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BREEAM Offices 2011 pre assessment report

Contents

Introduction	3
Time Limited credits	5
At risk/optional credits	6
Credit Breakdown	8
Innovation Credits	21
Pre assessment result	25



Introduction

BREEAM (Building Research Establishment's Environmental Assessment Method) is a voluntary scheme that works by awarding credits for meeting different environmental targets. It is the worlds longest established and most widely used environmental assessment method and winner of the 'Best Program Award' at the 2005 Tokyo World Sustainable Building Conference.

The scheme works by awarding credits for sustainability issues that are split into nine categories; Management, Health and Well Being, Energy Transport, Water, Materials, Waste, Land Use and Ecology and Pollution. The points are added together to give a final BREEAM rating of Pass, Good, Very Good, Excellent or Outstanding.

HRS Services Ltd have been commissioned to carry out a pre assessment BREEAM Office 2011 assessment by James Durrans & Sons Ltd on the New Offices, Penistone

This initial assessment provides the design team and client with details of the rating we believe to be achievable at this early stage. The pre assessment has been carried out using BRE software and information provided by the design team has been entered.

The predicted BREEAM rating for the new development was Very Good. A score of 55.32% was initially deemed achievable following discussions between the design team present at the meeting on 16th May 2012 and Steve Closs

The table below shows the percentage scores required for the BREEAM ratings.

BREEAM rating	% score needed
Unclassified	<30
Pass	≥30
Good	≥45
Very Good	≥55
Excellent	≥70
Outstanding	≥85

The table below shows the BREEAM minimum standards required to achieve the applicable rating.

BREEAM Issue	BREEAM Rating/Minimum number of credits				
	PASS	GOOD	VERY GOOD	EXCELLENT	OUTSTANDING
Man 1 – Sustainable procurement	1	1	1	1	2
Man 2 – Responsible construction practices				1	2
Man 4 – Stakeholder participation (Building user information)				1	1
Hea 1 – Visual comfort (Criterion 1 only)	1	1	1	1	1
Hea 4 – Water quality (Criterion 1 only)	1	1	1	1	1
Ene 1 – Reduction of CO ₂ emissions				6	10
Ene 2 - Energy monitoring (First sub-metering credit)			1	1	1
Ene 4 – Low or zero carbon technologies				1	1
Wat 1- Water consumption		1	1	1	2
Wat 2 - Water monitoring (Criterion 1)		1	1	1	1
Mat 3 – Responsible sourcing (Criterion 3)	1	1	1	1	1
Wst 1 – Construction waste management					1
Wst 3 – Operational waste				1	1
LE3 – Mitigating ecological impact			1	1	1

At risk/optional credits

There are a number of credits that have been assumed at this stage that should be considered 'at risk', which may be lost if a full BREEAM assessment is carried out.

There are a number of additional credits not assumed at pre assessment stage which may be gained at a later stage when further evidence is provide or if changes are made to the project.

As the predicted score is only just over the 55% needed for a Very Good rating the 'at risk' and additional credits should not be considered optional at this stage. To give some margin the design team should be aiming to achieve at least 60% in case any credits we have assumed in this pre assessment prove too difficult to achieve.

This pre assessment has been based on limited information and no formal evidence. The requirements set out in the tables below give a brief overview of each credit. For the formal BREEAM certification detailed requirements are defined in the BRE guidance and must be met to achieve credits. This will include evidence in the form of plans, photographs, letters, specification and reports.

Man 1 Sustainable procurement – thermographic survey carried out to determine that insulation has been installed continuously.

Hea 2 Indoor air quality - Fume cupboard manufactured and installed in line with relevant standards

Hea 5 Acoustic performance – currently assumed that this will not be achieved. Though an acoustician would need to be appointed from RIBA B to award the credit

Hea 6 Safety and security – engage ALO/CPDA/Security consultant from RIBA C

Hea 10 Thermal Comfort - thermal modelling to be carried out in accordance with CIBSE AM11 Building Energy and Environmental Modelling

Ene 1 Reduction of CO₂ emissions – currently assumed that the building will perform better than 2010 Part L targets. This needs to be confirmed from the SBEM output.

Ene 4 Low and zero carbon technologies – no credits currently targeted. If these were to be sought, a feasibility study would need to be conducted at RIBA C

Tra 5 Travel plan – travel plan will be produced as part of the feasibility and design stages

Wat 1 Water consumption – 2 out of 5 credits assumed equating to a 25% improvement over the baseline. Compliance will need to be demonstrated using the Wat 1 spreadsheet.

Mat 1 Materials Specification - assumed 3 out of 6 credits at this stage but until the proposed materials in each of the following elements (external walls, windows, roof, upper floor slabs, internal walls, floor finishes/coverings) are checked against www.thegreenguide.org.uk we cannot be sure of how many credits are likely to be achieved.

Mat 3 Responsible sourcing – assumed 2 out of 3 credits. Compliance will need to be demonstrated with the Mat 3 spreadsheet

Mat 4 Insulation – assumed both credits will be achieved. Compliance will need to be demonstrated using the Mat 4 spreadsheet for building and building services insulation

Wst 2 Recycled aggregates – exemplary level currently assumed. Refer to appendix for levels to be achieved

LE credits – assumed that an ecologist will be on board and credits achieved. Ecologists report required to confirm

Pol 3 Surface water run off – assumed that all credits will be achieved. Require FRA and surface water run off/attenuation calculations from the structural engineer to confirm

Credit breakdown

Reference	Credit title	Criteria	Potential credits	Credits assumed	Notes
Man 01	Sustainable Procurement	Will roles, responsibilities and a training schedule be defined in accordance with BREEAM?	1	0	From RIBA Stage B or equivalent the client, building occupier, design team and contractor are involved in contributing to the decision making process for the project. Once construction is complete a thermographic survey of the building is carried out. Any defects noted are rectified.
		Will a BREEAM AP be appointed at RIBA stage A/B and performance targets contractually agreed?	1	0	
		Will a BREEAM AP be appointed to monitor and report progress during RIBA stage B-E?	1	0	
		Will a BREEAM AP be appointed to monitor and report progress during RIBA stage F-L?	1	0	
		Will a thermographic survey be conducted and any defects uncovered remedied?	1	1	
		Will compliant commissioning of building services be carried out?	1	1	
		Will compliant seasonal commissioning of building services be carried out?	1	1	

		Will water/energy consumption data be recorded and aftercare support provided for 12 months?	1	1	
		Will water/energy consumption be recorded/reported for 3 years post construction?	1	1	Exemplary level credit
Man 02	Responsible Construction Practices	Which considerate construction scheme will be used or required to be used by the principal contractor? For the required scheme, what will be the target performance level set for the site/contractor?	2	2	A Considerate Constructors Scheme score of between 32 and 35.5 is achieved.
Man 03	Construction Site Impacts	Will site energy consumption be metered/monitored? Will site water consumption be metered/monitored? Will the transport of construction materials and waste to/from site be measured/monitored? Will timber be sourced in accordance with the Government's Timber Procurement Policy? Will/does the principal contractor operate a compliant Environmental Management System? Will the principal contractor adopt best practice pollution prevention policies & procedures?	1 1 1 1 1	1 1 0 1 1	A compliant EMS and the adoption of best practice pollution prevention policies are required to achieve this credit.
Man 04	Stakeholder participation	Will an appropriate level of consultation activities be undertaken? Will an access statement be developed and appropriate building user facilities provided? Will building user guides and relevant user information be provided?	1 1 1	0 0 1	

		Will a post occupancy evaluation assessment be undertaken and information disseminated?	1	1	
Man 05	Lifecycle cost and service planning	Will a feasibility stage Life Cycle Cost (LCC) analysis be commissioned and completed? Will a strategic and system level LCC be commissioned and completed? Will a technical design LCC to be commissioned and completed?	0	0	
Hea 01	Visual comfort	Will all fluorescent lamps be fitted with high frequency ballasts? Will all relevant building areas be designed to achieve the appropriate daylight factor(s)? Will the design provide adequate glare control and view out for building users? Will internal/external lighting be specified in accordance with the relevant CIBSE Guides/British Standards?	1 1 1	0 0 1	The requirement for all fluorescent lamps to have HF ballasts is mandatory and no credits are awarded for compliance with this Average daylight factor within occupied spaces to be at least 2% over a minimum of 80% of the total floor area Restricted view out due to retaining wall.
Hea 02	Indoor air quality	Will an air quality plan be produced and building designed to minimise air pollution? Will the relevant products be specified to meet the VOC	1 1	0 0	The production of an air quality plan is a mandatory pre-requisite for the other air quality credits to be achieved Air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.

		testing and emission levels required?			
		Will formaldehyde and total VOC levels be measured post construction?	1	0	
		Will the building be designed to, or have the potential to provide, natural ventilation?	1	0	
		Will fume cupboards be manufactured/installed in accordance with relevant British/other Standards?	1	1	
		Will containment Level 2 and 3 labs be designed in accordance with relevant standards?	N/A		
Hea 03	Thermal comfort	Will thermal modelling of the design be carried out?	1	1	Thermal modelling assessment is carried out in line with CIBSE AM11 and the proposed building is within "time out of range" parameters.
		Will the modelling inform the development of a thermal zoning and control strategy?	1	1	
Hea 04	Water quality	Will all water systems be designed to comply with the relevant HSE Approved Code of Practice and Guidance?	1	1	All water systems in the building are designed in compliance with "Legionnaires disease- The control of legionella bacteria in water systems." ACoP and guide, 2000.
		Where humidification is to be provided, will a failsafe humidification system be specified?	N/A		Where no humidification is specified or only steam humidification is provided.
		Will a wholesome supply of accessible, clean and fresh drinking water be supplied for building users?	1	1	Chilled mains-fed point of use water supply or point-of-use water coolers
Hea 05	Acoustic performance	Will/has a suitably qualified acoustician be appointed to provide appropriate design advice?	1	0	A suitably qualified acoustician is appointed by the client at pre-bid/briefing stage of the project to provide design advice
		Will the building meet the relevant acoustic performance	1	0	The first credit is a mandatory pre-requisite for this

		standards and testing requirements?			credit
Hea 06	Safety and security	Where external site areas are present, will safe access be designed for pedestrians and cyclists?	1	1	The site layout has been designed in accordance with best practice to ensure safe and adequate pedestrian and cycle access.
		Will a suitably qualified security consultant be appointed and security considerations accounted for?	1	1	An Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted during or prior to RIBA stage C and their recommendations incorporated into the design of the building and its parking facilities (if relevant).
Ene 01	Reduction of CO ₂ emissions	An improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO ₂ emissions.	15	2	The proposed building performance will need to be better than the Target Emission Rate (TER) required for Building Regulations. The calculation for allocation of credits will also take into account the proposed building energy demand and energy consumption.
Ene 02	Energy Monitoring	Will a BMS or sub-meters be specified to monitor energy use from major building services systems?	1	1	For the following systems (where present); Space heating, Domestic Hot Water, Humidification, Cooling, Fans (major), Lighting, Small power, Any other major energy consuming items where appropriate. All energy sub meters have a pulsed output to enable future connection to BMS for the monitoring of energy consumption.
		Will a BMS or sub-meters be specified to monitor energy use by tenant/building function areas?	1	1	
Ene 03	External Lighting	Will external light fittings and controls be specified in accordance with the BREEAM criteria?	1	1	Energy-efficient external lighting is specified and all light fittings are controlled for the presence of daylight.
Ene 04	Low and Zero Carbon technology	Compliant LZC feasibility and Life Cycle Assessment study to be undertaken?	4	0	Or alternatively: A maximum of one credit where evidence provided demonstrates that a contract with an energy supplier is in place for a minimum of three years 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)

		Free cooling strategy in place?	1	0	Where a compliant cooling strategy is employed, or the building does not require cooling.
Ene 05	Energy Efficient Cold Storage	N/A	3		
Ene 06	Energy Efficient Transportation Systems	Analysis of lift demand and usage patterns Energy efficient transportation features	2	1	
Ene 07	Energy Efficient Laboratory Systems	Specification of energy efficient fume cupboard	1	1	
Ene 08	Energy Efficient Equipment	Procurement of energy-efficient equipment to ensure optimum performance and energy saving in operation.	2	2	For small plug in power the equipment either qualifies for an Enhanced Capital Allowance Scheme claim OR has been awarded an Energy Star rating OR has been procured in accordance with the Government Buying Standards OR are identified as products with at least a 'green tick' standard on the Buying Solutions website
Ene 09	Drying Space	N/A			
Tra 01	Public Transport Accessibility	Credits are awarded on a sliding scale based on the assessed buildings' accessibility to the public transport network.	3	0	Assumed that public transport is not adequate enough to achieve any credits
Tra 02	Proximity to amenities	The building is located within 500m of accessible local amenities (grocery shop/food outlet, post box, cash machine) appropriate to the building type and its users.	1	0	
Tra 03	Cyclist Facilities	Covered, secure and well-lit cycle storage facilities are provided for all building users. Second credit, two of the following must be provided; a)	2	1	Number of complaint cycle spaces provided is as follows: a) 10% of building users up to 500 PLUS

		compliant showers, b) compliant changing facilities and lockers for clothes, c) compliant drying space for wet clothes			b) 7% for building users in the range of 501-1000 PLUS c) 5% for building users over 1000
Tra 04	Maximum Car Park Capacity	Number of credits awarded is based on number of car parking spaces provided relative to the number of building users and building's accessibility index.	2	0	One credit where one parking space is provided per 4 building users Two credits where one parking space is provided per 5 building users
Tra 05	Travel Plan	A travel plan has been developed and tailored to the specific needs of the building users.	1	1	
Wat 01	Water Consumption	The specification includes taps, urinals, WCs and showers that consume less potable water in use than standard specifications for the same type of fittings.	5	2	Also takes into account rainwater and greywater recycling systems. Assumed that water consumption for the proposed building is 25% less compared against a notional baseline.
Wat 02	Water Monitoring	Will there be a water meter on the mains water supply to the building(s) Will metering/monitoring equipment be specified on the water supply to any relevant plant/building areas? Will all specified water meters have a pulsed output? If the site/building has an existing BMS connection, will all pulsed meters be connected to the BMS?	1	1	The first criteria is mandatory
Wat 03	Water Leak Detection and Prevention	Will a mains water leak detection system be installed on the building's mains water supply?	1	1	Must cover all mains water supply between and within the building and the site boundary. 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 minimum for a pre set period of time, able to identify different flow and therefore leakage rates over set periods of time, programmable to suit the owner/occupiers water consumption requirements, where applicable designed to avoid false alarms

		Will flow control devices be installed in each sanitary area/facility?	1	1	caused by normal operation of large water consuming plant such as chillers. One of the following types of flow control device is fitted to each WC area/facility to ensure water is supplied only when needed (and therefore prevent minor water leaks). • A time controller i.e. an automatic time switch device to switch off the water supply after a predetermined interval • A programmed time controller i.e. an automatic time switch device to switch water on and/or off at predetermined times • A volume controller i.e. an automatic control device to turn off the water supply once the maximum preset volume is reached • A presence detector and controller i.e. an automatic device detecting occupancy or movement in an area to switch water on and turn it off when the presence is removed • A central control unit i.e. a dedicated computer based control unit for an overall managed water control system, utilising some or all of the types of control elements listed above
Wat 04	Water Efficient Equipment	Efficient irrigation systems, or non present	1	1	Manual irrigation only assumed
Mat 01	Life Cycle Impacts	Credits determined on the basis of the building's quantified environmental life cycle impact through assessment of the main building elements	5	3	Green guide ratings for materials used in following elements must be considered; External walls and roof.
Mat 02	Hard Landscaping and Boundary	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	1	1	

	Protection	to Specification.			
Mat 03	Responsible Sourcing of Materials	80% of the assessed materials in the building elements are responsibly sourced. Additionally 100% of any timber must sourced in accordance with the UK Government's Timber Procurement Policy	3	2	
Mat 04	Insulation	Is the building targeting an insulating index of 2 or more? Will the building's insulating materials be responsibly sourced?	2	2	
Mat 05	Designing for Robustness	Will suitable durability/protection measures be specified and installed to vulnerable areas of the building?	1	1	
Wst 01	Construction Site Waste Management	The amount of non-hazardous construction waste (m3/100m2 or tonnes/100m2) 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	2	6 tonnes of non-hazardous per 100m2 floor area assumed
Wst 02	Recycled aggregates	Significant use of recycled or secondary aggregates in 'high-grade' building aggregate uses.	1	1	35% of high grade aggregate uses for the building is recycled or secondary (can be obtained on site or within 30km of site). See appendix for full breakdown.
Wst 03	Operational Waste	A central, dedicated space is provided for the storage of the building's recyclable waste streams.	1	1	It must be clearly labelled for recycling, placed within accessible reach of the building, in a location with good vehicular access to facilitate collections. Size at least 2m ² per 100m ² of net floor area
Wst 04	Speculative Floor and Ceiling Finishes	One credit 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	1	1	

		installed in a limited show area only.			
LE 01	Site Selection	Will at least 75% of the proposed development's footprint be located on previously been developed land? Is the site deemed to be significantly contaminated?	2	0	Land must have been developed in the last 50 years for use by industrial, commercial or domestic purposes).
LE 02	Ecological Value of Site and Protection of Ecological Features	Can the land within the construction zone be defined as 'land of low ecological value'? Will all features of ecological value surrounding the construction zone/site boundary be protected?	1	1	The site is deemed as significantly contaminated as confirmed by a contaminated land specialists site investigation, risk assessment and appraisal identifying: a. the degree of contamination, b. the contaminant sources/types, c. the options for remediating sources of pollution which present an unacceptable risk to the site. The client or contractor confirms that remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan.
LE 03	Mitigating Ecological Impact	What is the likely change in ecological value (plant species richness) as a result of the sites development?	2	2	No negative change in species richness
LE 04	Enhancing Site Ecology	Will a suitably qualified ecologist be appointed to report on enhancing and protecting site ecology? Will the suitably qualified ecologist's general recommendations be implemented? What is the targeted/intended improvement in ecological value as a result of enhancement actions?	3	2	Using either the BREEAM assessors calculator or a suitably qualified ecologist. Increase in plant species richness of up to 6.
LE 05	Long Term Impact on Biodiversity	Will the building meet BREEAM's mandatory criteria for this BREEAM issue? Will a Biodiversity Champion be appointed to monitor/minimise impacts of site activities on biodiversity?	2	2	Two credits where, in addition to the above, there is a positive increase in the ecological value of the site of up to (but not including) 6 species. Three credits where, in addition to the above, evidence is provided to demonstrate a positive

		Will the contractor provide training for the site workforce on how to protect ecology during the project? Will the contractor record actions to protect biodiversity and monitor their effectiveness during construction? Will a new ecologically valuable habitat, appropriate to the local area, be created? Where flora/fauna habitats exist on site, will the contractor programme site works to minimise disturbance?			increase in the ecological value of the site of 6 species or greater
Pol 01	Impact of Refrigerants	Will refrigerant containing systems be installed in the assessed building?	3	1	Refrigerant leak detection Systems using refrigerants must be contained in a moderately air tight enclosure and a refrigerant leak detection system must be installed covering high risk parts of the plant OR an automatic permanent refrigerant leak detection system is specified which is NOT based on the principle of detecting or measuring the concentration of refrigerant in air. Refrigerant recovery system The automatic shut down and pump down of refrigerant occurs on the detection of high concentrations of refrigerant in the plant room/enclosure. For the majority of cases only systems in mechanically ventilated/ moderately air tight plant rooms comply. Automatic pump down to either a separate storage tank or into the heat exchanger is acceptable but only where automatic isolation valves are fitted to contain the refrigerant once fully pumped down. The alarm threshold that triggers automatic pump down is set to a maximum of 2000ppm (0.2%) but lower levels can be set. The credit cannot be awarded for manual

					systems.
Pol 02	NOx emissions from heating source	One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating and cooling energy are ≤ 100 mg/kWh (at 0% excess O₂). Two credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating and cooling energy are ≤ 70 mg/kWh (at 0% excess O₂). Three credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating and cooling energy are ≤ 40 mg/kWh (at 0% excess O₂).	1	0	
Pol 03	Surface Water Run Off	What is the actual/likely annual probability of flooding for the assessed site? Will a Flood Risk Assessment be undertaken and ground level of the building/access meet BREEAM criteria? Will the site meet the BREEAM criteria for peak rate surface water run off? Will the site meet the criteria for surface water run off volume, attenuation and/or limiting discharge? Will the site be designed to minimise watercourse pollution in accordance with the BREEAM criteria?	5	5	The following demonstrates compliance; Specification of SUDS or source control systems such as permeable surfaces or infiltration trenches where run off drains are in areas with a relatively low risk source of watercourse pollution. Specification of oil/petrol separators (or equivalent system) in surface water drainage systems, where there is a high risk of contamination or spillage of substances such as petrol and oil. All water pollution prevention systems have been designed and detailed in accordance with the recommendations of Pollution Prevention Guideline 3 and where applicable the SUDS manual. A comprehensive and up to date drainage plan of the site will be made available for the building/site occupiers.
Pol	Reduction of	External lighting design is in compliance with the guidance	1	1	

04	night time light pollution	in the Institution of Lighting Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.			
Pol 05	Noise Attenuation	New 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	

Innovation credits

Reference	Credit title	Criteria	Potential credits	Credits assumed	Notes
Inn. Man01	Sustainable Procurement	The following are carried out at quarterly intervals for the first three years after occupation: - Collection of occupant satisfaction, energy consumption and water consumption data - Data is utilised to check that the building is performing as expected and any necessary adjustments are carried out - Targets are set for reducing water and energy consumption and progress monitored towards these - Feedback of “ lessons learned” to the design team and developer for use in future projects - Provision of the actual annual building energy, water consumption and occupant satisfaction to BRE Global	1	0	

Inn. Man02	Considerate Constructors	Where post construction, a Considerate Constructors Scheme certificate can be provided demonstrating that the site achieved CCS Code of Considerate Practice with a score of at least 36.	1	0	
Inn. Hea01	Visual Comfort	At least 80% of the floor area (for the building spaces/room identified above in the standard requirements) has an average daylight factor of 3% in multi-storey buildings and 4% in single-storey buildings.	1	0	
Inn. Ene01	Reduction of CO2 emissions	The building is 'carbon negative' in terms of its total modelled operational energy consumption.	5	0	
Inn. Ene04	Low or Zero Carbon Technologies	A local LZC energy technology has been installed in line with the recommendations of a compliant feasibility study and this method of supply results in a 30% reduction in the building's CO2 emissions.	1	0	
Inn. Ene05	Energy Efficient Cold Storage	The installed system must demonstrate a saving in indirect greenhouse gas emissions relative to a baseline with reference to The Carbon Trust Refrigeration Road Map.			
Inn. Wat01	Water Consumption	The water consumption for the assessed building demonstrates a 65% improvement compared to a national baseline performance	1	0	
Inn. Mat01	Life Cycle Impacts	Where assessing four or more applicable building elements, the building achieves at least two points additional to the total points required to achieve maximum credits under the standard BREEAM requirements.	1	0	

Inn. Mat03	Responsible Sourcing of Materials	Where 70% of the available responsible sourcing points have been achieved.	1	0	
Inn. Wst01	Construction Waste Management	Where non-hazardous construction waste generated by the building's development meets or exceeds the resource efficiency benchmark required to achieve three credits (as outlined in the guidance). Where at least 90% by weight (85% by volume) of non-hazardous construction waste and 95% of demolition waste by weight (85% by volume) (if applicable) generated by the build has been diverted from landfill and either: a. Reused on site (in-situ or for new applications) b. Reused on other sites c. Salvaged/reclaimed for reuse d. Returned to the supplier via a 'take-back' scheme e. Recovered from site by an approved waste management contractor and recycled. Where all key waste groups are identified for diversion from landfill at pre-construction stage SWMP.	1	0	
Inn. Wst02	Recycled Aggregate	The total amount of recycled and/or secondary aggregate specified is greater than 35% (by weight or volume) of the total high-grade aggregate specified for the project.	1	1	

Pre assessment result

BREEAM 2011 New Construction Assessment Report: Assessment Issue Scoring	
Building name	New Offices
Building score (%)	55.32%
Building rating	Very Good
Minimum standards level achieved	Very Good level

BREEAM 2011 New Construction Assessment Report: Assessment Issue Scoring

Building name	New Offices
Building score (%)	55.32%
Building rating	Very Good
Minimum standards level achieved	Very Good level

MANAGEMENT

Man01 Sustainable Procurement

No. of BREEAM credits available	8	Available contribution to overall score	4.36%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria		Compliant?	Credits available	Credits achieved
Project brief and design	Criteria 1-3	No	1	0
	Criteria 4-6	No	1	0
	Criteria 7-9	No	1	0
	Criteria 10-13	No	1	0
Construction and handover	Criteria 14-17	Yes	1	1
	Criteria 18-21	Yes	1	1
	Criteria 22	Yes	1	1
Aftercare	Criteria 23-24	Yes	1	1
	Exemplary level (Criteria 25)	Yes	1	1

Total BREEAM credits achieved	4
Total contribution to overall building score	2.18%
Total BREEAM innovation credits achieved	1
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Man02 Responsible Construction Practices

No. of BREEAM credits available	2	Available contribution to overall score	1.09%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria

Compliant considerate construction scheme used	Considerate Constructors Scheme
Level achieved by the project using the compliant scheme	A CCS score between 32 and 35.5.

Total BREEAM credits achieved	2
Total contribution to overall building score	1.09%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Man03 Construction Site Impacts

No. of BREEAM credits available	5	Available contribution to overall score	2.73%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Energy consumption monitoring	Yes	1	1
Water consumption monitoring	Yes	1	1
Transport of construction materials and waste monitoring	No	1	0
Timber procurement	Yes	1	1
Construction site management: EMS	Yes	1	1
Construction site management - Pollution Prevention Procedures	Yes	1	1

Key Performance Indicators: Construction site energy use

Energy consumption (total) - site processes		Information not available at design stage
Energy consumption (intensity) - site processes		Information not available at design stage
Distance (total) - materials transport to site		Information not available at design stage
Distance (total) -waste transport from site		Information not available at design stage
Energy consumption (total) - materials transport to site		Information not available at design stage
Energy consumption (total) - waste transport from site		Information not available at design stage
Energy consumption (intensity) - materials transport to site		Information not available at design stage
Energy consumption (intensity) - waste transport from site		Information not available at design stage

Key Performance Indicators: Construction site greenhouse gas emissions

Process greenhouse gas emissions (total) - site processes		Information not available at design stage
Greenhouse gas emissions (intensity) - site processes		Information not available at design stage
Greenhouse gas emissions (total) - materials transport to site		Information not available at design stage
Greenhouse gas emissions (total) - waste transport from site		Information not available at design stage
Greenhouse gas emissions (intensity) - materials transport to site		Information not available at design stage
Greenhouse gas emissions (intensity) - waste transport from site		Information not available at design stage

Key Performance Indicators: Construction site use of freshwater resources

Use of freshwater resource (total) - site processes		Information not available at design stage
Use of freshwater resource (intensity) - site processes		Information not available at design stage

Total BREEAM credits achieved	4
Total contribution to overall building score	2.18%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Man04 Stakeholder Participation

No. of BREEAM credits available	4	Available contribution to overall score	2.18%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Consultation	No	1	0
Inclusive and accessible design	No	1	0
Building user information	Yes	1	1
Post occupancy evaluation and information dissemination	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.09%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Man05 Life cycle cost and service life planning

No. of BREEAM credits available	3	Available contribution to overall score	1.64%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Feasibility stage LCC: concept design/development proposals	No	1	0
Strategic and system level LCC: component analysis and selection	No	1	0
Technical design LCC: specification and maintenance strategy	No	1	0

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

HEALTH & WELLBEING

Hea01 Visual Comfort

No. of BREEAM credits available	3	Available contribution to overall score	3.00%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Fluorescent lamps fitted with high frequency ballasts?	Yes	N/A	N/A
Daylight factor	No	1	
Glare control and view out	No	1	0
Internal and external lighting	Yes	1	1
Exemplary level daylighting	No	1	0
Total BREEAM credits achieved	1		
Total contribution to overall building score	1.00%		
Total BREEAM innovation credits achieved	0		
Minimum standard(s) level	Outstanding level		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Hea02 Indoor Air Quality

No. of BREEAM credits available	5	Available contribution to overall score	5.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Min. sources of air pollution: air quality plan (criterion 1)	No	1	0
Min. sources of air pollution: internal and external source (criterion 2-5)	No		
Minimising sources of air pollution: VOCs (specification)	No	1	0
Minimising sources of air pollution: VOCs (measurement)	No	1	0
Potential for Natural Ventilation	No	1	0
Fume cupboards (manufacture and installation)	Yes	1	1

Key Performance Indicators: Indoor air quality

Concentration levels of formaldehyde		Information not available at design stage
Total volatile organic compound (TVOC) concentration		Information not available at design stage

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Hea03 Thermal Comfort

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Thermal modelling	Yes	1	1
Thermal zoning and control strategy	Yes	1	1

Key Performance Indicators: Thermal comfort (Time out of range (TOR))

TOR of min. and max. temperatures for summer and winter settings		%
--	--	---

Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Hea04 Water Quality

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Minimising risk of contamination: water systems	Yes	1	1
Minimising risk of contamination: failsafe humidification	N/A		
Provision of fresh drinking water	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

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Hea05 Acoustic Performance

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Appointment of a suitably qualified acoustician	No		
Acoustic performance standards and testing requirements		2	
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Hea06 Safety and Security

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Safe external access	Yes	1	1
Security of site and building	Yes	1	1
Total BREEAM credits achieved	2		
Total contribution to overall building score	2.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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ENERGY

Ene01 Reduction of CO₂ Emissions

No. of BREEAM credits available	15	Available contribution to overall score	10.18%
No. of BREEAM innovation credits available	5	Minimum standards applicable	Yes

Ene01 Calculator and Key Performance Indicators

Building floor area	1095	m ²
Notional building energy demand	100.00	MJ/m ² /annum
Actual building energy demand	90.00	MJ/m ² /annum
Notional building energy consumption	100.00	kWh/m ² /annum
Actual building energy consumption	95.00	kWh/m ² /annum
Target Emission Rate (TER)	100.00	kgCO ₂ /m ² /annum
Building Emission Rate (BER)	100.00	kgCO ₂ /m ² /annum
Building improvement over TER	0.00%	
Demand Energy Performance Ratio (EPR)	0.124	
Consumption Energy Performance Ratio (EPR)	0.079	
CO ₂ Energy Performance Ratio (EPR)	0.000	
Overall Building Energy Performance Ratio (EPR _{NC})	0.203	

Equivalent % of the building's 'regulated' energy consumption generated by carbon neutral sources and used to meet energy demand from 'unregulated' building systems or processes?	
Is the building designed to be 'carbon negative' ?	
If the building is defined as 'carbon negative' what is the total (modelled) renewable/carbon neutral energy generated and exported	

Total BREEAM credits achieved	2
Total contribution to overall building score	1.36%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Very Good level

Assessor comments/notes:

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Ene02 Energy Monitoring

No. of BREEAM credits available	2	Available contribution to overall score	1.36%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Monitoring of major energy consuming systems	Yes	1	1
Monitoring of energy use by tenancy or function area	Yes	1	1
Total BREEAM credits achieved	2		
Total contribution to overall building score	1.36%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	Outstanding level		

Assessor comments/notes:

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Ene03 External Lighting

No. of BREEAM credits available	1	Available contribution to overall score	0.68%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
External lighting specification	Yes	1	1
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.68%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Ene04 Low and Zero Carbon Technology

No. of BREEAM credits available	5	Available contribution to overall score	3.39%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant?	Credits available	Credits achieved
Please select	No	2	0
Additional credits not achievable for above option selection		2	0
Please select	No	1	0

KPI - Low and/or zero carbon energy generation

Total on-site and/or near-site LZC energy generation kWh/yr

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Very Good level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Ene05 Energy Efficient Cold Storage

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Refrigeration system design, installation and commissioning	No	1	0
Indirect greenhouse gas emissions savings	No	1	0
Exemplary level	No	1	0
Total BREEAM credits achieved	N/A		
Total contribution to overall building score	N/A		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Ene06 Energy Efficient Transportation Systems

No. of BREEAM credits available	2	Available contribution to overall score	1.36%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Transportation system analysis and strategy	Yes	1	1
Energy efficient transportation features	No	1	0
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.68%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Where awarding the second credit please confirm the following here (delete text if not applicable):
 Criteria 3: For lifts, of the energy-efficient features stipulated in the criteria, list the three specified that offer the greatest potential energy savings.
 Criteria 4: For escalators and/or moving walks, of the energy-efficient features stipulated in the criteria, confirm the compliant option specified.

Ene07 Energy Efficient Laboratory Systems

No. of BREEAM credits available	1	Available contribution to overall score	0.68%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Fume cupboards and/or other containment device specification	Yes	1	1
Best Practice Energy Practices in Laboratories (table 6-2)		N/A	N/A
Item b) Fan power			
Item c) Fume cupboard volume flow rates			
Item d) Grouping / isolation of high filtration/ventilation activities			
Item e) Energy recovery - heat			
Item f) Energy recovery - cooling			
Item g) Grouping of cooling loads			
Item h) Free cooling			
Item i) Load responsiveness			
Item j) Cleanrooms			
Item k) Diversity			
Item l) Room air-change rates			
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.68%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Ene08 Energy Efficient Equipment

No. of BREEAM credits available	2	Available contribution to overall score	1.36%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Present	Significant majority contributor
Small power and plug in equipment	Yes	Yes
Swimming pool	No	
Communal laundry	No	
Data centre	No	
IT-intensive operation areas	No	
Residential areas	No	
Healthcare	No	
Kitchen and catering facilities	Yes	Yes

	Compliant	Credits available	Credits achieved
Significant majority contributors BREEAM compliant	Yes	2	2
Total BREEAM credits achieved	2		
Total contribution to overall building score	1.36%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Ene09 Drying Space

Assessment Issue Not Applicable

No. of BREEAM credits available	N/A	Available contribution to overall score	N/A
No. of BREEAM innovation credits available	N/A	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Residential internal/external drying space and fixings			
Total BREEAM credits achieved	N/A		
Total contribution to overall building score	N/A		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

TRANSPORT

Tra01 Public Transport Accessibility

No. of BREEAM credits available	3	Available contribution to overall score	2.67%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra01 issue assessment)	Business (office/industrial)
--	------------------------------

Assessment Criteria	Compliant	Credits available	Credits achieved
Public transport accessibility index	1.00	3	0
Building dedicated bus service	No		0
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Tra02 Proximity to Amenities

No. of BREEAM credits available	1	Available contribution to overall score	0.89%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Close proximity and accessible to applicable amenities	No	1	
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Tra03 Cyclist facilities

No. of BREEAM credits available	2	Available contribution to overall score	1.78%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra03 issue assessment)	Business - offices, Industrial
Number of compliant cycle storage spaces provided	4
Cyclist facilities provided	No compliant facilities

Assessment Criteria	Compliant?	Credits available	Credits achieved
Cycle storage spaces	Yes	2	1
Cyclist facilities	No		
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.89%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Tra04 Maximum Car Parking Capacity

No. of BREEAM credits available	2	Available contribution to overall score	1.78%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Building type category (for purpose of Tra04 issue)	Business - offices, Industrial
Buildings Accessibility Index (sourced from issue Tra01)	1

Assessment Criteria	Compliant?	Credits available	Credits achieved
Maximum parking capacity	No	2	
Total BREEAM credits achieved	0		
Total contribution to overall building score	0.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Where awarding the credit please state here the number of parking spaces per building user or per type of building user if applicable, or state the specific reference that contains this information (delete text if not applicable).

Tra05 Travel Plan

No. of BREEAM credits available	1	Available contribution to overall score	0.89%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Transport plan based on site specific travel survey/assessment	Yes	1	1
Total BREEAM credits achieved		1	
Total contribution to overall building score		0.89%	
Total BREEAM innovation credits achieved		N/A	
Minimum standard(s) level		N/A	

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

WATER

Wat01 Water Consumption

No. of BREEAM credits available	5	Available contribution to overall score	3.33%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Please select the calculation procedure used	Alternative approach
--	----------------------

Standard approach data

Water Consumption from building micro-components	
Water demand met via greywater/rainwater sources	
Total net water consumption	
Improvement on baseline performance	

Key Performance Indicator - use of freshwater resource

Total net Water Consumption		Indicator Not Assessed
Default building occupancy		Indicator Not Assessed

Alternative approach data

Overall microcomponent performance level achieved	Level 2
Please select:	

Total BREEAM credits achieved	2
Total contribution to overall building score	1.33%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Wat02 Water Monitoring

No. of BREEAM credits available	1	Available contribution to overall score	0.67%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Water meter on the mains water supply to the building(s)	Yes	1	1
Metering/monitoring equipment on supply to plant/building areas	Yes		
Pulsed output on all relevant water meters	Yes		
Existing BMS connection	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	0.67%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Where awarding the credit please list here the water-consuming plant or building areas that consume 10% or more of the building's total water demand and are being fitted with sub-meters (delete text if not applicable).

Wat03 Water Leak Detection and Prevention

No. of BREEAM credits available	2	Available contribution to overall score	1.33%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Leak detection on building's mains water supply	Yes	1	1
Flow control device to each sanitary area/facility	Yes	1	1

Total BREEAM credits achieved	2
Total contribution to overall building score	1.33%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

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Wat04 Water Efficient Equipment

No. of BREEAM credits available	1	Available contribution to overall score	0.67%
No. of BREEAM innovation credits available	No	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Specification/installation of water efficient equipment	Yes	1	1
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.67%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

If applicable, please confirm the following here (delete text if not applicable):

Criteria 1: the irrigation method type specified/installed for internal or external planting and/or landscaping (from options outlined in the technical guide for Wat04).

MATERIALS

Mat01 Life Cycle Impacts

No. of BREEAM credits available	5	Available contribution to overall score	5.21%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria

Total Mat01 credits achieved	3
Total Mat01 points achieved	0.00
Number of building elements assessed	5
Exemplary level compliant?	No

Key Performance Indicator - embodied green house gas emissions by element	Total area of element m ²	Total impact kgCO ₂ eq.	Area of element impact data relevant to m ²
External walls			
Windows			
Roof			
Upper floor construction			
Internal wall			
Floor finishes/coverings			

Key Performance Indicator - embodied green house gas emissions for building (assessed elements only)

Total embodied green house gas emissions for building (by assessed elements)	Missing data	kgCO ₂ eq.		kgCO ₂ eq./m ²
Proportion of applicable building elements that data reported covers				

Total BREEAM credits achieved	3
Total contribution to overall building score	3.13%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Mat02 Hard Landscaping and Boundary Protection

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
External hard landscaping and boundary protection	Yes	1	1
Total BREEAM credits achieved	1		
Total contribution to overall building score	1.04%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

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Mat03 Responsible Sourcing

No. of BREEAM credits available	3	Available contribution to overall score	3.13%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria	Compliant	Credits available	Credits achieved
Percentage of available responsible sourcing points achieved	50.00%	3	2
All timber sourced in accordance with the UK Govt's Timber Procurement Policy.	Yes		

Building elements	Element present / assessed	% element responsibly sourced	Responsible sourcing points
Structural Frame	Yes	80%	4.00
Ground floor	Yes	80%	4.00
Upper floors (including separating floors)	Yes	80%	4.00
Roof	Yes	80%	1.00
External walls	Yes	80%	1.00
Internal walls	Yes	80%	1.00
Foundation/substructure	Yes	80%	1.00
Fittings	Yes	80%	1.00
Hard landscaping	Yes	80%	1.00

Total BREEAM credits achieved	2
Total contribution to overall building score	2.08%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

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Mat04 Insulation

No. of BREEAM credits available	2	Available contribution to overall score	2.08%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Embodied impact - insulation index	2.00	1	1
Responsible sourcing - % of insulating materials responsibly sourced	80%	1	1
Total BREEAM credits achieved	2		
Total contribution to overall building score	2.08%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Mat05 Designing for Robustness

No. of BREEAM credits available	1	Available contribution to overall score	1.04%
No. of BREEAM innovation credits available	0	Minimum standards applicable	N/A

Assessment Criteria	Compliant?	Credits available	Credits achieved
Suitable durability/protection measures to vulnerable building areas	Yes	1	1
Total BREEAM credits achieved	1		
Total contribution to overall building score	1.04%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Where awarding the credit please provide the following information here (delete text if not applicable):

1) List the main areas of the building (both internal and external) identified as being subject to regular/heavy vehicular, trolley and pedestrian movement and therefore where suitable durability/protection measures are required.

2) Summarise the key protection/durability measures specified/installed to minimise the risk of damage to the above areas (or list the specific reference containing this information).

WASTE

Wst01 Construction Waste Management

No. of BREEAM credits available	4	Available contribution to overall score	4.29%
No. of BREEAM innovation credits available	1	Minimum standards applicable	Yes

Assessment Criteria

Compliant?

Compliant Site Waste Management Plan	Yes
Compliant Pre-demolition audit	Yes

Key Performance Indicators - Construction Waste

Measure/units for the data being reported	tonnes	
Non-hazardous construction waste (excluding demolition/excavation)	6.00	tonnes/100m2
Total non-hazardous construction waste generated	6570.00	tonnes
Non-hazardous non-demolition const. waste diverted from landfill	80.00%	%
Total non-hazardous non-demolition const. waste diverted from landfill	5256.00	tonnes
Total non-hazardous demolition waste generated		tonnes
Non-hazardous demolition waste diverted from landfill	80.00%	%
Total non-hazardous demolition waste to disposal	INA	tonnes
Material for reuse		tonnes
Material for recycling		tonnes
Material for energy recovery		tonnes
Hazardous waste to disposal		tonnes

Total BREEAM credits achieved	2
Total contribution to overall building score	2.14%
Total BREEAM innovation credits achieved	0
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Wst02 Recycled Aggregates

No. of BREEAM credits available	1	Available contribution to overall score	1.07%
No. of BREEAM innovation credits available	1	Minimum standards applicable	No

Assessment Criteria

Total

Total % of high-grade aggregate that is recycled/secondary aggregate	35%
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% of high-grade aggregate that is recycled/secondary aggregate - by application

Structural frame	50%
Floor slabs including ground floor slabs	50%
Bitumen/hydraulically bound base, binder and surface courses	75%
Concrete road surfaces	50%
Pipe bedding	100%
Building foundations	50%
Granular fill and capping	100%
Gravel landscaping	100%

Total BREEAM credits achieved	1
Total contribution to overall building score	1.07%
Total BREEAM innovation credits achieved	1
Minimum standard(s) level	N/A

Assessor comments/notes:

Where awarding the credit please list the key type(s) of recycled/secondary aggregates used in the above applications (delete text if not applicable).

Wst03 Operational Waste

No. of BREEAM credits available	1	Available contribution to overall score	1.07%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Assessment Criteria

Compliant?

Credits available

Credits achieved

Segregation and storage of operational recyclable waste volumes	Yes	1	1
Static waste compactor(s) or baler(s)	N/A		
Vessel(s) for composting suitable organic waste	N/A		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.07%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

If the building is of a type that could be considered likely to generate large amounts of packaging or compostable waste and static waste compactors, balers and/or composting vessels (or other type of equivalent facility/technology) are not provided, please include a statement here outlining the reasons for not specifying such facilities (delete text if not applicable).

Wst04 Speculative Floor and Ceiling Finishes

No. of BREEAM credits available	1	Available contribution to overall score	1.07%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
The building's occupant(s)/tenant(s) have specified floor/ceiling finishes	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	1.07%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

LAND USE & ECOLOGY

LE01 Site Selection

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Previously developed land	No	1	0
Contaminated land	No	1	0

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

LE02 Ecological Value of Site and Protection of Ecological Features

No. of BREEAM credits available	1	Available contribution to overall score	1.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Ecological value of the land defined using	Please select
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Assessment Criteria

	Compliant?	Credits available	Credits achieved
Land of low ecological value	Yes	1	1
Protection of existing ecological features	Yes		

Total BREEAM credits achieved	1
Total contribution to overall building score	1.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

LE03 Mitigating Ecological Impact

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	Yes

Data sourced for calculating the change in ecological value from	Suitably Qualified Ecologist site survey of plant species
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Assessment Criteria

Change in ecological value	0.00	Plant species richness
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Total BREEAM credits achieved	2
Total contribution to overall building score	2.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	Outstanding level

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

LE04 Enhancing Site Ecology

No. of BREEAM credits available	3	Available contribution to overall score	3.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Suitably Qualified Ecologist appointment (SQE)	Yes	3	2
Implementation of the Suitably Qualified Ecologists general recommendations	Yes		
Change in ecological value (as confirmed by Suitably Qualified Ecologist)	2	Plant species richness	
Total BREEAM credits achieved	2		
Total contribution to overall building score	2.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

LE05 Long Term Impact on Biodiversity

No. of BREEAM credits available	2	Available contribution to overall score	2.00%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

Assessment Criteria	Compliant?	Credits available	Credits achieved
Mandatory criteria - SQE, legislation & landscape/habitat management plan	Yes	2	2
Additional criteria - Biodiversity Champion	Yes		
Additional criteria - Training of site workforce	Yes		
Additional criteria - Monitor and record actions to protection site biodiversity	Yes		
Additional criteria - New ecologically valuable habitat creation	Yes		
Additional criteria - Construction programme minimises disturbance to wildlife	No		
Total BREEAM credits achieved	2		
Total contribution to overall building score	2.00%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

POLLUTION

Pol01 Impact of Refrigerants

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

		Credits available	Credits achieved
Refrigerant containing systems installed in the assessed building?	Yes	2	0
Global Warming Potential of the specified refrigerant(s) 10 or less?	No		
Total Direct Effect Life Cycle CO ₂ eq. emissions from the system	1911	kgCO ₂ eq/kW coolth capacity	
Cooling/Heating capacity of the system	89.5	kW	
BREEAM compliant refrigerant leak detection and containment	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.77%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Where refrigerants are/will be installed, please list here the refrigerant names (Chemical name and/or R-number) specified. Where carbon dioxide or ammonia specified, please also confirm the system/installation complies with the requirements of the relevant standard (see technical guide for detail). (Delete text if not applicable).

Pol02 NO_x Emissions

No. of BREEAM credits available	3	Available contribution to overall score	2.31%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

NO _x emission level - space heating and cooling		mg/kWh
Heating and cooling energy consumption		kWh/m ²

Total BREEAM credits achieved	0
Total contribution to overall building score	0.00%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

Pol03 Surface Water Run off

No. of BREEAM credits available	5	Available contribution to overall score	3.85%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

	Compliant?	Credits available	Credits achieved
Annual probability of flooding	Low		
Flood Risk Assessment	Yes	2	2
Surface water run off – peak rate	Yes	1	1
Surface water run off – volume, attenuation and/or limiting discharge	Yes	1	1
Minimising watercourse pollution	Yes	1	1

Total BREEAM credits achieved	5
Total contribution to overall building score	3.85%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Where awarding the credit for minimising watercourse pollution, please confirm the following (delete text if not applicable):

- 1) Whether the site contains areas with a relatively low risk source of watercourse pollution only.
- 2) Whether there is a high risk of contamination or spillage of substances such as petrol/oil/chemicals/liquid gas (or other polluting substances) and therefore requirement to specify appropriate prevention measures, including shut-off valves to drainage system (broadly outline the measures specified).

Pol04 Reduction of Night Time Light Pollution

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria

	Compliant?	Credits available	Credits achieved
External lighting specification	Yes	1	1

Total BREEAM credits achieved	1
Total contribution to overall building score	0.77%
Total BREEAM innovation credits achieved	N/A
Minimum standard(s) level	N/A

Assessor comments/notes:

Where awarding the credit please confirm if safety and security lighting and illuminated advertisements are specified and therefore whether either forms part of the assessment and compliance checking, or not as the case may be (delete text if not applicable).

Pol05 Noise Attenuation

No. of BREEAM credits available	1	Available contribution to overall score	0.77%
No. of BREEAM innovation credits available	0	Minimum standards applicable	No

Assessment Criteria	Compliant	Credits available	Credits achieved
Noise-sensitive areas/buildings within 800m radius of the development	Yes	1	1
Noise impact assessment and, if applicable, noise attenuation measures	Yes		
Total BREEAM credits achieved	1		
Total contribution to overall building score	0.77%		
Total BREEAM innovation credits achieved	N/A		
Minimum standard(s) level	N/A		

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.

INNOVATION

Inn01 Innovation

No. of BREEAM innovation credits available	10	Available contribution to overall score	10.00%
		Minimum standards applicable	No

Assessment Criteria	Compliant?	Credits available	Credits achieved
Man01 Sustainable Procurement	Yes	1	1
Man02 Responsible Construction Practices	No	1	0
Hea01 Visual Comfort	No	1	0
Ene01 Reduction of CO2 Emissions	No	5	0
Ene04 Low and Zero Carbon Technology	No	1	0
Ene05 Energy Efficient Cold Storage	N/A	N/A	N/A
Wat01 Water Consumption	No	1	0
Mat01 Life Cycle Impacts	No	1	0
Mat03 Responsible Sourcing of Materials	No	1	0
Wst01 Construction Waste Management	No	1	0
Wst02 Recycled Aggregates	Yes	1	1

Number of 'approved' innovation credits achieved?	
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Total BREEAM innovation credits achieved	2
Total contribution to overall building score	2.00%
Minimum standard(s) level	N/A

Assessor comments/notes:

Insert here any relevant comments, notes, feedback concerning the assessment of this BREEAM issue. Such information is not necessarily required for the purposes of the quality assurance audit but the provision of additional information (to that above) may be of relevance to any third party interpreting the assessment result and/or interpreting evidence referenced for verification purposes.