BREEAM OFFICES 2008

Pre-assessment for

GATEWAY HOUSE - OFFICES

Date: 11/03/2011

STATUS/REVISION: A

BRE Project reference: Project Not Registered
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Issue Status

Rev.	Description	Prepared By	Reviewed By	Date
A	Initial Pre-Assessment	EM	BB	11/03/2011

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This report is intended to provide an initial overview of the BREEAM Offices credits scheme. This report does not in anyway constitute a BREEAM assessment and should be read accordingly.

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Alterations

The BRE hold the right to update or alter the scheme at any time. Hoare Lea as their agents will implement these changes to any assessment being undertaken.

1. EXECUTIVE SUMMARY

BREEAM (**BRE E**nvironmental **R**esearch **M**ethod) provides a method of assessing the environmental impact of a building in terms of a wide variety of categories whilst also promoting design which creates a healthy and comfortable indoor and outdoor environment.

The BREEAM 2008 assessment is carried out in two stages, as follows;
- Design Stage - Carried out based on evidence provided during the design stage of the project, prior to construction leading to the award of an Interim BREEAM Certificate.
- Post Construction - Carried out after following final completion, gathering evidence throughout the construction process and leading the the award of a Final BREEAM Certificate. This assessment should confirm the rating achieved at the design stage.

There are a wide range of issues assessed under nine main category titles:
- Management
- Health & Wellbeing
- Energy
- Transport
- Water
- Materials
- Waste
- Land Use & Ecology
- Pollution

An independent assessor will assess the overall environmental performance of the building. For both the Design Stage & Post-Construction Stage Assessments the building is awarded a BREEAM rating;
Pass, Good, Very Good, Excellent or Outstanding.

A BREEAM 'Very Good' rating is targeted for the office scheme proposed at Gateway House. It will be assessed under the BREEAM Offices 2008 Criteria.

The pre-assessment report is a result of correspondance with the design team to determine credits which can be targeted at this stage.

The credits taken within this report are subject to assumptions based on the future scheme design, design team actions, contractors achievements, etc. These assumptions will be reviewed by the project team as the project progresses, and the BREEAM score updated if required.

The score calculation and credits requirements correspond to BREEAM Offices 2008 Technical Guidance document.

In addition to the above considerations, it is also important to note that in June 2011 the BRE will launch BREEAM 2011. If the team wish to proceed with the assessment under BREEAM Bespoke 2008, the project will need to be registered with the BRE prior to June 2011.

2. BREEAM OFFICES 2008

BREEAM Offices can be used to assess buildings that consist of office areas and associated functions/areas.

The functions/spcaes listed below are covered by the scope of BREEAM Offices (where they form part of an office development):

Office areas
- Cellular or open plan offices
- Meeting rooms
- Training/presentation rooms

Other associated functions/areas
- Reception and waiting areas
- Staff restaurant and/or kitchen areas
- Restrooms, WCs and changing facilities
- Storage and waste management areas
- I.T suites, server rooms
- Staff Gym or creche
- Ancillary areas e.g. plant room, circulation space

The office areas must make up >50% of the gross internal floor area of the building.

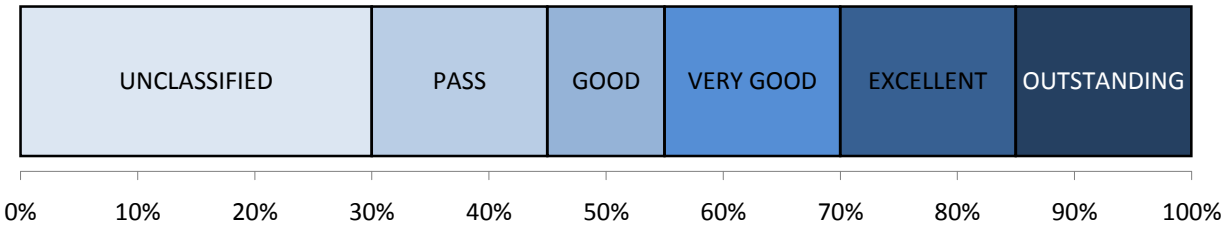
3. SCORING & RATING

The BREEAM rating is based on the number of environmental credits achieved under each category multiplied by a weighting factor. The BREEAM rating is given as Pass, Good, Very Good, Excellent, Outstanding.

The weighting factors are applied in order to account for the relative significance that each category has on the environmental impact of the building and are as follows;

Issue Category	Issue Weighting
Management	12%
Health & Wellbeing	15%
Energy	19%
Transport	8%
Water	6%
Materials	12.5%
Waste	7.5%
Land Use & Ecology	10%
Pollution	10%

The BREEAM rating awarded is dependant on the score achieved as follows;



For each level of achievement there are mandatory credits which are summarised below;

Credit Reference	BREEAM Rating				
	Pass	Good	Very Good	Excellent	Outstanding
Man1 - Commissioning	1	1	1	1	1
Man 2 - Considerate Constructors	-	-	-	1	2
Man 4 - Building Users Guide	-	-	-	1	1
Hea 4 - High Frequency Lighting	1	1	1	1	1
Hea 12 - Microbial Contamination	1	1	1	1	1
Ene 1 - Reduction of CO2 Emissions	-	-	-	6	10
Ene 2 - Sub-metering of Substantial Energy Uses	-	-	1	1	1
Ene 5 - Low or Zero Carbon Technologies	-	-	-	1	1
Wat 1 - Water Consumption	-	1	1	1	2
Wat 2 - Water Meter	-	1	1	1	1
Wst 3 - Storage of Recyclable Waste	-	-	-	1	1
LE4 - Mitigating Ecological Impact	-	-	1	1	1

For the Gateway House - Office Development the following mandatory credits have been targeted;

Mandatory Credits Targeted				
PASS	GOOD	VERY GOOD	EXCELLENT	OUTSTANDING
YES	YES	YES	NO	NO

Innovation Credits are also available and recognise where a building innovates in the field of sustainable performance above and beyond the level that is currently recognised and rewarded within standard BREEAM issues. An additional 1% can be added to a building's final BREEAM score for each innovation credit achieved. There are three ways a building can achieve an innovation credit.

The first is by meeting exemplary requirements for an existing BREEAM issue.

The exemplary performance credits are available as follows;

Credit Reference	Assessment Criteria	Credits Available
Man 2	Considerate Constructors	1
Hea 1	Daylighting	1
Ene 1	Reduction of CO2 Emissions	1
Ene 5	Low or Zero Carbon Technologies	1
Wat 2	Water Meter	1
Mat 1	Materials Specification	1
Mat 5	Responsible Sourcing of Materials	1
Wst 1	Construction Site Waste Management	1

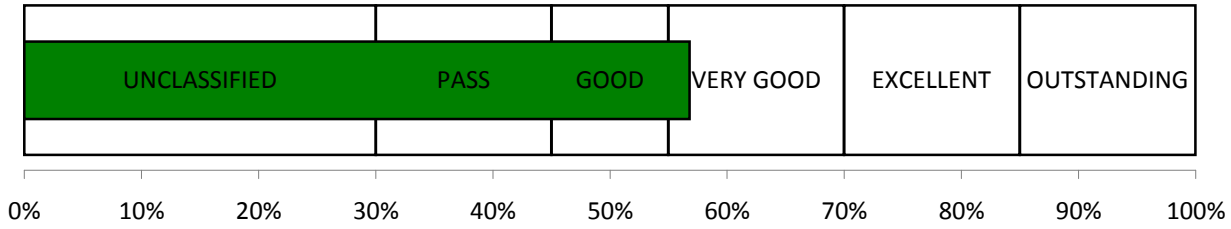
The second route is where the client/design team sets a specific BREEAM performance targets/objectives and appoints a BREEAM Accredited Professional (AP) throughout the key project work stages to help deliver a building that meets the performance objectives and target BREEAM rating.

The third route is where an application is made to BRE Global by the BREEAM assessor to have a particular building feature, system or process recognised as 'innovative'.

4. BUILDING PERFORMANCE

Gateway House - Offices has achieved a Pre-Assessment score of **56.78%** against the BREEAM Offices 2008 criteria. This translates to a Pre-Assessment rating of **VERY GOOD**.

	Building Performance			
	Environmental Weighting	Credits Available	Credits Targeted	Weighted Targeted Score
Management	12	10	10	12.00%
Health & Wellbeing	15	13	8	9.23%
Energy	19	23	7	5.78%
Transport	8	10	9	7.20%
Water	6	6	4	4.00%
Materials	12.5	13	5	4.81%
Waste	7.5	7	6	6.43%
Land Use & Ecology	10	10	4	4.00%
Pollution	10	12	4	3.33%
			TOTAL	56.78%
			EXEMPLARY/INNOVATION CREDITS TARGETED	0.00%
			TOTAL BREEAM SCORE	56.78%



5. CREDIT SUMMARY

Category	Assessment Criteria	Credit Ref	Credits Available	Targeted Credits
Management	Commissioning	Man 1	2	2
	Considerate Constructors	Man 2	2	2
	Construction Site Impacts	Man 3	4	4
	Building User Guide	Man 4	1	1
	Security	Man 8	1	1
Health and Wellbeing	Daylighting	Hea 1	1	0
	View Out	Hea 2	1	0
	Glare Control	Hea 3	1	1
	High Frequency Lighting	Hea 4	1	1
	Internal & External Lighting Levels	Hea 5	1	1
	Lighting Zones & Controls	Hea 6	1	1
	Potential for Natural Ventilation	Hea 7	1	0
	Indoor Air Quality	Hea 8	1	0
	Volatile Organic Compounds	Hea 9	1	0
	Thermal Comfort	Hea 10	1	1
	Thermal Zoning	Hea 11	1	1
	Microbial Contamination	Hea 12	1	1
	Acoustic Performance	Hea 13	1	1
Energy	Reduction of CO_2 Emissions	Ene 1	15	1
	Sub-metering of Substantial Energy Uses	Ene 2	1	1
	Sub-metering of High Energy Load and Tenancy Areas	Ene 3	1	1
	External Lighting	Ene 4	1	1
	Low or Zero Carbon Technologies	Ene 5	3	1
	Lifts	Ene 8	2	2
Transport	Provision of Public Transport	Tra 1	3	3
	Proximity to Amenities	Tra 2	1	1
	Cyclist Facilities	Tra 3	2	1
	Pedestrian and Cyclist Safety	Tra 4	1	1
	Travel Plan	Tra 5	1	1
	Maximum Car Parking Capacity	Tra 6	2	2

Category	Assessment Criteria	Credit Ref	Credits Available	Targeted Credits
Water	Water Consumption	Wat 1	3	1
	Water Meter	Wat 2	1	1
	Major Leak Detection	Wat 3	1	1
	Sanitary Supply Shut-Off	Wat 4	1	1
Materials	Materials Specification (Major Building Elements)	Mat 1	4	2
	Hard Landscaping and Boundary Protection	Mat 2	1	0
	Reuse of Building Facade	Mat 3	1	0
	Reuse of Building Structure	Mat 4	1	0
	Responsible Sourcing of Materials	Mat 5	3	1
	Insulation	Mat 6	2	1
	Designing for Robustness	Mat 7	1	1
Waste	Construction Site Waste Management	Wst 1	4	3
	Recycled Aggregates	Wst 2	1	1
	Recyclable Waste Storage	Wst 3	1	1
	Floor Finishes	Wst 6	1	1
Land Use & Ecology	Resuse of Land	Le 1	1	1
	Contaminated land	Le 2	1	0
	Ecological Value of Site & Protection of Ecological Features	Le 3	1	1
	Mitigating Ecological Impact	Le 4	2	2
	Enhancing Site Ecology	Le 5	3	0
	Long Term Impact on Biodiversity	Le 6	2	0
Pollution	Refrigerant GWP - Building Services	Pol 1	1	0
	Preventing Refrigerant Leaks	Pol 2	2	0
	NO_x Emissions from Heating Source	Pol 4	3	0
	Flood Risk	Pol 5	3	2
	Minimising Watercourse Pollution	Pol 6	1	1
	Reduction of Night Time Light Pollution	Pol 7	1	0
	Noise Attenuation	Pol 8	1	1

Category	Assessment Criteria	Credit Ref	Credits Available	Targeted Credits
Exemplary Level	Considerate Constructors	Man 2	1	0
	Daylighting	Hea 1	1	0
	Reduction of CO2 Emissions	Ene 1	2	0
	Low or Zero Carbon Technologies	Ene 5	1	0
	Water Meter	Wat 2	1	0
	Materials Specification	Mat 1	1	0
	Responsible Sourcing of Materials	Mat 5	1	0
	Construction Site Waste Management	Wst 1	1	0
	BREEAM AP	AP	2	0

6. FULL CREDIT PRE-ASSESSMENT

HOARE LEA	**PROJECT:** Gateway House - Offices		**No.**	**REVISION**	**PREPARED BY**	**DATE**	**KEY**
	FILING REF: 04/05460/14/1A		A	Initial Pre-Assessment	EM	11/03/2011	MANDATORY CREDIT FOR 'VERY GOOD'
	ASSESSMENT TYPE: OFFICES						
	ASSESSMENT VERSION: 2008						CREDIT NOT CURRENTLY TARGETED
	SCORE	**RATING**					
TARGETED	**56.78%**	**VERY GOOD**					REVISIONS

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Management									
Man1	Commissioning	**First credit (MANDATORY):** Where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be carried out in line with current Building Regulations. **Second Credit:** Where, in addition to the above, evidence provided demonstrates that seasonal commissioning will be carried out during the first year of occupation, post construction (or post fit out).	2	1	**2**	2.40%		**Main Contractor**	An appropriate project team member(s) should be appointed to monitor and programme pre-commissioning, commissioning and, where necessary, re-commissioning on behalf of the client. It is expected that this appontment will take place at Stage F (approximate). The specialist commissioning manager is appointed for complex systems such as: - Air conditioning - Mechanical ventilation - BMS - Renewable energy sources The specialist commissioning manager must have been appointed during the design stage and the scope of their responsibility includes: - Design input: commissionability design reviews - Commissioning management input to construction programming - Commissioning management input during installation stages - Management of commissioning, performance testing and handover/post handover stages Where a BMS is specified, the following commissioning procedures must be carried out: - Commissioning of air and water systems is carried out when all control devices are installed, wired and functional - In addition to air and water flow results, commissioning results include physical measurements of room temperatures, off coil temperatures and other key parameters as appr - The BMS/controls installation should be running in auto with satisfactory internal conditions - The occupier will be fully trained in the operation of the system
Man2	Considerate Constructors	**First credit:** Where evidence provided demonstrates that there is a commitment to comply with best practice site management principles. **Second credit:** Where evidence provided demonstrates that there is a commitment to go significantly beyond best practice site management principles.	2		**2**	2.40%		**Main Contractor**	One credit where the contractor achieves a CCS Code of Considerate Practice score between 24 and 31.5. Two credits where the contractor achieved a CCS Code of Considerate Practice score between 32 and 35.5. It is expected that the contractor will be able to achieve a CCS score of between 32 and 35.5 for this development, therefore achieving 2 credits.

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Man3	Construction Site Impacts	**First Credit:** Where evidence provided demonstrates that 2 or more of items a-h, listed below are achieved. **Second Credit:** Where evidence provided demonstrates that 4 or more of items a-h, listed below are achieved. **Third Credit:** Where evidence provided demonstrates that 6 or more of items a-h, listed below are achieved. a. Monitor, report and set targets for CO2 or energy arising from site activities; b. Monitor, report and set targets for CO2 or energy arising from transport to and from site; c. Monitor, report and set targets for water consumption arising from site activities d. Implement best practice policies in respect of air (dust) pollution arising from the site e. Implement best practice policies in respect of water (ground and surface) pollution occuring on the site f. Main contractor has an environmental materials policy, used for sourcing of construction materials to be used on site g. Main contractor operates and Environmental Management System **Fourth Credit:** Where evidence provided demonstrates that at least 80% of site timber is responsibly sourced and 100% is legally sourced.	4		**4**	4.80%		**Main Contractor**	In order to gain the 4 credits targeted for this issue it is then necessary to comply with 6 of the 7 items outlined in the credit criteria and site timber should be responsibly and legally sourced as outlined in the credit criteria.
Man4	Building user guide	**One Credit** is awarded where evidence provided demonstrates that the provision of as simple guide that covers information relevant to the staff, tenants and non-technical building manager on the operation and environmental performance of the building.	1		**1**	1.20%		**Main Contractor (with input from the Design Team)**	The following headings should be covered by the Building User Guide: - Building services information - Emergency information - Energy&Environmental strategy - Water use - Transport facilities - Materials & waste policy - Re-fit/re-arrangement considerations - Reporting provision - Training - Links & References The Building User Guide is a document which is additional to the O&M manuals. Some parts may be repeated in both documents but they are separate entities.
Man8	Security	Where evidence provided demonstrates that an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted at the design stage and their recommendations incorporated into the design of the building and its parking facilities (where relevant).	1		**1**	1.20%		**Architect**	**BREEAM time constraint: Consultation with the ALO/CPDA must occur during or prior to the concept design stage (RIBA Stage C or equivalent).** It is assumed that an ALO/CPDA will be appointed.
		SECTION SCORE	**10**		**10**	**12.00%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Health & Wellbeing									
Hea1	Daylighting	Where evidence provided demonstrates that at least 80% of floor area in each occupied space is adequately daylit, where an occupied space is defined as a room or space within the assessed building that is likely to be occupied for 30 minutes or more by a building user.	1		**0**	0.00%	**1**	**Architect/ M&E Designer**	At present this credit is not targeted. However, it may be possible for this credit to be achieved following a more detailed analysis of the daylight provision.
Hea2	View Out	Where evidence provided demonstrates that all relevant building areas have an adequate view out.	1		**0**	0.00%	**1**	**Architect**	The term 'relevant building areas' in this instance, refers to any areas of the building where there are, or will be, workstations/benches or desks for building users. The view out should ideally be through an external window providing a view of a landscape or buildings (rather than just the sky) at seated eye level (1.2 - 1.3m).
Hea3	Glare Control	Where evidence provided demonstrates that an occupant-controlled shading system (e.g. internal or external blinds) is fitted in relevant building areas.	1		**1**	1.15%		**Architect**	An occupant controlled shading system should be provided on all windows, glazed doors and rooflights in all areas of the building where there are, or will be, workstations/benches, desks and/or close work or visual aids will be used. In all other occupied areas (rooms that are likely to be occupied for 30 minutes or more by a building user) glare should be designed out by one or more of the following measures: - Brise-soleil - Low eaves - Bioclimatic design that provides shading from high level summer and low level winter sun
Hea4	High frequency lighting	Where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	1	1	**1**	1.15%		**M&E Designer**	
Hea5	Internal and external lighting levels	Where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained illuminance levels (in lux) recommended by CIBSE.	1		**1**	1.15%		**M&E Designer**	
Hea6	Lighting zones & controls	Where evidence provided demonstrates that, in all relevant building areas, lighting is appropriately zoned and occupant controllable.	1		**1**	1.15%		**M&E Designer**	For lighting zoning requirements specific to the relevant space type, refer to the BREEAM Offices Credit Manual.
Hea7	Potential for natural ventilation	Where evidence provided demonstrates that fresh air is capable of being delivered to the occupied spaces of the building via a natural ventilation strategy, and there is sufficient user-control of the supply of fresh air.	1		**0**	0.00%		**No action required**	
Hea8	Indoor air quality	Where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.	1		**0**	0.00%		**No action required**	The credit can be awarded where the building's air intakes and exhausts are over 10m apart to minimise recirculation and intakes are over 20m from sources of external pollution. Due to the close proximity of the intakes/exhausts and the close proximity of the development to access roads/car parks, this credit is not deemed to be achievable.

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Hea9	Volatile Organic Compounds	Where evidence provided demonstrates that the emissions of VOCs and other substances from key internal finishes and fittings comply with best practice levels.	1		**0**	0.00%		**No action required**	This credit is not targeted as it is difficult/costly to practically carry out during the construction phase. The following products should be assessed: - Wood panels - Timber structures - Wood flooring - Resilient, textile and laminated floor coverings - Suspended ceiling tiles - Flooring adhesives - Wall coverings - Adhesive for hanging flexible wall coverings - Decorative paints and varnishes
Hea10	Thermal comfort	Where evidence provided demonstrates that thermal comfort levels in occupied spaces of the building are assessed at the design stage to evaluate appropriate servicing options, ensuring appropriate thermal comfort levels are achieved.	1		**1**	1.15%		**M&E Designer**	
Hea11	Thermal zoning	Where evidence provided demonstrates that local occupant control is available for temperature adjustment in each occupied space to reflect differing user demands.	1		**1**	1.15%		**M&E Designer**	TRVs placed in zones around the building perimeter and the provision of local occupant controls to internal areas (eg Fan Coil Units) would satisfy the requirements for wet heating systems. For more complex servicing strategies, adequate provision of occupant-controlled temperature detectors that enable air-conditioned spaces to be adjusted within pre-set parameters satisfy the criteria for this credit.
Hea12	Microbial contamination	Where evidence provided demonstrates that the risk of waterborne and airborne Legionella contamination has been minimised.	1	1	**1**	1.15%		**M&E Designer**	
Hea13	Acoustic Performance	Where evidence provided demonstrates that the building achieves appropriate indoor ambient noise levels in office areas. In addition, for fully fitted buildings only, appropriate airborne sound insulation levels are achieved between acoustically sensitive spaces and occupied spaces, sufficient to ensure adequate privacy.	1		**1**	1.15%		**Acoustician**	In order to achieve this credit, an acoustician will need to be appointed.
		SECTION SCORE	13		**8**	**9.23%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Energy									
Ene1	Reduction of CO2 Emissions	Up to 15 credits available where evidence provided demonstrates an improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO2 emissions.	15		1	0.83%		**Accredited Energy Assessor**	As the building is new-build, in order to achieve the one credit targeted, an EPC rating of 63 must be achieved. Initial indications show that an EPC of 60 will be achieved. Further credits are available as follows: - 2 Credits: EPC of 53 - 3 Credits: EPC of 47 - 4 Credits: EPC of 45 - 5 Credits: EPC of 43 - 6 Credits: EPC of 40 - 7 Credits: EPC of 37 These continue on a sliding scale to 15 credits. See BREEAM Manual for full criteria.
Ene2	Sub-metering of Substantial Energy Uses	Where evidence provided demonstrates the provision of direct sub-metering of energy uses within the building.	1	1	1	0.83%		**M&E Designer**	Separate accessible energy sub-meters, labelled with the end energy consuming use are provided for the following systems (where present): a. Space heating b. Domestic Hot Water c. Humidification d. Cooling e. Fans (major) f. Lighting g. Small Power (lighting and small power can be on the same sub-meter where supplies are taken at each floor/department) h. Other major energy-consuming items where appropriate (laboratory plant, sterile services equipment, transportation systems)
Ene3	Sub-metering of high energy load Areas and Tenancy	Where evidence provided demonstrates sub-metering of energy consumption by tenancy/building function area is installed within the building.	1		1	0.83%		**M&E Designer**	
Ene4	External Lighting	Where energy-efficient external lighting is specified and all light fittings are controlled for the presence of daylight.	1		1	0.83%		**M&E Designer**	

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Ene5	Low zero carbon technologies	**First Credit:** Where evidence provided demonstrates that a feasibility study considering local (on-site and/or near site) low or zero carbon (LZC) technologies has been carried out and the results implemented. **Second Credit:** Where evidence provided demonstrates that the first credit has been achieved and there is a 10% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology. **Third Credit:** Where evidence provided demonstrates that the first credit has been achieved and there is a 15% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology. **OR:** **One Credit** Where evidence provided demonstrates that a contract with an energy supplier is in place to provide sufficient electricity used within the assessed building/development to meet the above criteria from a 100% renewable energy source. (Note: a standard green tariff will not comply)	3		**1**	0.83%	**2**	**M&E Designer**	**BREEAM time constraint: The feasibility study should be carried out at RIBA Stage C or equivalent.** The study must cover as a minimum: - Energy generated from LZC energy source per year - Pay back - Land use - Local planning requirements - Noise - Feasibility of exporting heat/electricity from the system - Life cycle cost/lifecycle impact of the potential specification in terms of carbon emissions - Any available grants - All technologies appropriate to the site and energy demand of the development Reasons for excluding other technologies One credit has been targeted for the production of a compliant LZC feasibility report and implementation of the recommended LZC technology. A further 3 credits are available (two here, and a further credit within the innovation section) for carbon savings of greater than 10% achieved as a result of the implementation of the LZC technology.
Ene8	Lifts	**Up to two credits** are available where evidence provided demonstrates the installation of energy-efficient lift(s).	2		**2**	1.65%		**Lift Specialist**	In order to achieve two credits, a lift traffic analysis must be carried out and energy efficient lifts must be specified and installed.
		SECTION SCORE	**23**		7	**5.78%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Transport									
Tra1	Provision of public transport	Up to three credits are awarded on a sliding scale based on the assessed buildings' accessibility to the public transport network.	3		**3**	2.40%		**BREEAM Assessor**	Compliant nodes includes any bus stop within 650m and any railway station within 1000m of the assessed building's main entrance. 3 credits are targeted due to the proximity of the offices to Manchester Piccadilly Train Station and a number of frequently used bus stops.
Tra2	Proximity to amenities	Where evidence provided demonstrates that the building is located within 500m of accessible local amenities appropriate to the building type and its users.	1		**1**	0.80%		**BREEAM Assessor**	The following should be within 500m of the building: - Grocery shop and/or food outlet - Post box - Cash machine - Pharmacy - Doctor's surgery/medical centre These amenities are within 500m of the proposed Offices and are all accessible via safe pedestrian routes.
Tra3	Cyclist Facilities	**First Credit:** Where evidence provided demonstrates that covered, secure and well-lit cycle storage facilities are provided for all building users. **Second Credit:** Where, in addition to the above, adequate changing facilities are provided for staff use.	2		**1**	0.80%	**1**	**Architect**	The facilities must be compliant with the following: - The space is covered overhead and protected from the rain - The covered area and the cycle racks are set in or fixed to a permanent structure and allow both the wheel and frame to be locked securely. Or racks are located in a locked structure fixed to or part of a permanent structure with CCTV surveillance. - There is a minimum distance of 1.0m between cycle racks, where the racks allow for two-sided parking and 0.8m for one-sided parking to enable bikes to be easily stored and accessed. - There is a minimum distance from any obstruction of 300mm for single-sided use and 900mm for double-sided use - Adequate lighting is provided in accordance with BS5489 Part 1 - Lighting of roads and amenity areas - The facilities are in a prominent site location that is viewable from the building - The majority of the cycle racks are within 100m of a building entrance (ideally within 50m) As the development is located in a city centre location, the number of cycle racks required can be halved. One credit has been targeted for the provision of compliant cycle racks. A further credit is potentially achievable for the provision of compliant shower/change facilities.
Tra4	Pedestrian and cycle safety	Where evidence provided demonstrates that the site layout has been designed in accordance with best practice to ensure safe and adequate pedestrian and cycle access.	1		**1**	0.80%		**Architect**	If the building does not have any external areas and internal access is directly from the public highway/footpath, then this credit can be awarded on a default basis.
Tra5	Travel plan	Where evidence is provided to demonstrate that a travel plan has been developed and tailored to the specific needs of the building users.	1		**1**	0.80%		**Client**	
Tra6	Maximum car parking capacity	**One Credit** where evidence provided demonstrates no more than one parking space is provided for every three building users. **Two Credits** where evidence provided demonstrates no more than one parking space is provided for every four building users.	2		**2**	1.60%		**Architect**	It is assumed that no car parking spaces will be directly allocated for use by the office development.
		SECTION SCORE	10		9	7.20%			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Water									
Wat 1	Water Consumption	**One credit (MANDATORY):** Where consumption is 4.5-5.5m^3 per person per year. **Two credits:** Where consumption is 1.5-4.4m^3 per person per year. **Three credits:** Where consumption is <1.5m^3 per person per year.	3	1	**1**	1.00%		**Architect**	
Wat 2	Water meter	Where evidence provided demonstrates that a water meter with a pulsed output will be installed on the mains supply to each building/unit.	1	1	**1**	1.00%		**M&E Designer**	A water meter on the mains water supply to each building should be specified. The water meter should have a pulsed output to enable connection to a BMS.
Wat 3	Major leak detection	Where evidence provided demonstrates that a leak detection system is specified or installed on the building water supply.	1		**1**	1.00%		**M&E Designer**	The leak-detection system must be: - Audible when activated - Activated when the flow of water passes through the water meter/data logger at a flow rate above a pre-set maximum for a pre-set period of time - Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods - Programmable to suit the owner/occupiers' water consumption criteria - Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers
Wat 4	Sanitary supply shut off	Where evidence provided demonstrates that proximity detection shut-off is provided to the water supply to all toilet areas.	1		**1**	1.00%		**M&E Designer**	
		SECTION SCORE	6		4	**4.00%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Materials									
MAT1	Materials Specification (major building elements)	**Up to four credits** are available, determined by the Green Guide to Specification ratings for the major building/finishing elements.	4		**2**	1.92%		**Architect**	The elements assessed under this credit are: - External Walls - Windows - Roof - Upper Floor Slabs - Internal walls - Floor finishes/coverings
MAT2	Hard landscaping and boundary protection	Where at least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.	1		**0**	0.00%	**1**	**Architect**	Where the development has neither element, the credit can be awarded.
MAT3	Re-use of building façade	**One credit** is awarded where evidence provided demonstrates that at least 50% of the total façade (by area) is reused and at least 80% of the reused façade (by mass) comprises in-situ reused material.	1		**0**	0.00%		**No action required**	
MAT4	Re-use of building structure	**One credit** is awarded where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's	1		**0**	0.00%		**Structural Engineer**	
MAT5	Responsible sourcing of materials	**Up to 3 credits** are available where evidence provided demonstrates that 80% of the assessed materials in the following building elements are responsibly sourced: a. Structural Frame b. Ground floor c. Upper floors (including separating floors) d. Roof e. External walls f. Internal walls g. Foundation/substructure h. Staircase Additionally 100% of any timber must be legally sourced.	3		**1**	0.96%		**Main Contractor**	The following elements are assessed as part of this credit: - Structural Frame - Ground Floor - Upper Floors - Roof - External Walls - Internal Walls - Foundation/Substructure - Staircase
MAT6	Insulation	**First Credit:** Where evidence provided demonstrates that thermal insulation products used in the building have a low embodied impact relative to their thermal properties, determined by the Green Guide to Specification ratings. **Second Credit:** Where evidence provided demonstrates that thermal insulation products used in the building have been responsibly sourced.	2		**1**	0.96%	**1**	**Architect/ Main Contractor** **M&E Designer/ M&E Contractor**	The responsible sourcing of insulation to at least Tier 3 (as defined in the BREEAM criteria) has been identified as a potential additional credit to be targeted, dependent on insulation type/supplier.
MAT7	Designing For Robustness	Where protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements.	1		**1**	0.96%		**Architect**	
		SECTION SCORE	**13**		5	4.81%			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Waste									
WST1	Construction Site Waste Management	**Up to three credits** are available where evidence provided demonstrates that the amount of non-hazardous construction waste (m3/100m2 or tonnes100m2) generated on site by the development is the same as or better than good or best practice levels. **One Credit** where evidence provided demonstrates that a significant majority of non-hazardous construction waste generated by the development will be diverted from landfill and reused or recycled.	4		**3**	3.21%	**1**	**Main Contractor**	In order to achieve the two credits targeted the waste generated should be either: - 9.2-12.9m3/m2 gross internal floor area - 4.7-6.5 tonnes/m2 gross internal floor area In addition at least 75% by weight of 65% by volume of non-hazardous construction waste generated shall be diverted from landfill. An additional credit is available for further reducing the quantity of non-hazardous waste generated during the building's construction phase.
WST2	Recycled aggregates	Where evidence provided demonstrates the significant use of recycled or secondary aggregates in 'high-grade' building aggregate uses.	1		**1**	1.07%		**Structural Engineer**	The amount of recycled and secondary aggregate specified is over 25% (by weight or volume) of the total high-grade aggregate uses for the building. The aggregate used can be obtained on site, from a waste processing site within a 30km radius of site or secondary aggregates obtained from non-construction post-consumer or post-industrial by-product source. High Grade aggregate uses are considered to be: Bound: - Structural fame - Floor slabs including ground floor slabs - Bitumen or hydraulically bound base, binder, and surface courses for paved areas and roads Unbound: - Asphalt-based or similar road surfaces - Granular fill and capping - Pipe bedding - Sub bases/building foundations - Gravel landscaping
WST3	Recyclable waste storage	Where a central, dedicated space is provided for the storage of the building's recyclable waste streams.	1		**1**	1.07%		**Client/ Architect**	The dedicated storage space for recyclable materials should be within 20m of the appropriate building entrance. See BREEAM Manual for details on the calculation of required recyclable waste storage area.
WST6	Floor Finishes	Where carpets and other floor finishes are specified by the future occupant or, in tenanted areas of speculative buildings, where carpets or floor finishes are installed in a limited show area only.	1		**1**	1.07%		**Client/ Architect**	
		SECTION SCORE	7		6	**6.43%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Land Use & Ecology									
LE1	Re-use of land	Where evidence is provided to demonstrate that the majority of the footprint of the proposed development falls within the boundary of previously developed land.	1		**1**	1.00%		**Architect/ BREEAM Assessor**	
LE2	Contaminated land	**One credit** is awarded where evidence is provided to demonstrate that the land used for the new development has, prior to development, been defined as contaminated and where adequate remedial steps have been taken to decontaminate the site prior to construction	1		**0**	0.00%		**No action required**	
LE3	Ecological value of site AND Protection of ecological features	**One credit** is awarded where evidence is provided to demonstrate that the construction zone is defined as land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works.	1		**1**	1.00%		**Architect/ BREEAM Assessor**	**BREEAM time constraint: It is necessary to construct ecological protection prior to any site works therefore report must be completed before this.** In order to achieve this credit it is necessary for Checklist A4 to be completed to demonstrate that there are no features of ecological value on the site.
LE4	Mitigating Ecological impact	**First Credit (MANDATORY):** Where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is minimal. **Second Credit:** Where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of development.	2	1	**2**	2.00%		**Architect/ BREEAM Assessor**	**BREEAM time constraint: Survey required prior to any site works.** In order to achieve this credit, an ecologist is not necessary.
LE5	Enhancing Site Ecology	**First Credit:** Where the design team (or client) has appointed a suitably qualified ecologist to advise and report on enhancing and protecting the ecological value of the site; and implemented the professional's recommendations for general enhancement and protection of the site ecology. **Second Credit:** Where evidence is provided to demonstrate a positive increase in the ecological value of the site of up to 6 species. **Third Credit:** Where evidence is provided to demonstrate a positive increase in the ecological value of the site of 6 species or greater.	3		**0**	0.00%		**No action required**	**BREEAM time constraint: Report based on site visit/survey by the SQE prior to commencement of initial site preparation works.** In order to achieve this credit, an ecologist MUST be appointed.
LE6	Long term impact on biodiversity	**First Credit:** The client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements. **Second Credit:** The client has committed to achieving the mandatory requirements listed below and at least four of the additional requirements.	2		**0**	0.00%		**No action required**	**BREEAM time constraint: Ecologist appointed prior to commencement of activities on site.** In order to award this credit, an ecologist MUST be appointed.
		SECTION SCORE	10		4	**4.00%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Pollution									
Pol1	Refrigerant GWP - Building services	Where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less than 5 or where there are no refrigerants specified for use in building services.	1		**0**	0.00%		**No action required**	The following refrigerants are compliant with the credit criteria: - Ammonia - R290 - R600 - R600a - R290/R170 - R1270
Pol2	Preventing refrigerant leaks	**First credit:** Where evidence provided demonstrates that refrigerant leaks can be detected or where there are no refrigerants specified for the development. **Second credit:** Where evidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves. OR Where there are no refrigerants specified for the development	2		**0**	0.00%		**No action required**	
Pol4	NOx emissions from heating source	**Up to three credits** available, depending on the dry NOx emissions from delivered space heating energy: 1 credit where evidence provided demonstrates that the dry NOx emissions from delivered space heating energy are <100mg/kWh (at 0% excess 02). 2 credits where evidence provided demonstrates that dry NOx emissions from delivered space heating energy are <70mg/kWh (at 0% excess 02) 3 credits where evidence provided demonstrates that dry NOx emissions from delivered space heating energy are <40mg/kWh (at 0% excess 02) and emissions from delivered water heating energy are 100mg/kWh or less (at 0% excess 02)	3		**0**	0.00%	**2**	**M&E Designer**	The achievement of these credits is dependant on the heating source selected. If air source heat pumps are adopted, these credits cannot be achieved. The use of CHP would allow these credits to be targeted.
Pol5	Flood risk	**Two credits** available where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. **OR** **One credit** is available where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium or high annual probability of flooding AND the ground level of the building, car parking and access is above the design flood level for the site's location. And an **additional credit** is available where evidence provided demonstrates that surface water run-off attenuation measures are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site due to development.	3		**2**	1.67%	**1**	**Structural Engineer**	It is assumed that the location of the development is in a zone defined as having a low annual probability of flooding.
Pol6	Minimising watercourse pollution	**One credit** is available where evidence provided demonstrates that effective on site treatment such as Sustainable Drainage Systems (SUDs) or oil separators have been specified in areas that are or could be a source of watercourse pollution.	1		**1**	0.83%		**Structural Engineer**	

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Pol7	Reduction of Night Time Light Pollution	Where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institution of Lighting Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.	1		**0**	0.00%	**1**	**M&E Designer**	
Pol8	Noise Attenuation	Where evidence provided demonstrates that sources of noise from the development do not give rise to the likelihood of complaints from existing noise sensitive premises and amenity or wildlife areas that are within the locality of the site.	1		**1**	0.83%		**Acoustician**	
		SECTION SCORE	12		4	**3.33%**			

Credit Ref.	Title	Criteria	Number of credits available	Minimum BREEAM Credits for Very Good	Number of credits targeted	Weighted Percentage Targeted	Potential Additional Credits	Ownership	Notes
Innovation									
INN: MAN2	Considerate Constructors	**One credit** is available where the main contractor has complied with and achieved a certified CCS Code of Considerate Practice score of 36 or more.	1		**0**	0.00%	**1**	**Main Contractor**	
INN: HEA1	Daylighting	**One credit** is available where at least 80% of the floor area (for the building spaces/room identified in the standard criteria) has an average daylight factor of 3% in multi-storey buildings and 4% in single-storey buildings.	1		**0**	0.00%		**No action required**	
INN: ENE1	Reduction of CO2 Emissions	**One additional innovation credit** can be awarded where evidence provided demonstrates the building is designed to be a carbon neutral building as defined by NCM. **Two additional innovation credits** can be awarded where evidence provided demonstrates the building is designed to be a True zero carbon building.	2		**0**	0.00%		**No action required**	
INN: ENE5	Low or Zero Carbon Technologies	**One additional credit** where a local LZC energy technology has been installed in line with the recommendations of the feasibility study and this method of supply results in a 20% reduction in the building's CO2 emissions.	1		**0**	0.00%		**No action required**	
INN: WAT2	Water Meter	**One credit** is available where sub meters are fitted to allow the metering of individual water-consuming plant or building areas, where demand in such areas will be equal to or greater than 10% of the total water demand of the building.	1		**0**	0.00%		**No action required**	
INN: MAT1	Materials Specification (major building elements)	**One credit** is available where the building achieves at least two points additional to the total points required to achieve maximum credits under the standard BREEAM criteria.	1		**0**	0.00%		**No action required**	
INN: MAT5	Responsible sourcing of materials	**One credit** is available where, in addition to the standard criteria, 95% of the applicable materials, comprised within the applicable building elements, have been responsibly sourced.	1		**0**	0.00%		**No action required**	
INN: WST1	Construction Site Waste Management	**One credit** is available where non-hazardous construction waste generated by the building's development meets or exceeds the resource efficiency benchmark required to achieve three credits and where at least 90% by weight (80% by volume) of non-hazardous waste and 95% of demolition waste by weight (85% by volume) (if applicable) generated by the build has been diverted from landfill.	1		**0**	0.00%		**No action required**	
INN: AP	Accredited Professional	**Up to two credits** are available for the Comprehensive use of a BREEAM Accredited Professional (AP) throughout project work stages.	2		**0**	0.00%		**No action required**	This credit is not targeted as a pre-assessment was not carried out at RIBA Stage B as required by the BREEAM credit criteria.
		SECTION SCORE	11		0	**0.00%**			