Innovation Credits Achieved**  
Please Select

**Comments**

Assumes a suitable assessment is completed by a qualified access expert as part of the design development and secures at minimum 1 credit

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			Indicative Credits
Where the dwelling meets the following ventilation requirements:			1
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			
It is assumed the property will meet the minimum ventilation requirements as set out in the technical manual.			
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			Indicative Credits
Where a fire and carbon monoxide (CO) detection and alarm system is specified as follows:			1
One Credit Fire and Carbon Monoxide (CO) Detection and Alarm Systems	Where a compliant fire detection and fire alarm system is provided		
	Carbon Monoxide detector installed if dwelling is supplied with mains gas or other fossil fuel		
	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		
* see CN9 in Hea 06 for the definition of re-wiring			
Comments			
It is assumed that suitable Fire and CO detection equipment will be installed.			
ENERGY Section Weighting: 43% Indicative Section Score 26.69%			
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			Indicative Credits
Where the following targets are met for the improvement in Energy Efficiency Rating achieved as a result of refurbishment:			4
	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			
Assumes that an improvement of >36 is achieved based on performance compared with pre-refurbishment SAP calculation to be completed in accordance with material change of use conventions as set out in the Technical Guide and anticipated low energy efficiency of the existing building with high heat loss and poor thermal insulation properties as set out in the planning applications Sustainability Plan.			
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			Indicative Credits
Where the following Energy Efficiency Rating benchmarks will be met as a result of refurbishment:			2.5
	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	Indicative Innovation Credits Achieved
	≥90	1	Please Select
	≥100	2	
Comments			
Assumes that 2.5 credits will be achieved as a minimum meeting the mandatory BREEAM Excellent level through improved building thermal efficiency including measures such as replacement glazing and new insulation and installation of high efficiency low energy internal lighting and other building services.			

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			Indicative Credits	
Where the following Primary Energy Demand benchmarks will be met as a result of refurbishment:			2.5	
	Primary Energy Demand Post Refurbishment (kWh/m <sup>2</sup> /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				
2.5 credits have been assumed as a suitable but conservative estimate of the refurbished dwellings primary energy demand at this stage.				
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			Indicative Credits	
Where the dwelling will meet the following % contribution from renewables and primary energy demand targets as a result of refurbishment			0	
	Dwelling Type	Primary Energy Demand	Percentage from Renewables	
			1 Credit	
			2 Credits	
	Detached	≤ 250 kWh/m <sup>2</sup> /year	≥10%	≥20%
	Semi-Detached		≥10%	≥20%
	Bungalow		≥10%	≥20%
	End of Terrace		≥10%	≥20%
	Mid Terrace	≤ 220 kWh/m <sup>2</sup> /year	≥10%	≥20%
	Low Rise Flat		≥10%	≥20%
	Mid Rise Flat		≥10%	≥15%
	High Rise Flat		≥10%	≥15%
Comments				
Due to the building being located in a conservation area, the installation of roof mounted renewable technologies will not be appropriate.				
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			Indicative Credits	
Where Energy Efficiency White goods are to be provided as follows:			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				
assumes thar all appliances installed will meet the requirements to secure two credits.				
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			Indicative Credits	
Where adequate, secure internal or external space with posts and footings or fixings is provided with the following:			1	
	1 Credit			
	Number of bedrooms	Drying line required		
	1-2	4m+		
	3+	6m+		
Comments				
The property has a large private garden whereby 6m+ of drying line will be provided and secured in accordance with the technical manual.				
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			Indicative Credits	
Where energy efficient internal and external lighting is provided as follows:			1	
	External Lighting - 1 Credit			
	Energy Efficient Space Lighting of more than 45 lumens per circuit watt 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/m <sup>2</sup>			
Comments				
Energy efficient space lighting will be provided throughout the property and external security lighting.				

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			Indicative Credits
Where consumption data is displayed to occupants by a compliant energy display device			2
Electricity usage data displayed		Primary Heating Fuel	
Electricity usage data displayed		Electricity	Other
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		Where the first two credits are achieved	
Recording consumption data		Where any compliant Energy Display Device is capable of recording consumption data	
Comments			Indicative Innovation Credits Achieved Please Select
A compliant Energy display device will be provided that monitors and displays electricity and primary heating fuel usage.			
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			Indicative Credits
Where individual or communal compliant cycle storage is provided as follows:			2
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			
Four compliant cycle storage units are assumed to be provided			
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			Indicative Credits
Where sufficient space and services will be provided to allow occupants to set up a home office in a suitable room with adequate ventilation			1
Comments			
A home office will be provided.			
<b>WATER</b>		<b>Section Weighting: 11%</b>	<b>Indicative Section Score 9.90%</b>
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			Indicative Credits
Where the dwellings water consumption meets the following consumption benchmarks, or where terminal fittings meet the following water consumption standards:			2.5
Calculated Water Consumption (litres/person/day)	Equivalent terminal fitting standards	Minimum Standard	Credits
>150	Typical baseline performance	N/A	0
from 140 to ≤ 150	All showers specified to 'Good' OR All taps and WC's to 'Good' OR Kitchen fittings specified to 'Excellent'	N/A	0.5
from 129 to < 140	All showers specified to 'Excellent' OR All showers and bathroom taps to 'Good'	BREEAM Very Good	1
from 118 to < 129	All bathroom and WC room fittings specified to 'Good' OR All bathroom fittings specified to 'Excellent'	N/A	1.5
from 107 to < 118	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 fittings specified to 'Good'	BREEAM Excellent	2
from 96 to < 107	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
< 96	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	
Comments			Indicative Innovation Credits Achieved Please Select
Water consumption levels of <107 litres per person per day will be targeted.			
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			Indicative Credits
Where the following requirements will be met:			1
Requirements:		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.	
One Credit			
Comments			
A compliant rainwater collection system will be provided.			
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			Indicative Credits
Where an appropriate water meter for measuring usage of mains potable water meter has been provided to dwelling(s), one credit may be awarded			1
Comments			
A water meter will be installed.			



**MATERIALS**

Section Weighting: 8%

Indicative Section Score 4.27%

**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**

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: ⇒ **Indicative Credits**  
12

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**

15 credits have been assumed

**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**

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: ⇒ **Indicative Credits**  
8

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:

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

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

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

**Comments**

Seven credits have been assumed.

**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**

Where any new insulation specified for use within external walls, ground floor, roof and buildings services meet the following requirements: ⇒ **Indicative Credits**  
4

Requirements	Credits
Where the Insulation Index for new insulation used in the buildings is ≥2	4 Credits
Where Green Guide ratings are determined using the Green Guide to specification tool	
Where ≥ 80% of the new thermal insulation used in the building elements is responsibly sourced.	4 Credits

**Comments**

WASTE		Section Weighting: 3%		Indicative Section Score 2.40%	
<b>Was 01 Household Waste</b>					
No. of BREEAM credits available	2	Available contribution to overall score	1.20%		
No. of BREEAM innovation credits	0	Minimum Standards applicable	No		
<b>Assessment Criteria</b>				<b>Indicative Credits</b>	
Where compliant recycling and composting facilities are provided, up to two credits may be awarded as follows				2	
<b>First Credit - Recycling Facilities</b>					
<b>Scenario</b>		<b>Internal recycling storage requirements</b>			
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				
No compliant collection scheme in place No adequate external storage	Dedicated position in accordance with compliance note 1				
	3 internal recycling containers provided				
	Minimum 60 litre total capacity				
No compliant collection scheme in place Adequate external storage provided	Dedicated position in accordance with compliance note 1				
	3 internal recycling containers provided				
	Minimum 30 litre total capacity, no single container smaller than 7 litre capacity				
<b>Second credit - Composting facilities</b>					
<b>With external space</b>			<b>Without external space</b>		
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					
<b>Comments</b>					
<b>Was 02 Refurbishment Site Waste Management</b>					
No. of BREEAM credits available	3	Available contribution to overall score	1.80%		
No. of BREEAM innovation credits	1	Minimum Standards applicable	No		
<b>Assessment Criteria</b>				<b>Indicative Credits</b>	
Up to three credits are available depending on the site waste management plan to be implemented as follows				2	
<b>Projects up to £100k</b>					
<b>Three Credits</b>		Where waste generated through the refurbishment process is managed in accordance with Checklist A-9			
<b>Exemplary Credit</b>		Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place			
<b>Projects up to £300k</b>					
<b>Three Credits</b>		Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place			
<b>Exemplary Credit</b>		Where a compliant Level 2; Site Waste Management Plan (SWMP) is in place			
		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			
<b>Projects over £300k</b>					
<b>First Credit Management Plan</b>		Where a compliant Level 2; Site Waste Management Plan (SWMP) is in place			
<b>Second Credit Good Practice Waste Benchmarks</b>		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			
<b>Third Credit Best Practice Waste Benchmarks</b>		If demolition is included as part of the refurbishment programme, then the audit should also cover demolition materials			
		Where the first two credits have been achieved			
<b>Exemplary Credit</b>		Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the refurbishment & demolition waste diversion benchmarks			
		Where non-hazardous construction waste generated by the dwellings refurbishment meets or exceeds the <i>exemplary level resource efficiency benchmark</i>			
		Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the <i>exemplary level diversion benchmarks</i>			
<b>Comments</b>					
POLLUTION		Section Weighting: 6%		Indicative Section Score 3.75%	
<b>Pol 01 NOx Emissions</b>					
No. of BREEAM credits available	3	Available contribution to overall score	2.25%		
No. of BREEAM innovation credits	0	Minimum Standards applicable	No		
<b>Assessment Criteria</b>				<b>Indicative Credits</b>	
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:				2	
		<b>Dry NOx Emissions</b>			
<b>One Credit</b>		≤100 mg/kWh (NOx class 4 boiler)			
<b>Two Credits</b>		≤70 mg/kWh (NOx class 5 boiler)			
<b>Three Credits</b>		≤40 mg/kWh			
<b>Comments</b>					

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
<b>Assessment Criteria</b>			<b>Indicative Credits</b>
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:			1
<b>Requirements</b>			
<b>One Credit</b> 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		
<b>Requirements</b>			
<b>OR Second Credits</b> Reducing Run-Off From Site: Basic	Where the criteria needed for One Credit has been achieved		
	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		
<b>Requirements</b>			
<b>OR Three Credits</b> 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).		
<b>Requirements</b>			
<b>Exemplary Credit</b>	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).		
<b>Indicative Innovation Credits Achieved</b>			Please Select
<b>Comments</b>			

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
<b>Assessment Criteria</b>			<b>Indicative Credits</b>
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:			2
<b>Minimum Standards</b>			
A minimum of two credits must be achieved for this issue at the Excellent and Outstanding levels			
<b>Option 1 - Low Flood Risk</b>			
<b>Two Credits</b>		Where a Flood Risk Assessment (FRA) has been carried out and the assessed dwellings are defined as having a low annual probability of flooding.	
<b>Option 2 - Medium / High Flood Risk</b>			
<b>Two Credits</b>		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	
<b>Comments</b>			