# BREEAM UK Domestic Refurbishment 2014 Pre-Assessment Estimator v0.1: Results Summary

BREEAM® UK

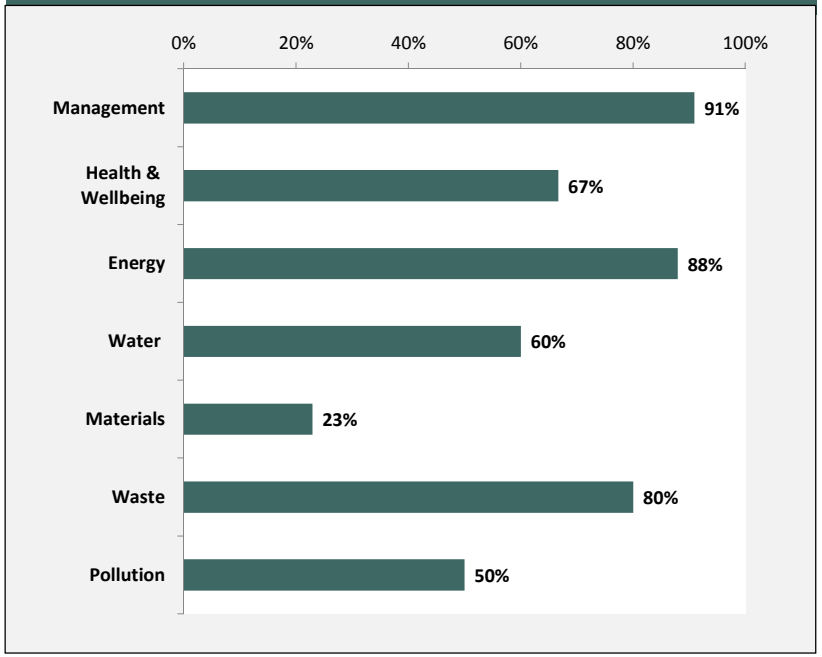
| | |
|---|---|
| Building name | Christ church, Teddington |
| Indicative Building Score | 73.88% |
| Indicative Building Rating | BREEAM Excellent |

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 |
|---|---|---|---|---|---|
| Management | Man 01 | 3 | 3 | 12% | 10.91% |
| | Man 02 | 2 | 2 | | |
| | Man 03 | 1 | 1 | | |
| | Man 04 | 2 | 2 | | |
| | Man 05 | 1 | 1 | | |
| | Man 06 | 2 | 1 | | |
| Health and Wellbeing | Hea 01 | 2 | 0 | 17% | 11.33% |
| | Hea 02 | 4 | 2 | | |
| | Hea 03 | 1 | 1 | | |
| | Hea 04 | 2 | 2 | | |
| | Hea 05 | 2 | 2 | | |
| | Hea 06 | 1 | 1 | | |
| Energy | Ene 01 | 6 | 5.5 | 43% | 37.81% |
| | Ene 02 | 4 | 3 | | |
| | Ene 03 | 7 | 7 | | |
| | Ene 04 | 2 | 0 | | |
| | Ene 05 | 2 | 2 | | |
| | Ene 06 | 1 | 1 | | |
| | Ene 07 | 2 | 2 | | |
| | Ene 08 | 2 | 2 | | |
| | Ene 09 | 2 | 2 | | |
| | Ene 10 | 1 | 1 | | |
| Water | Wat 01 | 3 | 2 | 11% | 6.60% |
| | Wat 02 | 1 | 0 | | |
| | Wat 03 | 1 | 1 | | |
| Materials | Mat 01 | 25 | 5 | 8% | 1.83% |
| | Mat 02 | 15 | 2 | | |
| | Mat 03 | 8 | 4 | | |
| Waste | Was 01 | 2 | 2 | 3% | 2.40% |
| | Was 02 | 3 | 2 | | |
| Pollution | Pol 01 | 3 | 1 | 6% | 3.00% |
| | Pol 02 | 3 | 1 | | |
| | Pol 02 | 2 | 2 | | |
| Innovation | | 10 | 0 | N/A | 0.00% |

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

Percentage of Category Score Attained



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| | |
|---|---|
| Building name | Christ church, Teddington |
| Indicative building score (%) | 73.88% |
| 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: 0.00%

**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: 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: 2

**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 |
| Alternative Compliant Scheme | Exemplary Level Compliance |
| Checklist A-3* | All Items (Optional & Mandatory) |

* Small Scale Project Only

Indicative Innovation Credits Achieved: 0

**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: 1

| | 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**

## 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** 2

| | |
|---|---|
| **One Credit**<br>Secure windows and doors | External doors and accessible windows meet minimum standards and appropriately certified |
| **Two Credits**<br>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** 1

| | |
|---|---|
| **One Credit**<br>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 |

**Indicative Innovation Credits Achieved** 0

| | |
|---|---|
| **Exemplary Credit**<br>**Ecological enhancement** | A suitably qualified ecologist recommends features to enhance ecology of the site |
| | adopts all general ecological recommendations |
| | adopts 30% of additional recommendations |

**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** 1

| | |
|---|---|
| **One Credit**<br><br>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:<br>i. Planning and Building control notification<br>ii. Design<br>iii. Refurbishment<br>iv. Commissioning and handover<br>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**<br><br>Handover and Aftercare | Handover meeting arranged |
| | 2 or more of the following committed to:<br>- A site inspection within 3 months of occupation<br>- Conduct post occupancy interviews with building occupants or a survey via phone or posted information within 3 months of occupation<br>- 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** 0

**Exemplary Credits**

| | |
|---|---|
| **One Exemplary Credit**<br><br>Early Design Input | Where A BREEAM Accredited Professional has been appointed to oversee key stages within the project.<br>OR<br>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**<br><br>Thermographic Surveying and Airtightness Testing | Where Thermographic surveying and Airtightness testing have been carried out at both pre and post refurbishment stages<br><br>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 11.33% |
|---|---|---|

## 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: 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 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**

## 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: 2

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 |
| | 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 propertywith 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**

## 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: 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**

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:

**Indicative Credits** 2

| | 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** 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** 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**

**ENERGY** **Section Weighting: 43%** **Indicative Section Score 37.81%**

## 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** 5.5

| 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**: 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 |
|---|---|
| ≥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**: 7

| 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**

## 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**: 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**: 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+ uner 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**

## 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**

## 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

**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

**Internal Lighting - 1**

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** — **Indicative Credits**

Where consumption data is displayed to occupants by a compliant energy display device ⇨ 2

| 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 the first two credits are achieved | **Indicative Innovation Credits Achieved** |
| | Where any compliant Energy Display Device is capable of recording consumption data | ⇨ 0 |

**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** — **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**

## 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**

## WATER — Section Weighting: 11% — Indicative Section Score 6.60%

### 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: 2

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

| 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**

### 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: 0

Where the following requirements will be met:

**Requirements:**

| | |
|---|---|
| One Credit | Where a compliant rainwater collection system for external/internal irrigation use has been provided to dwellings.<br>**OR**<br>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** — Indicative Credits: 1

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

**Comments**

## MATERIALS — Section Weighting: 8% — Indicative Section Score 1.83%

### 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: 5

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 |
|---|---|---|
| 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**

## 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**

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 |
|---|
| 2 |

| Sustainable Procument 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 |
|---|
| Yes |

**Table 1**

| 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 | 1.33% |
| 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 | |
|---|---|
| 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 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**

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

| Indicative Credits |
|---|
| 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<br>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<br>Adequate external storage provided | 3 internal recycling containers provided |
| | Minimum 30 litre total capacity, no single container smaller than 7 litre |
| | 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 |
|---|
| 2 |

**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 |
| 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 |
| | 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 3.00% |
|---|---|---|

## 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:

| | 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 |

| Indicative Credits |
|---|
| 1 |

**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 |
|---|
| 1 |

**Requirements**

| | |
|---|---|
| **One 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**

| | |
|---|---|
| **OR Second Credits** 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 |

**Requirements**

| | |
|---|---|
| **OR Three Credits** 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**

| | |
|---|---|
| **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). |

| Indicative Innovation Credits Achieved |
|---|
| 0 |

**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 |
|---|
| 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**