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Part of the **FOCUS** consultancy group



BREEAM 2014 Non Domestic Refurbishment
Pre-assessment
Arches, Prowse Place NW1 9PN
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About *MES Building Solutions*

***MES Building Solutions* is an established consultancy practice specialising in providing building solutions throughout the UK.**

We offer a full range of services for both residential and commercial buildings from small individual properties through to highly complex mixed use developments.

We are an industry leader in delivering a professional, accredited and certified service to a wide range of clients including architects, developers, builders, housing associations, the public sector and private householders.

Employing highly qualified staff, our team comes from a variety of backgrounds within the construction industry with combined knowledge of building design, engineering, assessment, construction, development, research and surveying.

We are renowned for our creative thinking and provide a high quality, honest and diligent service.

MES Building Solutions maintains its position at the forefront of changes in planning, building regulations and neighbourly matters, as well as technological advances. Our clients, large or small are therefore assured of a cost effective, cohesive and fully integrated professional service.

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SECTION 1- What is BREEAM?

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's leading and most widely used environmental assessment method for buildings, with over 115,000 buildings certified and nearly 700,000 registered. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance. Credits are awarded in ten categories according to performance. These credits are then added together to produce a single overall score on a scale of Pass, Good, Very Good, Excellent and Outstanding. The operation of BREEAM is overseen by an independent Sustainability Board, representing a wide cross-section of construction industry stakeholders.

Aims of BREEAM:

- To mitigate the impacts of buildings on the environment
- To enable buildings to be recognised according to their environmental benefits
- To provide a credible, environmental label for buildings
- To stimulate demand for sustainable buildings

Objectives of BREEAM:

- To provide market recognition to low environmental impact buildings
- To ensure best environmental practice is incorporated in buildings
- To set criteria and standards surpassing those required by regulations and challenge the market to provide innovative solutions that minimise the environmental impact of buildings
- To raise the awareness of owners, occupants, designers and operators of the benefits of buildings with a reduced impact on the environment
- To allow organisations to demonstrate progress towards corporate environmental objectives



SECTION 2- Scope

Non-domestic BREEAM schemes can be used to assess the environmental impacts of a building in accordance with this scope document in England, Scotland, Wales and Northern Ireland. Assessments using UK BREEAM schemes can also be carried out in the Republic of Ireland, but it must be recognised that BREEAM is tailored to the UK's construction sector. No concessions are made in the schemes where the Republic of Ireland building standards and design and procurement practices differ from those in the UK.

The BREEAM UK Refurbishment and Fit-out scheme is a performance based assessment method and certification scheme for existing building refurbishment and fit-out projects.

The primary aim of BREEAM UK Refurbishment and Fit-out is to promote the delivery of sustainable refurbishment and fit-out, in order to mitigate the life cycle impacts of existing buildings on the environment in a robust and cost effective manner. This is achieved through integration and use of the scheme by clients and their project teams at key stages in the design and refurbishment/fit-out works process.

This enables the client, through the BREEAM assessor and the BRE Global certification process, to measure, evaluate and reflect the performance of their refurbishment or fit-out project against best practice in an independent and robust manner.

The scheme provides a modular framework split up into four separate parts, that are assessed according to the scope of work of the project, with each part defining a set of individual measures and associated criteria that each project is assessed against. This allows projects to be assessed against the parts that are within the scope of influence of the project, while also ensuring that similar project types are assessed against a comparable set of criteria.

This approach provides the scheme's users with a flexible means of measuring the environmental performance of their building and comparing it with other buildings across the property market, backed with the assurance that independent third party certification of the assessment process provides.

- Part 1 – Fabric and Structure
- Part 2 – Core Services
- Part 3 – Local Services
- Part 4 – Interior Design

A Simple Building is defined as one where the building services are predominantly of limited capacity and local in their delivery, largely independent of other systems in the building fabric and avoid complex control systems.

Where the building includes complex services, systems or functions/facilities including, but not limited to those listed below, it cannot be defined or assessed as a Simple Building and a full BREEAM UK New Construction 2018 assessment should be carried out:

- Air-conditioning and refrigeration systems
- Mechanical ventilation, displacement ventilation, and complex passive ventilation.

Note: Buildings with small localised cooling or ventilation systems are eligible for assessment using simple buildings criteria. See Building services section for further guidance.

- Renewable energy sources, with the exception of on-site microgeneration technologies
- Renewable energy sources, with the exception of situations where connecting to an existing communal network system
- Laboratories and buildings that contain either fume cupboards and/or safety cabinets and/or containment areas
- Major water-consuming plant or functions such as swimming, hydrotherapy and research pools, vehicle wash or irrigation systems
- Cold storage plant and enclosures, with the exception of domestic scale refrigeration
- Escalators and/or travelling walkways.

The list above is not exhaustive, but serves to indicate the types of services and systems that describe a more complex building solution and therefore would not be present within a simple building. Examples of buildings which could fall under the BREEAM UK New Construction definition of Simple Building (depending on the remit of the works) include: offices, educational and community buildings, GP surgeries, basic industrial units, and extensions to existing buildings.

The following describes some of the additional features a simple building may have. This should be used to support the classification of whether your building can be defined as 'simple' according to BREEAM:

Building services

- Space or hot water heating is provided by simple systems only (e.g. systems with total capacity of < 100kW or point of use heaters).
- Predominately naturally ventilated, using simple cross flow ventilation relying solely on openable windows and/or trickle vents, except in areas where mechanical extract ventilation is required by the Building Regulations.

Note: Small local systems, such as local split cooling systems or ventilation systems (to service single rooms or areas for occasional or seasonal use), with a total system capacity of < 12kW and a total collective refrigerant charge of < 5kg can be assessed under simple buildings criteria.

- Domestic scale sanitary, kitchen and laundry facilities with only basic connections for hot and cold water provision and drainage.
- Building services commissioning required will be limited in complexity.

Where specified, microgeneration technologies are permissible within the scope of a simple building assessment, providing the installation and commissioning of such technologies is undertaken by a certified installer.



SECTION 3- Scoring & Rating

There are a number of elements that determine the overall performance of a refurbishment or fit-out project assessed using BREEAM; these are as follows:

1. The scope of the assessment
2. The BREEAM rating level benchmarks
3. The minimum BREEAM standards
4. The environmental section weightings
5. The BREEAM assessment issues and credits

How these elements combine to produce a BREEAM rating for a refurbishment or fit-out project is summarised on the following pages.

Rating Benchmarks

The BREEAM rating benchmarks for projects assessed using the 2014 version of BREEAM UK Refurbishment and Fit-out are outlined in table 2 below:

Table 2 BREEAM 2018 rating benchmarks

BREEAM RATING	% SCORE
UNCLASSIFIED	<30
PASS	≥30
GOOD	≥45
V GOOD	≥55
EXCELLENT	≥70
OUTSTANDING*	≥85

* Please note: there are additional criteria for achieving a BREEAM Outstanding rating. Please refer to the guidance below.

BREEAM issues and credits

Tradable BREEAM issues

Each environmental issue has a set number of 'credits' available and these credits can be awarded where the building demonstrates that it complies with the requirements of that issue.



Minimum BREEAM standards

A number of issues within a category have set minimum standards, i.e. a minimum number of credits that must be achieved in order for a particular BREEAM rating level to be met.

Innovation credits

Innovation credits provide additional recognition for a building that innovates in the field of sustainable performance, above and beyond the level that is currently recognised and rewarded by standard BREEAM issues. Innovation credits are awarded for either complying with pre-defined BREEAM issue exemplary level requirements or through the appointment of a BREEAM Accredited Professional or Suitably Qualified Assessor or via application to BRE Global to have a particular building feature, system or process approved as 'Innovative'.

Environmental weightings, final score and BREEAM Rating

Once each BREEAM issues has been assessed the category percentage scores are determined (based on the number of credits achieved over those available within a category), and an environmental weighting applied (as shown below).

The weighted category scores are then totalled to give an overall score, and any additional score for innovation is added to give the final BREEAM score which is used to determine the BREEAM rating.

The environmental weightings for a common project types are as follows:

Environmental section	Project specific weightings							
	Core weightings	Part 1 only	Part 2 only	Part 3 only	Part 4 only	Parts 1 and 2	Parts 2 and 3	Parts 3 and 4
Management	12%	15%	16.7%	16.5%	20%	13%	16.5%	14.4%
Health and Wellbeing	15%	14.8%	14.4%	15.3%	19.9%	11%	15.3%	15.9%
Energy	19%	16.4%	24.5%	24.3%	2.5%	18.8%	24.3%	22.5%
Transport	8%	10%	11.2%	11.1%	13.4%	8.6%	11.1%	9.5%
Water	6%	0%	7.5%	7.4%	10.1%	5.7%	7.4%	7.1%
Materials	12.5%	15.6%	5.4%	5.3%	19.3%	13.4%	5.3%	13.7%
Waste	7.5%	9.4%	9.3%	9.2%	11.2%	8.1%	9.2%	7.9%
Land Use and Ecology	10%	12.5%	0%	0%	0%	10.7%	0%	0%
Pollution	10%	6.3%	11%	10.9%	3.6%	10.7%	10.9%	9.3%
Total	100%	100%	100%	100%	100%	100%	100%	100%
Innovation	10%	10%	10%	10%	10%	10%	10%	10%



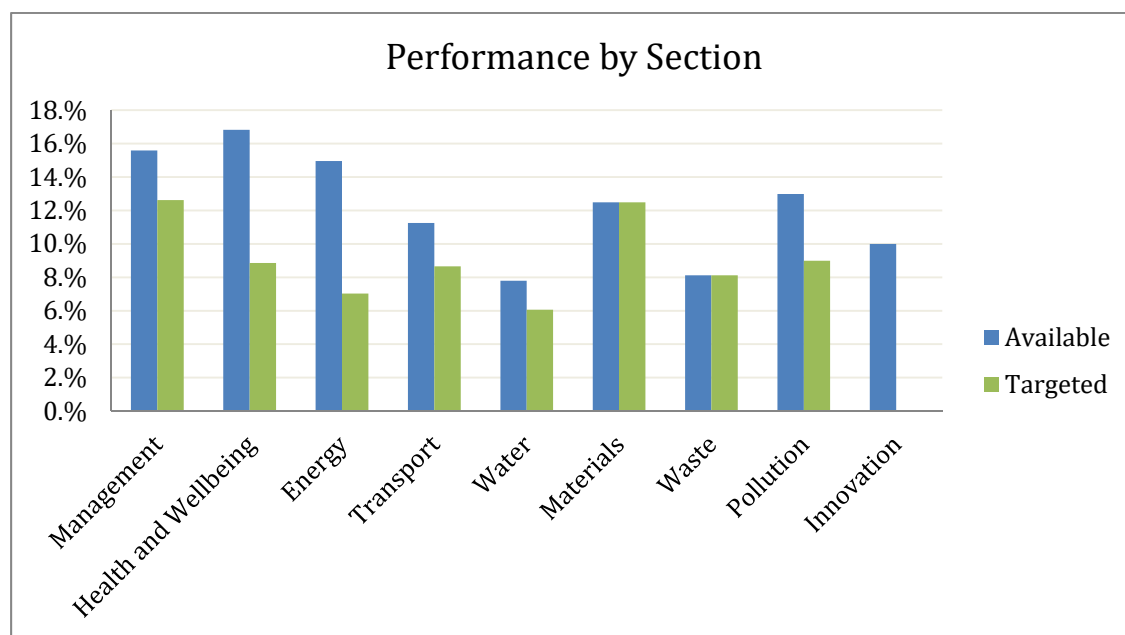
SECTION 4- BREEAM Pre Assessment

A BREEAM Refurbishment and Fit-out assessment has been completed by a licenced BREEAM Assessor on behalf of MES Building Solutions. The results suggest that a score of 72.81% (Excellent) is achievable with the current assumed specification and design.

The Pre-Assessment score summary can be seen below:

Overall Building Performance

Project name	Arches, Prowse Place NW1 9PN
BREEAM Scheme	Refurbishment and Fit-out 2014
Assessment Type	Parts 3 and 4
BREEAM rating	Excellent
Total score	72.81%
Min. standards level achieved	Excellent Level



A breakdown of the credits assessed as being achievable can be seen in the table on the following pages.

The relevant BREEAM 2014 Refurbishment and Fit-out 2014 Manual (Issue 1.1) is used.



Appendix:

BREEAM Calculator Tool Output



Criteria Summary

Project:	20/02/20 - The Arches, Prowse Place				
Report:	Pre-Assessment Stage				
Design Target:	Excellent - 72.81%				
Management	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Man 01.1: Project brief and design : Stakeholder consultation	<p>One credit – Stakeholder consultation (project delivery)</p> <p>1. A clear sustainability brief is developed prior to Concept Design which sets out:</p> <ul style="list-style-type: none"> a. Client requirements e.g. internal environmental conditions required b. Sustainability objectives and targets including target BREEAM rating, business objectives etc. c. Timescales and budget d. List of consultees and professional appointments that may be required e.g. Suitably Qualified Acoustician etc. e. Constraints for the project e.g. technical, legal, physical, environmental. <p>2. Prior to completion of the Concept Design (RIBA Stage 2 or equivalent), the project delivery stakeholders (see Relevant definitions) have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery.</p> <p>3. In defining the roles and responsibilities for each key phase of the project, the following must be considered:</p> <ul style="list-style-type: none"> a. End user requirements b. Aims of the design and design strategy c. Particular installation and construction requirements/limitations d. Design and construction risk assessments e.g. CDM, legionella risk assessment e. Legislative requirements e.g. building control notification, heritage requirements f. Procurement and supply chain g. Identifying and measuring project success in line with project brief objectives h. Occupiers' budget and technical expertise in maintaining any proposed systems i. Maintainability and adaptability of the proposals j. Requirements for the production of project and end user documentation k. Requirements for commissioning, training and aftercare support. <p>4. The project team demonstrate how the project delivery stakeholder contributions and the outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design.</p>	2	1.48%	2	1.48%
	<p>One credit - Stakeholder consultation (third party)</p> <p>One credit - Sustainability Champion (design)</p> <p>9. A Sustainability Champion has been appointed to facilitate the setting and achievement of BREEAM performance targets for the project. The design stage Sustainability Champion is appointed to perform this role during the feasibility stage (Stage 1, Preparation and Brief stage, as defined by the RIBA Plan of Work 2013 or equivalent).</p> <p>10. The defined BREEAM performance target(s) has been formally agreed (see Relevant definitions) between the client and design/project team no later than the Concept Design stage (RIBA Stage 2 or equivalent).</p> <p>11. To achieve this credit at the interim design stage assessment, the agreed BREEAM performance target(s) must be demonstrably achieved by the project design. This must be demonstrated via the BREEAM assessor's design stage assessment report.</p> <p>One credit - Sustainability Champion (monitoring progress)</p> <p>12. The Sustainability Champion criteria 9, 10 and 11 have been achieved.</p> <p>13. A Sustainability Champion is appointed to monitor progress against the agreed BREEAM performance target(s) throughout the design process and formally report progress to the client and design team.</p> <p>To do this the Sustainability Champion must attend key project/design team meetings during the Concept Design, Developed Design and Technical Design stages, as defined by the RIBA Plan</p>	2	1.48%	2	1.48%
Man 02: Life cycle cost and service life planning	<p>Two credits - Elemental life cycle cost (LCC)</p> <p>1. An outline, entire asset elemental life cycle cost (LCC) plan has been carried out at Process Stage 2 (equivalent to Concept Design - RIBA Stage 2) in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:20081.</p> <p>2. The elemental LCC plan:</p> <ul style="list-style-type: none"> a. An outline LCC plan has been undertaken for the project based on the building's basic structure and envelope, appraising a range of options and based on the life expectancy of the refurbished building, e.g. 20, 30, 50+ years. b. The servicing strategy for the project outlining services component over a 15- year period, in the form of an 'elemental LCC Plan'. c. A fit-out strategy is developed outlining fit-out options over a 10-year period. <p>One credit - Component level LCC Plan</p> <p>3. A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to Technical Design – RIBA Stage 4) in line with PD 156865:2008 and includes the following component types, where present. (see table in supporting documents) Where carrying out a major refurbishment covering all parts of the scheme, a component level LCC plan shall be developed as above.</p> <p>One credit - Capital cost reporting</p> <p>4. Report the capital cost for the building in pounds per square metre (£k/m2), via the BREEAM</p>	4	2.97%	1	0.74%

<p>Man 03.1: Responsible construction practices : Environmental management</p>	<p>Pre-requisite</p> <p>1. All timber and timber based products used on the project is 'Legally harvested and traded timber' (see Relevant definitions). Note: For other materials there are no pre-requisite requirements at this stage.</p> <p>One credit – Environmental management</p> <p>2. The principal contractor operates an environmental management system (EMS) covering their main operations. The EMS must be either: a. Third party certified, to ISO 14001/EMAS or equivalent standard; or b. Have a structure that is in compliance with BS 8555:2003 and has reached phase four of the implementation stage, 'implementation and operation of the environmental management system', and has completed phase audits one to four, as defined in BS 8555. For Healthcare NHS buildings, see the pre-requisite for this issue in compliance note CN6</p> <p>3. The principal contractor implements best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction</p>	<p>1</p>	<p>0.74%</p>	<p>1</p>	<p>0.74%</p>
<p>Man 03.2: Responsible construction practices : Sustainability Champion</p>	<p>One credit – Sustainability Champion (construction)</p> <p>4. A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages (as defined by the RIBA Plan of Works 2013, stages 5 and 6).</p> <p>To do this the Sustainability Champion will ideally be site based or will visit the site regularly to carry out spot checks, with the relevant authority to do so and require action to be taken to address shortcomings in compliance. The Sustainability Champion will monitor site activities with sufficient frequency (see compliance note CN6) to ensure that risks of non-compliance are minimised. They will report on progress at relevant project team meetings including identifying potential areas of non-compliance and any action needed to mitigate.</p> <p>5. The defined BREEAM performance target forms a requirement of the principal contractor's contract (Man 01 Project brief and design – CN3.2 and in Man 01 Project brief and design – Relevant definitions).</p> <p>6. To achieve this credit at the final post construction stage of assessment, the BREEAM-related performance target for the project must be demonstrably achieved by the project. This is</p>	<p>1</p>	<p>0.74%</p>	<p>1</p>	<p>0.74%</p>
<p>Man 03.3: Responsible construction practices : Considerate construction</p>	<p>Up to two credits - Considerate construction</p> <p>7. For small scale or low value refurbishment or fit-out projects (see Relevant definitions): a. One credit can be awarded where an individual(s) is responsible for implementing and maintaining the following considerate construction practices throughout the works stage (see Relevant definitions): i. Keeping the site clean and tidy ii. Reducing impacts on the community through community/neighbour engagement iii. Continuous improvements in safety iv. Commitments to respect and fair treatment of all workers v. Suitable site facilities for operatives and visitors b. Two credits can be awarded where the contractor achieves 'compliance' with the criteria of a 'compliant' scheme</p> <p>8. Where the refurbishment or fit-out project does not meet the definition of a small scale or low value project (see Relevant definitions) the principal contractor has used a 'compliant' organisational, local or national considerate construction scheme and their performance against the scheme has been confirmed by independent assessment and verification. The BREEAM credits can be awarded as follows: a. One credit where the contractor achieves 'compliance' with the criteria of a compliant scheme. b. Two credits where the contractor significantly exceeds 'compliance' with the criteria of the scheme. Refer to the Relevant definitions section for a list of compliant schemes and therefore</p>	<p>2</p>	<p>1.48%</p>	<p>2</p>	<p>1.48%</p>
<p>Man 03.4: Responsible construction practices : Monitoring of construction site impacts</p>	<p>Up to two credits - Monitoring of refurbishment or fit-out-site impacts</p> <p>9. Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data (where measured) resulting from all on-site refurbishment or fit-out processes (and dedicated off-site monitoring) throughout the refurbishment or fit-out programme. To ensure the robust collection of information, this individual(s) must have the appropriate authority and responsibility to request and access the data required. Where appointed, the Sustainability Champion could perform this role.</p> <p>First monitoring credit - Utility consumption</p> <p>Energy consumption</p> <p>10. Criterion 9 is achieved.</p> <p>11. Monitor and record data of the site energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation (as relevant to the project type).</p> <p>12. Report the total carbon dioxide emissions (total kgCO₂/project value) from the construction process via the BREEAM Assessment Scoring and Reporting tool (for the purposes of potential future BREEAM performance benchmarking).</p> <p>Water consumption</p> <p>13. Criterion 9 is achieved</p> <p>14. Monitor and record data on principal constructor's and subcontractors' potable water consumption (m³) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation (as relevant to the project type, see Compliance Note).</p> <p>15. Using the collated data report the total net water consumption (m³), i.e. consumption minus any recycled water use from the construction process via the BREEAM Assessment Scoring and Reporting tool (for the purposes of potential future BREEAM performance benchmarking).</p> <p>Second monitoring credit - Transport of construction materials and waste</p>	<p>2</p>	<p>1.48%</p>	<p>2</p>	<p>1.48%</p>

<p>Man 04.1: Commissioning and handover : Commissioning and testing schedule and responsibilities</p>	<p>One credit - Commissioning and testing schedule and responsibilities</p> <p>1. There is a schedule of commissioning and testing that identifies appropriate commissioning required for the scope of works that includes a suitable timescale for commissioning and re-commissioning of all relevant works carried out. Commissioning should be carried out where changes are being made to the following:</p> <ul style="list-style-type: none"> a. Building services (including both complex and non-complex systems) b. Building services control systems (including Building Management Systems) c. Changes to the building fabric that will affect thermal performance. <p>2. The schedule will identify the appropriate standards that all commissioning activities will be conducted in accordance with such as current Building Regulations, BSRIA1 and CIBSE2 guidelines and/or other appropriate standards, where applicable. Where a building management system (BMS) is specified, refer to compliance note CN8 on BMS commissioning procedures.</p> <p>3. An appropriate project team member(s) is appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client.</p> <p>4. The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of works, allowing for the required time to complete all commissioning and testing activities prior to handover.</p>	<p>1</p>	<p>0.74%</p>	<p>1</p>	<p>0.74%</p>
<p>Man 04.2: Commissioning and handover : Commissioning building services</p>	<p>One credit - Commissioning building services</p> <p>5. The commissioning and testing schedule and responsibilities credit is achieved.</p> <p>6. For projects where work is being undertaken to upgrade, renovate or install new building services and systems.</p> <ul style="list-style-type: none"> a. For complex building services and systems, a specialist commissioning manager is appointed during the design stage (by either client or contractor) with responsibility for: <ul style="list-style-type: none"> i. Undertaking design reviews and giving advice on suitability for ease of commissioning ii. Providing commissioning management input to construction programming and during installation stages iii. Management of commissioning, performance testing and handover/post handover stages. b. For simple building services, this role can be carried out by an appropriate project team member (see criterion 3), provided they are not involved in the general installation works for the building services system(s). 	<p>1</p>	<p>0.74%</p>	<p>1</p>	<p>0.74%</p>
<p>Man 04.3: Commissioning and handover : Testing and inspecting building fabric</p>	<p>One credit - Testing and inspecting building fabric</p> <p>7. Projects where the fabric of the building is being upgraded, the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths is quality assured through completion of a thermographic survey as well as airtightness testing and visual inspection at appropriate times during the refurbishment. The survey/testing is undertaken by a Suitably Qualified Professional (see Relevant definitions) in accordance with the appropriate standard, with visual inspection conducted by a representative of the main contractor or by an independent inspector such as a clerk of works.</p> <p>8. Any defects identified in the site inspection, thermographic survey and the airtightness testing reports are rectified prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building element.</p>	<p>1</p>	<p>0.74%</p>	<p>0</p>	<p>0%</p>
<p>Man 04.4: Commissioning and handover : Handover</p>	<p>One credit - Handover</p> <p>9. A Building User Guide is developed or (where present) an existing Building User Guide is updated, prior to handover for distribution to the building occupiers and premises managers (see Relevant definitions), with a draft copy developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users.</p> <p>10. A training schedule is prepared for building occupiers/premises managers, timed appropriately around handover and proposed occupation plans, which includes the following content as a minimum:</p> <ul style="list-style-type: none"> a. The design intent of refurbishment/fit-out works b. The available aftercare provision and aftercare team main contact(s), including any scheduled seasonal commissioning and post occupancy evaluation c. Introduction to, and demonstration of, installed systems and key features, particularly building management systems, controls and their interfaces, to ensure they are fully conversant with the detailed operation of the building d. Introduction to the Building User Guide and other relevant building documentation, e.g. design data, technical guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log book etc. 	<p>1</p>	<p>0.74%</p>	<p>1</p>	<p>0.74%</p>

Man 05.1: Aftercare : Aftercare support	<p>One credit - Aftercare support</p> <p>1. There is (or will be) operational infrastructure and resources in place to provide aftercare support to the building occupier(s), which includes the following as a minimum:</p> <ul style="list-style-type: none"> a. A meeting programmed to occur between the aftercare team/individual and the building occupier/management (prior to initial occupation, or as soon as possible thereafter) to: <ul style="list-style-type: none"> i. Introduce the aftercare team or individual to the aftercare support available, including the Building User Guide (where existing) and training schedule/content. ii. Present key information about the building including the design intent and how to use the building to ensure it operates as efficiently and effectively as possible (including the use of local services and controls and central services, as applicable). b. On-site facilities management training, to include a walkabout of the building and introduction to and familiarisation with the building systems, their controls and how to operate them in accordance with the design intent and operational demands. c. Initial aftercare support provision for at least the first month of building occupation, e.g. on-site attendance on a weekly basis to support building users/and management and to conduct a walk-around to examine how the refurbished area of the building is being used/operated to identify any issues that need to be communicated to building users/facilities managers (this could be more or less frequent depending on the complexity of the building and building operations). d. Longer term aftercare support provision for occupants for at least the first 12 months from occupation, e.g. a helpline, nominated individual or other appropriate system to support building users/management. <p>2. There is (or will be) operational infrastructure and resources in place to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months (for Part 4, where local metering is available and accessible), once the building is occupied. Discrepancies between actual and predicted performance should be identified, with a commitment to identify actions required to address any discrepancies such as adjusting systems and/or to develop/review operational policies to influence user behaviours accordingly.</p> <p><u>Exemplary level criteria</u></p>	1	0.74%	1	0.74%
Man 05.2: Aftercare : Seasonal commissioning	<p>One credit - Seasonal commissioning</p> <p>3. The following seasonal commissioning activities will be completed over a minimum 12 month period, once the building becomes substantially occupied:</p> <ul style="list-style-type: none"> a. Complex systems - Specialist Commissioning Manager: <ul style="list-style-type: none"> i. Testing of all building services under full load conditions, i.e. heating equipment in mid-winter, cooling/ventilation equipment in mid-summer, and under part load conditions (spring/autumn). ii. Where applicable, testing should also be carried out during periods of extreme (high or low) occupancy. iii. Interviews with building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. iv. Re-commissioning of systems (following any work needed to serve revised loads), and incorporating any revisions in operating procedures into the operations and maintenance (O&M) manuals. b. Simple systems (naturally ventilated) - external consultant/aftercare team/facilities manager <ul style="list-style-type: none"> i. Review thermal comfort, ventilation, and lighting, at three, six and nine month intervals after initial occupation, either by measurement or occupant feedback. ii. Take all reasonable steps to re-commission systems following the review to take account of deficiencies identified and incorporate any relevant revisions in operating procedures into the O&M manuals. 	1	0.74%	1	0.74%
Man 05.3: Aftercare : Post occupancy evaluation	<p>One credit - Post occupancy evaluation</p> <p>4. The client or building occupier makes a commitment to carry out a post occupancy evaluation (POE) exercise one year after initial building occupation (see compliance note CN7. This is done to gain in-use performance feedback from building users to inform operational processes, including re-commissioning activities, and maintain or improve productivity, health, safety and comfort. The POE is carried out by an independent party (see Man 01 Project brief and design – Relevant definitions) and needs to cover:</p> <ul style="list-style-type: none"> a. A review of the design intent and construction process (review of design, procurement, construction and handover processes). b. Feedback from a wide range of building users including facilities management on the design and environmental conditions of the building covering: <ul style="list-style-type: none"> i. Internal environmental conditions (light, noise, temperature, air quality) ii. Control, operation and maintenance iii. Facilities and amenities iv. Access and layout v. Other relevant issues. c. Sustainability performance (energy/water consumption, performance of any sustainable features or technologies, e.g. materials, renewable energy, rainwater harvesting etc.). <p>5. The client or building occupier makes a commitment to carry out the appropriate dissemination of information on the building's post occupancy performance. This is done to share good practice and lessons learned and inform changes in user behaviour, building operational processes and procedures, and system controls. Refer to compliance notes CN7.1 and CN7.2 for a definition of appropriate dissemination. This also provides advice on appropriate dissemination where the building or building information is commercially or security sensitive.</p>	1	0.74%	1	0.74%
Management Totals	21	15.58%	17	12.62%	

Health and Wellbeing	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Hea 01.1: Visual comfort : Glare control	<p>One credit - Glare control</p> <p>1. The potential for disabling glare has been designed out of all relevant building areas using a glare control strategy, either through building form and layout and/or building design measures (see Compliance notes CN7).</p> <p>2. The glare control strategy avoids increasing lighting energy consumption, by ensuring that:</p> <ul style="list-style-type: none"> a. The glare control system is designed to maximise daylight levels under all conditions whilst avoiding disabling glare in the workplace or other sensitive areas. The system should not inhibit daylight from entering the space under cloudy conditions, or when sunlight is not on the facade: AND b. The use or location of shading does not conflict with the operation of lighting control systems. 	1	0.89%	1	0.89%

<p>Hea 01.2: Visual comfort : Daylighting</p>	<p>Up to three credits - Daylighting</p> <p>3. Up to three credits are awarded on a sliding scale depending on the percentage of relevant building areas that comply with one of the following daylighting criteria:</p> <ul style="list-style-type: none"> a. The relevant building areas meet good practice daylight factor(s) and other criterion as outlined in Table - 12 and Table - 13: OR b. The relevant building areas meet good practice average and minimum point daylight illuminance criteria as outlined in Table - 14. <p>4. Two credits where daylighting provision, averaged over all relevant spaces, has improved after refurbishment or fit-out by 30% or more and there is a minimum glazing to floor area ratio of either:</p> <ul style="list-style-type: none"> a. 5% glass to floor area ratio for side windows; OR b. 2.5% glass to floor area ratio for roof lights; <p>5. One credit where daylighting provision, averaged over all relevant spaces, has improved after refurbishment or fit-out by 15% or more and there is a minimum glazing to floor area ratio of either:</p> <ul style="list-style-type: none"> a. 5% glass to floor area ratio for side windows; OR b. 2.5% glass to floor area ratio for roof lights <p>Note: The improvement in daylighting provision is calculated using the BREEAM Hea 01 Calculator tool based upon either the increase in glazing area, transmittance, illuminance or percentage daylight factor. Please refer to the Methodology section for calculation procedures.</p> <p>Exemplary level criteria</p> <p>The following outlines the exemplary level criteria to achieve an innovation credit for daylighting:</p> <p>1. Daylighting criteria have been met using either of the following options:</p> <ul style="list-style-type: none"> a. Relevant building areas meet exemplary daylight factor(s) and the relevant criteria in Table - 17 	<p>3</p>	<p>2.66%</p>	<p>0</p>	<p>0%</p>
<p>Hea 01.3: Visual comfort : View out</p>	<p>Up to two credits - View out</p> <p>6. Two credits where 95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out.</p> <p>7. One credit where 80% of the floor area space in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out and criterion 8 is met.</p> <p>8. The window/opening must be ≥ 20% of the surrounding wall area (refer to Relevant definitions in the Additional information section). Where the room depth is greater than 7m, compliance is only possible where the percentage of window/opening is the same as, or greater than, the values in Table 1.0 of BS 8206.</p> <p>9. In addition, the building type criteria in Table - 15 are applicable to fit-out criteria.</p>	<p>2</p>	<p>1.77%</p>	<p>0</p>	<p>0%</p>
<p>Hea 01.4: Visual comfort : Internal and external lighting, Zoning and control</p>	<p>One credit - Internal and external lighting levels, zoning and control</p> <p>Internal lighting</p> <p>10. All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts.</p> <p>11. Internal lighting in all relevant areas of the building is designed to provide an illuminance (lux) level appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. This can be demonstrated through a lighting design strategy that provides illuminance levels in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard.</p> <p>12. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 2 sections 3.3, 4.6, 4.7, 4.8 and 4.9. This gives recommendations highlighting:</p> <ul style="list-style-type: none"> a. Limits to the luminance of the luminaires to avoid screen reflections. (Manufacturers' data for the luminaires should be sought to confirm this.) b. For uplighting, the recommendations refer to the luminance of the lit ceiling rather than the luminaire; a design team calculation is usually required to demonstrate this. c. Recommendations for direct lighting, ceiling illuminance, and average wall illuminance. <p>External lighting</p> <p>13. All external lighting located within the refurbishment or fit-out zone is designed to provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. To demonstrate this, external lighting provided is specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas3 and BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places.</p> <p>Zoning and occupant control</p> <p>14. Internal lighting is zoned to allow for occupant control (see Relevant definitions) in accordance with the criteria below for relevant areas present within the building: a. In office areas, zones of no more than four workplaces</p>	<p>1</p>	<p>0.89%</p>	<p>1</p>	<p>0.89%</p>

<p>Hea 02.1: Indoor air quality : Minimising sources of air pollution</p>	<p>One credit - Indoor air quality (IAQ) plan</p> <p>1. An indoor air quality plan has been produced and implemented, with the objective of facilitating a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during the design, construction and occupation of the building. The indoor air quality plan must consider the following:</p> <ul style="list-style-type: none"> a. Removal of contaminant sources b. Dilution and control of contaminant sources c. Procedures for pre-occupancy flush out d. Protection of Heating Ventilation and Air Conditioning (HVAC) systems from sources of pollution during refurbishment/fit-out works e.g. dust e. Procedures for protecting the indoor air quality of areas outside of the refurbishment or fit-out zone that may be affected by the refurbishment/fit-out works f. Procedures for identifying and implementing third party testing and analysis required to ascertain that the contaminant sources have been removed effectively before occupancy g. Commitments for maintaining indoor air quality in-use, e.g. maintenance and cleaning of the HVAC system, ductwork and filters. <p>One credit - Ventilation</p> <p>Refurbishment and fit-out works include measures to minimise the concentration and recirculation of pollutants in the building as follows:</p> <p>2. Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation.</p> <p>3. Design ventilation pathways to minimise the build-up of air pollutants in the building, as follows:</p> <ul style="list-style-type: none"> a. In air conditioned and mixed mode buildings/spaces: <ul style="list-style-type: none"> i. The building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution; OR ii. The location of the building's air intakes and exhausts, in relation to each other and 	4	3.54%	2	1.77%
<p>Hea 02.2: Indoor air quality : Adaptability - potential for natural ventilation</p>	<p>One credit (credit not applicable to prison buildings)</p> <p>13. The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios. This can be demonstrated as follows:</p> <ul style="list-style-type: none"> a. Occupied spaces of the building are designed to be capable of providing fresh air entirely via a natural ventilation strategy. The following are methods deemed to satisfy this criterion dependent upon the complexity of the proposed system: <ul style="list-style-type: none"> i. Room depths are designed in accordance with CIBSE AM10 (section 2.4) to ensure effectiveness of any natural ventilation system. The openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate; OR ii. The design demonstrates that the natural ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates. This is demonstrated using ventilation design tool types recommended by CIBSE AM107 (or for education buildings by using the ClassVent tool).. b. For fit-out projects (Part 3 assessments), local services are designed to provide fresh air via a natural ventilation strategy and are appropriately designed according to the room depth in accordance with CIBSE AM10. <p>14. The natural ventilation strategy is capable of providing at least two levels of user-control on the supply of fresh air to the occupied space (see compliance note CN9 for further details). Note: Any opening mechanisms must be easily accessible and provide adequate user-control over air flow rates to avoid draughts. Relevant industry standards for ventilation can be used to define 'adequate levels of fresh air' sufficient for occupancy and internal air pollution loads relevant to the building type.</p> <p>Note: Multi-residential buildings with self-contained flats and individual bedrooms must have a degree of openable window function. This does not need to provide two levels of user-control</p>	1	0.89%	1	0.89%
<p>Hea 04: Thermal comfort</p>	<p>One credit - Thermal modelling</p> <p>1. Thermal modelling has been carried out using software in accordance with CIBSE AM11 Building Energy and Environmental Modelling.</p> <p>2. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11).</p> <p>3. The modelling demonstrates that:</p> <ul style="list-style-type: none"> a. For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type). b. For naturally ventilated/free running buildings: <ul style="list-style-type: none"> i. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type). ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings. <p>4. Where undertaking a Part 4 assessment a competent person (e.g. chartered building services engineer) must assess the suitability of existing building services and controls to identify any changes that may be required as a result of fit-out works (e.g. as a result of changes to internal layout, occupant density, additional equipment that may increase cooling loads etc.).</p> <p>5. For air conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.</p> <p>One credit - Adaptability - for a projected climate change scenario</p> <p>6. Criteria 1 to 4 are achieved</p>	3	2.66%	3	2.66%

Hea 05.1: Acoustic performance : Education, Healthcare, Office and Law Courts building types	<p>Up to three credits for Education, Healthcare, Office and Law courts building types</p> <p>1. The building meets the appropriate acoustic performance standards and testing requirements defined in the checklists and tables section which defines criteria for the acoustic principles of:</p> <ol style="list-style-type: none"> Sound insulation Indoor ambient noise level Reverberation times. <p>2. Where undertaking a partial refurbishment or fit-out, the performance standards and testing requirements defined in the checklist and tables section for the following principles are applicable to each assessment part:</p> <ol style="list-style-type: none"> Part 1: criteria for sound insulation and indoor ambient noise levels Part 2: criteria for indoor ambient noise levels only Part 3: criteria for sound insulation and indoor ambient noise levels Part 4: sound insulation and reverberation control <p>3. See relevant compliance notes on applicable assessment criteria, where undertaking a partial refurbishment or fit-out for further information on how to apply the appropriate acoustic performance standards and testing requirements defined in this issue.</p>	3	2.66%	2	1.77%
Hea 06: Safety and security	<p>One credit - Security of site and building</p> <p>1. A Suitably Qualified Security Specialist (SQSS) conducts an evidence based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent), see compliance note where the refurbishment or fit-out zone comprises part of a larger building.</p> <p>2. The SQSS develops a set of recommendations or solutions during or prior to Concept Design (RIBA Stage 2 or equivalent). These recommendations or solutions aim to ensure that the design of buildings, public and private car parks and public or amenity space are planned, designed and specified to address the issues identified in the preceding SNA.</p> <p>3. The recommendations or solutions proposed by the SQSS are implemented (see CN5.2. Any deviation from those recommendations or solutions will need to be justified, documented and agreed in advance with the suitably qualified security specialist.</p>	1	0.89%	0	0%
Health and Wellbeing Totals		19	16.82%	10	8.85%

Energy	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Ene 01.2: Reduction of energy use and carbon emissions - Option 2: Elemental level energy model	<p>There are two ways of demonstrating compliance with this issue:</p> <p>Option 1: Whole building energy model</p> <p>For projects that want to gain recognition for improvements made at the whole building level, using whole building energy modelling National Calculation Methodology (NCM) compliant software</p> <p>Option 2: Elemental level energy model</p> <p>For projects where the scope of work is limited to a single or multiple assessment part (from parts 1, 2, 3 and 4) such as partial or minor refurbishment projects and fit-out projects. This option can, however, be used by projects undertaking a full refurbishment (all assessment parts).</p> <p>Note: The credits available for option 2 are dependent upon the applicable assessment part and building type as defined in the BREEAM Refurbishment and Fit-out reporting tool. However irrespective of the building type and assessment scope, it is always possible to score up to 100% of the credits available to each project.</p> <p>Up to twelve credits - Elemental level energy model (option 2)</p> <p>2. Calculate the energy score using the BREEAM Refurbishment and Fit-out energy model for the applicable assessment parts to determine the number of credits awarded. Refer to Table - 28 to determine the minimum requirements for this issue. The following should be assessed as applicable to the scope of works (see Table - 30 for further details):</p> <ol style="list-style-type: none"> Part 1: Fabric and Structure: thermal performance and air-tightness of the building fabric Part 2: Core Services: energy performance of core heating, hot water, cooling and ventilation systems and controls Part 3: Local Services: energy performance of local heating, cooling, ventilation, lighting and <p>Please note:</p> <ul style="list-style-type: none"> The first credit is applicable to all building types. The second credit is not applicable to Pre-schools, Primary schools, Law courts, Prisons, Multi-residential and Other buildings: Residential institutions. <p>The following is required to demonstrate compliance.</p> <p>One credit - Sub-metering of major energy consuming systems</p> <ol style="list-style-type: none"> Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems (see Methodology). The energy consuming systems in buildings with a total useful floor area greater than 1,000m². are metered using an appropriate energy monitoring and management system. The systems in smaller buildings are metered either with an energy monitoring and management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system (see Relevant definitions). The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs. <p>One credit - Sub-metering of high energy load and tenancy areas</p> <ol style="list-style-type: none"> An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant 	12	8.97%	4.4	3.29%
Ene 02: Energy monitoring	<p>The following is required to demonstrate compliance.</p> <p>One credit - Sub-metering of major energy consuming systems</p> <ol style="list-style-type: none"> Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems (see Methodology). The energy consuming systems in buildings with a total useful floor area greater than 1,000m². are metered using an appropriate energy monitoring and management system. The systems in smaller buildings are metered either with an energy monitoring and management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system (see Relevant definitions). The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs. <p>One credit - Sub-metering of high energy load and tenancy areas</p> <ol style="list-style-type: none"> An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant 	2	1.5%	1	0.75%

Tra 03: Cyclist facilities	<p>One credit - Cycle storage (excluding sheltered housing, care homes, supported living facilities and prison building types)</p> <p>1. Compliant cycle storage spaces that meet the minimum levels set out in Table - 38 (see checklists and tables) are installed.</p> <p>One credit - Cyclist facilities (excluding sheltered housing, care homes and supported living facilities, Student residents, key accommodation, transport hub and MOD residential and prison building types)</p> <p>2. Criterion 1 has been achieved.</p> <p>3. At least two of the following types of compliant cyclist facilities have been provided for all staff and pupils (where appropriate) (see compliance notes for the scope of compliant cyclist facilities):</p> <ul style="list-style-type: none"> a. Showers b. Changing facilities c. Lockers d. Drying spaces <p>One credit - Cycle storage and cyclist facilities (sheltered housing, care homes and supported living facilities and prison building types only)</p>	2	1.73%	2	1.73%
Tra 04: Maximum car parking capacity	<p>Up to two credits - Car parking capacity</p> <p>1. The building's car parking capacity is compared to the maximum car parking capacity benchmarks in Table - 39 and the relevant number of BREEAM credits awarded. For most building types, except those where stated, the benchmarks vary according to the buildings public transport Accessibility Index (determined in accordance with BREEAM issue Tra 01 Sustainable transport solutions). Therefore, for these building types the AI must be determined prior to assessing this issue. This is required to ensure that the building's car parking capacity is relative to the development's accessibility to the public transport network.</p>	2	1.73%	2	1.73%
Tra 05: Travel plan	<p>One credit</p> <p>1. A travel plan has been developed as part of the feasibility and design stages.</p> <p>2. A site specific travel assessment/statement has been undertaken to ensure the travel plan is structured to meet the needs of the particular site and covers the following (as a minimum):</p> <ul style="list-style-type: none"> a. Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. b. Travel patterns and transport impact of future building users. c. Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children) d. Disabled access (accounting for varying levels of disability and visual impairment) e. Public transport links serving the site f. Current facilities for cyclists <p>3. The travel plan includes a package of measures to encourage the use of sustainable modes of transport and movement of people and goods during the buildings operation and use.</p> <p>4. If the occupier is known, they must be involved in the development of the travel plan and they must confirm that the travel plan will be implemented post construction and supported by the</p>	1	0.87%	1	0.87%
Transport Totals	13	11.26%	10	8.66%	

Water	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Wat 01: Water consumption	<p>Up to five credits</p> <p>1. An assessment of the efficiency of newly specified domestic water-consuming components and (where relevant) measures specified to retrofit existing devices is undertaken using the BREEAM Wat 01 calculator, including all fittings applicable to the project type as detailed in Table - 42. Where there are no fittings within the scope of refurbishment or fit-out works, or only minimal water-consuming fittings present or specified, refer to compliance notes 5 or 6 to determine how this issue should be assessed.</p> <p>2. The water consumption (litres/person/day) for the assessed building is compared against a baseline performance and BREEAM credits awarded based upon Table - 41.</p> <p>3. The efficiency of the following 'domestic scale' water-consuming components must be included in the assessment (where specified/relevant to project type as defined by Table - 42):</p> <ul style="list-style-type: none"> a. WCs b. Urinals c. Taps (wash hand basins and where specified kitchen taps and waste disposal unit) d. Showers e. Baths f. Dishwashers (domestic and commercial sized) g. Washing machine (domestic and commercial or industrial sized) <p>The BREEAM Wat 01 calculator defines the building types and activity areas for which the above components must be assessed.</p> <p>4. Where a greywater and/or rainwater system is specified, its yield (l/person/day) is used to offset non potable water demand from components that would otherwise be supplied using potable water.</p> <p>5. Any greywater systems must be specified and installed in compliance with BS 8525-1:2010 Greywater Systems - Part 1 Code of Practice. Any rainwater systems must be specified and installed in compliance with BS 8515:2009+A1:2013 Rainwater Harvesting Systems - Code of practice.</p> <p>6. Healthcare and prison buildings: refer to the relevant Compliance note for additional criteria</p>	5	4.33%	3	2.6%

Wat 02: Water monitoring	<p>One credit</p> <p>1. The specification of a water meter on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source.</p> <p>2. Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area (see Compliance notes).</p> <p>3. Each meter (main and sub) has a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption (see Relevant definitions).</p> <p>4. If the refurbishment zone is within a site that has an existing BMS, managed by the same occupier/owner (as the space undergoing refurbishment or fit-out), the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the existing BMS</p> <p>5. If the refurbishment or fit-out zone is within a building that is leasehold, the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the incoming water supply for water using equipment in tenanted areas (see compliance note)</p>	1	0.87%	1	0.87%
Wat 03: Water leak detection	<p>One credit - Leak detection system</p> <p>1. A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed. The leak detection system must be:</p> <p>a. A permanent automated water leak detection system that alerts the building occupants to the leak OR an in-built automated diagnostic procedure for detecting leaks is installed.</p> <p>b. Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time.</p> <p>c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods.</p> <p>d. Programmable to suit the owner/occupiers' water consumption criteria.</p> <p>e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.</p> <p>One credit - Flow control devices</p> <p>2. Flow control devices that regulate the supply of water to each WC area/facility according to</p>	2	1.73%	2	1.73%
Wat 04: Water efficient equipment	<p>One credit</p> <p>1. The design team has identified all unregulated water demands that could be realistically mitigated or reduced.</p> <p>2. System(s) or processes have been identified to reduce the unregulated water demand, and demonstrate, through either good practice design or specification, a meaningful reduction in the total water demand of the building</p>	1	0.87%	1	0.87%
Water Totals		9	7.79%	7	6.06%

Materials	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Mat 01.2: Environmental impact of materials - Option 2: Elemental assessment of environmental performance information	<p>This issue is broken down into:</p> <p>Option 1: Project life cycle assessment study (6 credits)</p> <p>OR</p> <p>Option 2: Elemental assessment of environmental performance information (4 credits)</p> <p>The following is required to demonstrate compliance:</p> <p>Up to four credits (option 2): Elemental assessment of environmental performance information</p> <p>8. Robust environmental performance information has been collected for newly specified materials or where materials are retained in situ, for elements listed in CN7</p> <p>9. The total number of points achieved as set out in the Methodology section are calculated using Part B of the BREEAM Mat 01 calculator. The number of points scored is based on the percentage of each element that has been:</p> <p>a. reused in situ</p> <p>b. reused in situ with minor repairs</p> <p>c. specified with robust environmental performance information.</p>	4	4.99%	4	4.99%

Mat 03: Responsible sourcing of materials	<p>Pre-requisite</p> <p>1. All timber and timber-based products used on the project is Legally harvested and traded timber (see Relevant definitions). Note:</p> <p>a. It is a minimum requirement for achieving a BREEAM rating (for any rating level) that compliance with criterion 1 is confirmed.</p> <p>b. For other materials there are no pre-requisite requirements at this stage.</p> <p>One credit - Sustainable procurement plan</p> <p>2. The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan (see the Relevant definitions in the Additional information section). Up to 3 credits - Responsible sourcing of materials (RSM)</p> <p>3. One credit can be awarded where at least three of the material types listed in Table - 53 'Material categories' has been responsibly sourced from one of the responsible sourcing schemes recognised by BREEAM as detailed in Guidance Note 18</p> <p>4. Up to three of the available RSM credits (refer to Table - 51) can be awarded where the applicable building materials (refer to Table - 53) are responsibly sourced in accordance with the BREEAM methodology, as defined in steps 1 to 2 in the Mat 03 Responsible sourcing of materials Exemplary level criteria</p> <p>The following outlines the exemplary level criteria to achieve one innovation credit for this BREEAM issue:</p> <p>5. Where at least 70% of the available RSM points are achieved</p>	4	4.99%	4	4.99%
Mat 05: Designing for durability and resilience	<p>One credit</p> <p>Protecting vulnerable parts of the building from damage</p> <p>1. The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This must include, but is not necessarily limited to:</p> <p>a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.).</p> <p>b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas.</p> <p>c. Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas.</p> <p>Protecting exposed parts of the building from material degradation</p> <p>2. Environmental factors have been identified that are relevant to the site location (see Table - 58)</p> <p>3. Existing applicable building elements that are exposed to any relevant environmental factors have been identified (see Table - 58)</p> <p>4. Existing applicable building elements (see Table - 58) have been surveyed have been assessed to identify impacts of material degradation effects including an assessment to grade the severity of any degradation effects. Design and specification measures have been developed to repair and protect existing elements according to the severity of any degradation affects, to limit degradation. Where it is not feasible to implement measures to limit material degradation for existing elements, justification should be provided.</p> <p>5. Newly specified materials or newly constructed elements (e.g. a new external wall) within the scope of refurbishment or fit-out works incorporate appropriate design and specification measures to limit material degradation due to environmental factors (See Methodology) See Table - 58 in the Checklists and tables section for a list of applicable elements</p>	1	1.25%	1	1.25%
Mat 06: Material efficiency	<p>One credit</p> <p>1. Opportunities have been identified, and appropriate measures investigated and implemented within the scope of refurbishment or fit out works, to optimise the use of materials through building design, procurement, refurbishment, maintenance and end of life (see examples in Table 59 and Table 60, in the Additional information section)</p> <p>2. The above is carried out by the design/construction team in consultation with the relevant parties (see CN3) at each of the following RIBA stages:</p> <p>a. Preparation and Brief</p> <p>b. Concept Design</p> <p>c. Developed Design</p> <p>d. Technical Design</p> <p>e. Construction</p>	1	1.25%	1	1.25%
Materials Totals		10	12.49%	10	12.49%
Waste	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent

Wst 01.1: Project waste management : Construction resource efficiency	<p>One credit - Pre-refurbishment audit</p> <p>1. The client shall ensure that a pre-refurbishment audit of all existing buildings, structures or hard surfaces within the scope of the refurbishment or fit-out zone is completed. The requirements for carrying out an appropriate pre-refurbishment audit are:</p> <ul style="list-style-type: none"> a. The audit should be carried out at the Concept Design Stage (equivalent to RIBA stage 2) prior to strip-out or demolition works in order to use the audit results to guide the design, consideration of materials that can be reused, and to set targets for waste management and ensure all contractors are engaged in the process of maximising high grade reuse and recycling opportunities. b. The audit should be carried out by a competent person (see Relevant Definitions) who is independent of the project, has appropriate knowledge of buildings, waste and options for the reuse and recycling of different waste streams c. Actual waste arisings and waste management routes used should be compared with those forecast from the audit and barriers to achieving targets should be investigated. <p>The audit must be referenced in the resource management plan and cover:</p> <ul style="list-style-type: none"> d. Identification and quantification of the key materials where present on the project (see Table - 66) e. Potential applications and any related issues for the reuse and recycling of the key materials in accordance with the waste hierarchy. f. Identification of local reprocessors or recyclers for recycling of materials g. Identification of overall recycling rate for all key materials h. Identification of reuse targets where appropriate. i. Identification of overall landfill diversion rate for all key materials. <p>Exemplary level criteria</p> <p>The following outlines the exemplary level criteria to achieve an innovation credit for this BREEAM issue:</p>	1	0.81%	1	0.81%
Wst 01.2: Project waste management : Reuse and direct recycling of materials	<p>Up to two credits - Reuse and direct recycling of materials</p> <p>2. Where waste material types detailed in Table - 64 are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling</p> <p>3. One credit is achieved where 50% of the total available points for the waste material types detailed in Table - 64, that are present on the project have been achieved (using the Was 01 calculator tool, see Table - 65 in the Methodology section).</p> <p>4. Two credits are achieved where 75% of the total available points for the waste material types detailed in Table - 64, that are present on the project have been achieved (using the Was 01 calculator tool, see Table - 65 in the Methodology section)</p> <p>Please note that in most instances any materials specified in Table - 64 that are sent to a Material Recovery Facility (MRF) for recovery does not qualify for this credit. See compliance note EN3 Resource management plan for further details</p>	2	1.62%	2	1.62%
Wst 01.3: Project waste management : Resource efficiency	<p>Up to three credits - Resource efficiency</p> <p>5. Develop and implement a compliant resource management plan covering the waste arisings from the refurbishment or fit-out project with the aim of minimising waste (see Relevant definitions), recording and reporting accurate data on waste arisings.</p> <p>6. The non-hazardous waste relating to on-site refurbishment or fit-out, and dedicated off-site manufacture or fabrication processes generated by the building's design and construction meets, or exceeds, the resource efficiency benchmarks set out in Table - 61 and Table - 62 as relevant to the project type</p>	3	2.44%	3	2.44%
Wst 01.4: Project waste management : Diversion of resources from landfill	<p>One credit - Diversion of resources from landfill</p> <p>7. The following percentages of non-hazardous construction and demolition waste (where applicable) generated have been diverted from landfill: (see supporting documents for Table - 63: Diversion of waste for refurbishment and fit-out)</p>	1	0.81%	1	0.81%
Wst 03: Operational waste	<p>One credit - Operational waste</p> <p>1. Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be</p> <ul style="list-style-type: none"> a. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams b. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities and occupancy rates. <p>2. Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operation, the following facilities are provided:</p> <ul style="list-style-type: none"> a. Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space. b. Vessel(s) for composting suitable organic waste resulting from the building's daily operation and use; OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility. c. Where organic waste is to be stored/composted onsite, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes. <p>Additionally for healthcare buildings only</p> <p>3. The specified/installed operational waste facilities are compliant with the relevant NHS guidelines for that part of the UK (See Compliance Note) Additionally for multi-residential buildings with self contained dwellings/bedsits only</p> <p>4. Each dwelling/bedsit has a provision of three internal storage containers, as follows:</p> <ul style="list-style-type: none"> a. A minimum total capacity of 30 litres 	1	0.81%	1	0.81%

Wst 04: Speculative floor and ceiling finishes	<p>One credit - Speculative floor and ceiling finishes</p> <p>Office building types only</p> <p>1. For tenanted areas (where the future occupant is not known), prior to full fit-out works, carpets, other floor finishes and ceiling finishes have been installed in a show area only.</p> <p>2. In a building developed for a specific occupant, that occupant has selected (or agreed to) the specified floor and ceiling finishes.</p>	1	0.81%	1	0.81%
Wst 06: Functional adaptability	<p>One credit - Functional adaptability</p> <p>1. A building-specific functional adaptation strategy study has been undertaken by the client and design team by Concept Design (RIBA Stage 2 or equivalent), which includes recommendations for measures to be incorporated to facilitate future adaptation.</p> <p>2. Functional adaptation measures (see examples in Table - 68) have been adopted in the design by Technical Design stage (RIBA Stage 4 or equivalent) in accordance with the functional adaptation strategy recommendations, where practical and cost effective. Omissions have been justified in writing to the assessor.</p>	1	0.81%	1	0.81%
Waste Totals		10	8.12%	10	8.12%

Pollution	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Pol 01: Impact of refrigerants	<p>Three credits - No refrigerant use</p> <p>1. Where the building does not require the use of refrigerants within its installed plant/systems. OR alternatively, where the building does require the use of refrigerants, the three credits can be awarded as follows:</p> <p>Pre-requisite</p> <p>2. All systems (with electric compressors) must comply with the requirements of BS EN 378:2008 (parts 2 and 3) and where refrigeration systems containing ammonia are installed, the institute of Refrigeration Ammonia Refrigeration Systems Code of Practice.</p> <p>Two credits - Impact of refrigerant</p> <p>3. Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELCO2e) of ≤ 100 kgCO2e/kW cooling/heating capacity. To calculate the DELCO2e please refer to the Relevant definitions in the Additional information section and the Methodology section.</p> <p>OR</p> <p>4. Where air-conditioning or refrigeration systems are installed the refrigerants used have a Global Warming Potential (GWP) ≤ 10.</p> <p>OR</p> <p>One credit - Impact of refrigerant</p> <p>5. Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELCO2e) of ≤ 1000 kgCO2e/kW cooling/heating capacity.</p> <p>One credit - Leak detection</p> <p>6. Where systems using refrigerants have a permanent automated refrigerant leak detection</p>	3	3.3%	3	3.3%
Pol 02: NOx emissions	<p>Up to three credits (all building types except Industrial)</p> <p>1. Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a NOx emission level (measured on a dry basis at 0% excess O2) as follows:</p> <p>Two credits (Industrial building types only)</p> <p>2. Report via the BREEAM scoring and reporting tool the direct and indirect NOx emissions in mg/kWh and energy consumption in kWh/m2/yr arising from systems installed to meet the building's space heating, cooling and hot water demands.</p>	3	3.3%	0	0%
Pol 03.1: Flood risk management and reducing surface water run-off : Flood risk management	<p>This issue is split into three parts;</p> <p>Flood risk management (2 credits)Surface water run-off (2 credits)Minimising water course pollution (1 credit)</p> <p>Two credits - Flood risk management</p> <p>Low flood risk</p> <p>1. Where flood maps from the appropriate statutory body (see Relevant definitions)confirm the refurbishment or fit-out is situated in a flood zone that is defined as having a low annual probability of flooding; OR</p> <p>2. The project meets the requirements for avoidance of flooding in accordance with Checklist 1, (see Checklists and tables), e.g. where the refurbishment or fit-out zone is of a floor level that is 0.3m higher than the obtained/estimated flood level and safe access/escape routes are available/present</p> <p>Medium/high flood risk</p> <p>3. Where criterion 4 and either criterion 5 or 6 have been met</p> <p>4. Where flood maps from the appropriate statutory body (see Relevant definitions) confirm the site has a medium or high flood risk and a site specific FRA has been undertaken (as relevant to size of project in accordance with CN7). The FRA must take all current and future sources of flooding into consideration in accordance with compliance note.</p> <p>5. Where the refurbishment or fit-out zone achieves avoidance from flooding through either:</p> <p>a. the refurbishment and fit-out zone is located entirely on the first floor or above and a flood emergency plan has been developed in accordance with 'Would your business stay afloat? A Guide to preparing your business for flooding', Environment Agency, 2011</p> <p>b. As a result of the building's floor level or measures to keep water away, the building is defined as achieving avoidance from flooding by following Checklist A-1, Checklists and tables.</p> <p>6. Where avoidance is not possible, two credits are achieved where a full flood resilience/resistance strategy is implemented for the building's scope of works in accordance</p>	2	2.2%	2	2.2%

<p>Pol 03.2: Flood risk management and reducing surface water run-off : Surface water run-off</p>	<p>This issue is split into three parts;</p> <p>Flood risk management (1 to 2 credits)Surface water run-off (2 credits)Minimising water course pollution (1 credit) Two credits - Surface water run-off</p> <p>One credit - neutral impact on surface water</p> <p>7. There is no increase in the impermeable surfaces as a result of the refurbishment works; OR 8. If there is an increase in the impermeable surface as a result of the refurbishment works then the following must be met:</p> <p>a. Hard standing areas - where there is an extension or increase in the hardstanding areas and hence an increase in the total impermeable area as a result of the refurbishment works, the hardstanding area must be permeable or be provided with on-site SuDS to allow full infiltration of the additional volume, to achieve the same end result. The permeable hardstanding must include all pavements and public rights of way, car parks, driveways and non-adoptable roads, but exclude footpaths that cross soft landscaped areas which will drain onto a naturally permeable surface.</p> <p>b. Building extension - where there is an increase in building footprint, extending onto any previously permeable surfaces, the additional run-off caused by the area of the new extension must be managed on-site using an appropriate SuDS technique for rainfall depths up to 5mm. Two credits - reducing run-off</p> <p>9. An Appropriate Consultant (see Relevant definitions) has been used to design an appropriate drainage strategy for the site. 10. Either of the following criteria are met:</p> <p>a. There is a decrease in the impermeable area by 50% or more, from the pre-existing impermeable hard surfaces; OR b. Where run-off as a result of the refurbishment is managed on-site using source control achieving the following requirements:</p>	<p>2</p>	<p>2.0%</p>	<p>1</p>	<p>1.0%</p>
<p>Pol 03.3: Flood risk management and reducing surface water run-off : Minimising water course pollution</p>	<p>This issue is split into three parts;</p> <p>Flood risk (1 to 2 credits)Surface water run-off (2 credits)Minimising water course pollution (1 credit) Minimising water course pollution</p> <p>One credit</p> <p>11. There is no discharge from the developed site (includes new and existing hard landscaping and buildings) for rainfall up to 5mm (confirmed by the Appropriate Consultant). 12. Where suitable pollution prevention measures are put in place (or already exist) for the different sources of pollution present on the assessed site, in accordance with compliance note CN20. 13. A comprehensive and up to date drainage plan of the site will be made available for the building/site occupiers. 14. Relevant maintenance agreements for the ownership, long term operation and maintenance</p>	<p>1</p>	<p>1.0%</p>	<p>1</p>	<p>1.0%</p>
<p>Pol 04: Reduction of night time light pollution</p>	<p>One credit</p> <p>1. Where external lighting pollution has been eliminated through effective design that removes the need for external lighting without adversely affecting the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows:</p> <p>2. The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011. Buildings located in Scotland must comply with the light pollution criteria in the guidance note 'Controlling Light Pollution and Reducing Lighting Energy Consumption'.</p> <p>This can be demonstrated via completion of the checklists in Annexes B and C of the guidance note by a relevant member of the design team.</p> <p>3. All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. 4. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes. 5. Illuminated advertisements, where specified, must be designed in compliance with ILP PLG 05</p>	<p>1</p>	<p>1.0%</p>	<p>1</p>	<p>1.0%</p>

Pol 05: Reduction of noise pollution	<p>Applicability:</p> <p>This issue is applicable to Parts 1, 2 and 3 assessments to assess the impact of existing or newly specified externally mounted plant and the impact of any fabric measures on reducing the impact of noise on any nearby noise-sensitive buildings.</p> <p>The following is required to demonstrate compliance:</p> <p>One credit</p> <p>1. Where there are, or will be, no noise-sensitive areas or buildings within 800m radius of the assessed development. OR</p> <p>2. Alternatively, where the building does have noise sensitive areas or buildings within 800m radius of the development, one credit can be awarded as follows:</p> <p>a. Where a noise impact assessment in compliance with BS 7445 has been carried out and the following noise levels measured/determined</p> <p>i. Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar.</p> <p>ii. The rating noise level resulting from the new noise-source (see CN7).</p> <p>3. The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body (see Relevant definitions in the Additional information section).</p> <p>4. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level.</p> <p>5. Where the noise source(s) from the proposed site/building is greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where</p>	1	1.1%	1	1.1%
Pollution Totals	13	12.99%	9	8.99%	

Innovation	Compliance Requirements	Available		Targeted	
		Credits	Percent	Credits	Percent
Inn 01: Innovation	<p>Up to a maximum of 10 credits are available in aggregate from a combination of the following:</p> <p>Exemplary level of performance in existing BREEAM issues</p> <p>1. Where the building demonstrates exemplary performance by meeting defined exemplary level performance criteria in one or more of following BREEAM assessment issues:</p> <p>a. Man 01 Project brief and design (Simple buildings only)</p> <p>b. Man 03 Responsible construction practices</p> <p>c. Man 05 Aftercare</p> <p>d. Hea 01 Visual comfort</p> <p>e. Hea 02 Indoor air quality</p> <p>f. Ene 01 Reduction of energy use and carbon emissions</p> <p>g. Wat 01 Water consumption</p> <p>h. Mat 01 Life cycle impacts</p> <p>i. Mat 03 Responsible sourcing of materials</p> <p>j. Wst 01 Construction-site waste management</p> <p>k. Wst 02 Recycled aggregates</p> <p>l. Wst 05 Adaptation to climate change</p> <p>m. Pol 03 Surface water run-off (Simple buildings only).</p> <p>Please refer to the relevant BREEAM issue within this scheme document for details of the exemplary level performance assessment criteria.</p> <p>Approved innovations</p> <p>2. One innovation credit can be awarded for each innovation application approved by BRE Global, where the building complies with the criteria defined within an Approved Innovation</p>	10	10%	0	0%
Man 03: Responsible construction practices	<p>Assessment criteria</p> <p>1. See compliance requirements for Man 03</p>	1	1%	0	0%
Man 05: Aftercare	<p>Assessment criteria</p> <p>1. See compliance requirements for Man 05</p>	1	1%	0	0%
Hea 01: Visual comfort	<p>Assessment criteria</p> <p>1. See compliance requirements for Hea 01</p>	1	1%	0	0%
Hea 02: Indoor air quality	<p>Assessment criteria</p> <p>1. See compliance requirements for Hea 02</p>	2	2%	0	0%
Ene 01: Reduction of energy use and carbon emissions	<p>Assessment criteria</p> <p>1. See compliance requirements for Ene 01</p>	5	5%	0	0%
Wat 01: Water consumption	<p>Assessment criteria</p> <p>1. See compliance requirements for Wat 01</p>	1	1%	0	0%
Mat 01: Life cycle impacts	<p>Assessment criteria</p> <p>1. See compliance requirements for Mat 01</p>	1	1%	0	0%
Mat 03: Responsible sourcing of materials	<p>Assessment criteria</p> <p>1. See compliance requirements for Mat 03</p>	1	1%	0	0%
Wst 01: Construction site waste management	<p>Assessment criteria</p> <p>1. See compliance requirements for Wst 01</p>	1	1%	0	0%
Wst 02: Recycled aggregates	<p>Assessment criteria</p> <p>1. See compliance requirements for Wst 02</p>	1	1%	0	0%
Wst 05: Adaptation to climate change	<p>Assessment criteria</p> <p>1. See compliance requirements for Wst 05</p>	1	1%	0	0%

Pol 03: Flood risk management and reducing surface water run-off	Assessment criteria 1. See compliance requirements for Pol 03	1	1%	0	0%
Innovation Totals (Up to a maximum of 10 credits)		10	10.00%	0	0.00%
Overall Totals		125	110.00%	82.4	72.81%

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