

BREEAM UK Domestic Refurbishment 2014 Pre-Assessment Estimator v0.1



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		38 Queens Road, Reading, RG1 4AU				
Indicative building score (%)		54.52%				
Indicative BREEAM rating		BREEAM Unclassified				
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: 0.00%

Comments

Credits not sought.

MANAGEMENT

Section Weighting: 12%

Indicative Section Score: 5.45%

Man 01 Home Users Guide

No. of BREEAM credits available	3
No. of BREEAM innovation credits	0

Available contribution to overall score	3.27%
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
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Comments

A Home User Guide will be provided to each dwelling which will cover details of operational issues relating to the dwelling as well as additional issues regarding the site and surroundings, all in accordance with the BREEAM Domestic Refurbishment 'User Guide Contents List' (Appendix 1). The Guide will be available in alternative formats.

Man 02 Responsible Construction Practices

No. of BREEAM credits available	2
No. of BREEAM innovation credits	1

Available contribution to overall score:	2.18%
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	0
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Large Scale - project with more than 5 units

	One Credit	Two Credits
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

Small Scale - project with 5 units or fewer

	One Credit	Two Credits
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

Exemplary Credit

Considerate Constructors Scheme	Score of 40 or more with a score of 7 in each section	* Small Scale Project Only
Alternative Compliant Scheme	Exemplary Level Compliance	
Checklist A-3*	All Items (Optional & Mandatory)	

Indicative Innovation Credits Achieved	0
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Comments

Credits not sought.

Man 03 Construction Site Impacts

No. of BREEAM credits available	1
No. of BREEAM innovation credits	0

Available contribution to overall score	1.09%
Minimum Standards applicable	No

Assessment Criteria

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

Indicative Credits	1
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	One Credit
Large Scale	Where there is evidence to demonstrate that 2 or more of the sections in Checklist A-4 are completed
Small Scale	Where there is evidence to demonstrate that 2 or more of the sections in Checklist A-5 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

There is a commitment : To set targets for, monitor and report energy and water consumption from site activities. All in accordance with BREEAM Domestic Refurbishment Checklist A-5. A single individual from the principal contractor will be identified to be responsible for the monitoring, recording and presentation of all information related to these site commitments. Procedures will be in place to ensure these policies and procedures are communicated to all site staff.

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:			0
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			
Credits not sought. The use of secondary glazing rather than double glazing does not meet the minimum standards set by BREEAM to score credits for this issue.			
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	0
		adopts 30% of additional recommendations	
Comments			
The existing site surveys shows that there are no features of ecological importance or protected species present on site.			
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:			0
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	Indicative Innovation Credits Achieved
Exemplary Credits			Please Select
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			
Credits not sought.			

HEALTH & WELLBEING		Section Weighting: 17%		Indicative Section Score 7.08%	
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
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
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 significantly 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					
There is a neutral or improved impact on daylight levels internally, as no existing window sizes will change and no external obstructions to daylight will change as a result of the refurbishment. There will be no impact on neighbouring properties as there will be no change to the external structure of the existing buildings.					
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
To ensure the provision of acceptable sound insulation standards and so minimise the likelihood of noise complaints					3
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			
		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			
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					
The dwellings will exceed the requirements of Approved Document E by 3dB in regard to conversion dwellings for airborne and impact sound insulation. This exceed to BREEAM criteria for historic buildings and needs to be achieved to meet local Building Control Requirements. A programme of pre-completion sound testing will be carried out to demonstrate that the chosen standard is achieved. Testing will be carried out by a compliant test body.					
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
Where the refurbishment avoids the use of VOCs with new products meeting the following requirements					0
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					
Credits not sought.					

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																										
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:			0																										
<table border="1"> <thead> <tr> <th colspan="3">Checklist A-8 of the Technical Manual</th> </tr> <tr> <th></th> <th>Section 1</th> <th>Section 2</th> </tr> </thead> <tbody> <tr> <td>One Credit Minimum Accessibility</td> <td>Completed with Evidence</td> <td></td> </tr> <tr> <td>Two Credits Advanced Accessibility</td> <td>Completed with Evidence</td> <td>Completed with Evidence</td> </tr> </tbody> </table>				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														
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			Indicative Innovation Credits Achieved																										
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		0																										
Comments																													
Credits not sought. Current constraints of the existing building prevent credits being awarded for this issue. A particular example is the stepped access to the main access door to the front of the main building which can not be altered due to the building being listed.																													
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:			0																										
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																													
Whilst the dwellings will all meet the statutory requirements of Building Regulations Part F for Historic Buildings, they are not able to meet the Criteria set out under BREEAM Domestic Refurbishment Issue Hea05, Compliance Note 4. This is because it can not be established what the current levels of air tightness and structural moisture were prior to the specification of fabric measures and heating systems. BRE have indicated that they do not accept the desk study carried out to determine the potential risk of thermal insulation to the moisture levels and fabric of the building.																													
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																													
A mains powered fire detection and alarm system will be installed throughout the development. A carbon monoxide monitoring and alarm system will not be installed as there will be no mains gas to any of the dwellings. The existing gas supply to the building is too be removed and all space heating, hot water and appliances will be electricity only.																													
ENERGY Section Weighting: 43% Indicative Section Score 24.47%																													
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:			1.5																										
<table border="1"> <thead> <tr> <th>Improvement in EER</th> <th>Credits</th> </tr> </thead> <tbody> <tr><td>≥ 5</td><td>0.5</td></tr> <tr><td>≥ 9</td><td>1</td></tr> <tr><td>≥ 13</td><td>1.5</td></tr> <tr><td>≥ 17</td><td>2</td></tr> <tr><td>≥ 21</td><td>2.5</td></tr> <tr><td>≥ 26</td><td>3</td></tr> <tr><td>≥ 31</td><td>3.5</td></tr> <tr><td>≥ 36</td><td>4</td></tr> <tr><td>≥ 42</td><td>4.5</td></tr> <tr><td>≥ 48</td><td>5</td></tr> <tr><td>≥ 54</td><td>5.5</td></tr> <tr><td>≥ 60</td><td>6</td></tr> </tbody> </table>			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	
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Comments																													
Design stage SAP calculations indicate that there will be an average 15 point improvement in the Energy Efficiency Rating of the dwellings as a result of conversion/refurbishment.																													

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:			3
	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	0
	≥100	2	
Comments			
Design Stage SAP calculations indicate that post-refurbishment the average Energy Efficiency rating will exceed 75.			
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
	Primary Energy Demand Post Refurbishment	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			
Design Stage SAP calculations demonstrate that the average Primary energy demand post-refurbishment will be 316 kWh/m ² /yr.			
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 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			
Credits not sought. Listed nature of the building limits possible use of renewable energy e.g. Photovoltaic (PV) panels.			
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	A+ Rating under EU Energy Efficiency Labelling Scheme	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	Washing Machine A++ under EU Energy Efficiency Labelling Scheme AND Dishwasher A+ under EU Energy Efficiency Labelling Scheme	Second credit not achieved
	Washer-Dryers and Tumble Dryers	Appliances specified with A Rating under EU Energy Efficiency Labelling Scheme	EU Energy Efficiency Labelling Scheme Information Leaflet provided to all dwellings
Comments			
EU Energy Efficiency Labelling Scheme rated white goods will be provided as follows: Fridge AND freezer, OR fridge/freezer, rated A+ or better Dishwasher rated A+ or better Washing machine – rated A++ or better. If a washer/dryer or tumble dryer are provided they will be A rated Details of the EU Energy Efficiency Labelling Scheme will be provided in the Home User Guide for each dwelling .			

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														
<table border="1"> <thead> <tr> <th colspan="2">1 Credit</th> </tr> <tr> <th>Number of bedrooms</th> <th>Drying line required</th> </tr> </thead> <tbody> <tr> <td>1-2</td> <td>4m+</td> </tr> <tr> <td>3+</td> <td>6m+</td> </tr> </tbody> </table>			1 Credit		Number of bedrooms	Drying line required	1-2	4m+	3+	6m+							
1 Credit																	
Number of bedrooms	Drying line required																
1-2	4m+																
3+	6m+																
Comments																	
Space and equipment for drying clothes will be provided in the bathroom of each flat with permanent fixings/fittings to provide a minimum of 4m of line length per dwelling. It will include controlled intermittent extract ventilation with a minimum extract rate of 30L/s and controlled according to the requirements for intermittent extract ventilation defined in Approved Document F of the Building Regulations.																	
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			2														
<table border="1"> <thead> <tr> <th colspan="2">External Lighting - 1</th> </tr> </thead> <tbody> <tr> <td colspan="2">Energy Efficient Space Lighting of more than 45 lumens per circuit watt and Energy Efficient Security Lighting OR</td> </tr> <tr> <td colspan="2">Where Energy Efficient Space Lighting is provided ONLY</td> </tr> </tbody> </table>			External Lighting - 1		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										
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<table border="1"> <thead> <tr> <th colspan="2">Internal Lighting - 1</th> </tr> </thead> <tbody> <tr> <td colspan="2">Maximum average wattage across the total floor area of the dwelling of 9 watts/m²</td> </tr> </tbody> </table>			Internal Lighting - 1		Maximum average wattage across the total floor area of the dwelling of 9 watts/m ²												
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Comments																	
External: General space lighting (doorways, porches, steps, paths drives etc.):- lighting will be energy efficient with an output of more than 45 lumens per circuit watt. Control systems to be fitted to ensure the lights do not operate unnecessarily e.g. when space is unoccupied or during daylight hours. Control systems may include dusk-to-dawn daylight sensors, PIR and push button time switches. Internal: The average internal lighting wattage across the total floor area of each dwelling will not exceed 9 watts/m².																	
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														
<table border="1"> <thead> <tr> <th rowspan="2">Electricity usage data displayed</th> <th colspan="2">Primary Heating Fuel</th> </tr> <tr> <th>Electricity</th> <th>Other</th> </tr> </thead> <tbody> <tr> <td>Electricity usage data displayed</td> <td>2 credits awarded</td> <td>1 credit awarded</td> </tr> <tr> <td>Primary Heating Fuel usage data displayed</td> <td>N/A</td> <td>1 credit awarded</td> </tr> <tr> <td>Electricity & Primary Heating Fuel usage displayed</td> <td>N/A</td> <td>2 credits awarded</td> </tr> </tbody> </table>			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	
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															
<table border="1"> <thead> <tr> <th colspan="2">Exemplary Credits</th> </tr> </thead> <tbody> <tr> <td>One credit</td> <td>Where the first two credits are achieved</td> </tr> <tr> <td>Recording consumption data</td> <td>Where any compliant Energy Display Device is capable of recording consumption data</td> </tr> </tbody> </table>			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	Indicative Innovation Credits Achieved								
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																
			0														
Comments																	
Each dwelling will be provided with an internal Energy Display Device to display electricity consumption. The Device will comprise of a self-charging sensor fixed to the incoming mains electricity supply of each dwelling. It will not monitor mains gas as there will be no mains gas supply to any of the dwellings – existing supply to the building to be removed. The Device will be capable of displaying: Local time, Current energy consumption (kW & kWh), Current emissions (g/kg CO ₂), Current tariff, Current cost (£/hour), Visual presentation of data i.e. graphical, not just numeric.																	
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														
<table border="1"> <thead> <tr> <th>Dwelling Size</th> <th>One Credit</th> <th>Two Credits</th> </tr> </thead> <tbody> <tr> <td>Studios/ 1 bedroom</td> <td>1 per two dwellings</td> <td>1 per dwelling</td> </tr> <tr> <td>2-3 bedrooms</td> <td>1 per dwelling</td> <td>2 per dwelling</td> </tr> <tr> <td>4 bedrooms</td> <td>2 per dwelling</td> <td>4 per dwelling</td> </tr> </tbody> </table>			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			
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																	
Sufficient storage space for 6 cycles will be provided – one for each one bedroom flat and two for the two bedroom flat as shown on the layout plan.																	
a. It will have: A roof cover to protect from weather, each cycle will be provided with a rack to allow the cycles to be freestanding and locked and allow each cycle to be accessed without having to move other cycles, the cycle racks need to be firmly secured to hardstanding. Lighting will be in accordance with issue Ene07.																	
The cycle storage space is provided to the rear of ground floor Flat 3 as shown on the proposed drawings 16051 100 Rev. 00.																	
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																	
Space for a home office will be provided in a bedroom of each dwelling (second bedroom in flat 1). Facilities will include: a space of at least 1.8m along the wall, at least two double power sockets, telephone socket, ventilation as detailed in issue Hea05.																	

WATER		Section Weighting: 11%		Indicative Section Score 7.70%	
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 sittings 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	Indicative Innovation Credits Achieved	
				0	
Comments					
Design Stage water efficiency calculations indicate that the dwellings will achieve potable water consumption rates of 105.9 L/person/day.					
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:					
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					
Dwellings have no individual or communal external garden space. Credit awarded by default.					
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					0
Comments					
Credits not sought.					

MATERIALS		Section Weighting: 8%		Indicative Section Score 5.17%	
Mat 01 Environmental Impact of Materials					
No. of BREEAM credits available	25	Available contribution to overall score		4.16%	
No. of BREEAM innovation credits	0	Minimum Standards applicable		No	
Assessment Criteria					Indicative Credits
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:					23
Elements	Green Guide Rating credits available	Thermal performance credits			
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				
Roof	0.11				
External walls	0.15				
Internal walls (including separating walls)	-				
Upper and Ground Floor	0.15				
Windows	1.4				
Comments					
Design Stage calculations indicate that the choice of materials used for the refurbishment and the extensive re-use of the existing fabric will result in a credit score of 23 which is 92% of the credits available for this issue.					

Mat 02 Responsible Sourcing of Materials																			
No. of BREEAM credits available	15	Available contribution to overall score	2.50%																
No. of BREEAM innovation credits	0	Minimum Standards applicable	Yes																
Assessment Criteria			Indicative Credits																
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:			0																
Sustainable Procurement Plan (3 BREEAM credits) The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan OR Where the principal contractor is a Small Company (up to 3 BREEAM credits) Checklist A-9 is filled in with supporting evidence		Will all new timber used in the project be sourced in accordance with the UK Government's Timber Procurement Yes																	
Table 1	<table border="1"> <thead> <tr> <th>BREEAM credits</th> <th>% of available points achieved</th> </tr> </thead> <tbody> <tr> <td>12</td> <td>≥54%</td> </tr> <tr> <td>10</td> <td>≥45%</td> </tr> <tr> <td>8</td> <td>≥36%</td> </tr> <tr> <td>6</td> <td>≥27%</td> </tr> <tr> <td>4</td> <td>≥18%</td> </tr> <tr> <td>2</td> <td>≥9%</td> </tr> </tbody> </table>			BREEAM credits	% of available points achieved	12	≥54%	10	≥45%	8	≥36%	6	≥27%	4	≥18%	2	≥9%		
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Comments																			
All timber will come from a 'legal source' and will not be on the CITES list or, in the case of Appendix III of the CITES list, will not be sourced from the country seeking to protect the species as listed in Appendix III.																			
Mat 03 Insulation																			
No. of BREEAM credits available	8	Available contribution to overall score	1.33%																
No. of BREEAM innovation credits	0	Minimum Standards applicable	No																
Assessment Criteria			Indicative Credits																
Where any new insulation specified for use within external walls, ground floor, roof and buildings services meet the following requirements:			8																
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Requirements																			
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Comments																			
Design Stage calculations indicate that the insulation materials selected for the refurbishment are all responsibly sourced, have an overall Insulation Index of 3.0 and are all Green Guide A+ rated.																			
WASTE Section Weighting: 3% Indicative Section Score 2.40%																			
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			Indicative Credits																
Where compliant recycling and composting facilities are provided, up to two credits may be awarded as follow:			1																
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Comments																			
Waste and recycling bins are to be provided and stored in the designated area shown on the layout plan. Bins to consist of: 5no. 240L grey wheeled bins for general waste, 5no. 240L red wheeled bins for recycling waste. Recycling waste is not sorted prior to collection. To facilitate waste sorting each dwelling will be provided with an internal waste bin with a total capacity of at least 30 Litres. The bins to be fixed (not freestanding) in a dedicated space e.g. the cupboard under the kitchen sink (or nearby). There are no food waste recycling facilities.																			
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			Indicative Credits																
Up to three credits are available depending on the site waste management plan to be implemented as follow:			3																
Projects up to £100k																			
Three Credits	Where waste generated through the refurbishment process is managed in accordance with Checklist A-9		Indicative Innovation Credits Achieved																
Exemplary Credit	Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place																		
Projects up to £300k																			
Three Credits	Where a compliant Level 1; Site Waste Management Plan (SWMP) is in place		0																
Exemplary Credit	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
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
Third Credit Best Practice Waste Benchmarks	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
Exemplary Credit	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>
Exemplary Credit	Where Non-hazardous demolition waste generated by the dwellings refurbishment meets or exceeds the exemplary level diversion benchmarks
Comments	
All waste generated through the conversion/refurbishment is to be managed in accordance with a Site Waste Management Plan i.e. All waste is dealt with by licensed waste contractor Waste transfer notes are obtained for all waste There is a commitment to divert at least 80% of waste from landfill. Where possible the generating of waste will be prevented and waste reused as an alternative to disposal.	

POLLUTION		Section Weighting: 6%		Indicative Section Score 2.25%													
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				Indicative Credits													
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:				0													
		<table border="1"> <thead> <tr> <th colspan="2">Dry NOx Emissions</th> </tr> </thead> <tbody> <tr> <td>One Credit</td> <td>≤100 mg/kWh (NOx class 4 boiler)</td> </tr> <tr> <td>Two Credits</td> <td>≤70 mg/kWh (NOx class 5 boiler)</td> </tr> <tr> <td>Three Credits</td> <td>≤40 mg/kWh</td> </tr> </tbody> </table>				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				
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Comments																	
Space heating and hot water will be provided by mains electricity which has NOx emissions of greater than 100 mg/kWh.																	
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				Indicative Credits													
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													
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Comments																	
There is no change in the impermeable area of the site form prior to conversion/refurbishment to post conversion/refurbishment. Therefore there is a neutral impact on surface water run-off from the site.																	
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				Indicative Credits													
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													
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 from 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																	
The site is in an area of low flood risk from all sources as determined by a Flood Risk Assessment carried out prior to development.																	