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**HAMPTON PRE-PREP SCHOOL EXTENSION
BREEAM Pre-Assessment**

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BREEAM Pre-Assessment

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Revision and Date	Amendment Details	Revision Prepared By	Revision Approved By

1.0 BREEAM PRE-ASSESSMENT

Introduction

- 1.1 BREEAM (Building Research Establishment's Environmental Assessment Method) is a nationally recognised standard for the design and construction of new non-residential developments.
- 1.2 The BREEAM assessment process involves the evaluation of the buildings performance against the scheme and its criteria using an independent third party auditor; a BREEAM Assessor. The BREEAM certificate provides formal verification that the Assessor has completed an assessment of the building in accordance with the requirements of the scheme and its quality standards and procedures. A BREEAM certificate verifies that a building's BREEAM rating, at the time of certification, accurately reflected its performance against the BREEAM standards.
- 1.3 The BREEAM standard assesses and awards credits based on the environmental features of the building within a framework of nine categories, these being:
- Management
 - Health and Wellbeing
 - Energy
 - Transport
 - Water
 - Materials
 - Waste
 - Land use and Ecology
 - Pollution

BREEAM Levels

- 1.4 The BREEAM rating is divided into five levels of compliance Pass, Good, Very Good, Excellent and Outstanding. The BREEAM level thresholds are as follows:

Total Percentage Points Score (equal to or greater than)	BREEAM Rating
<30 Points	Unclassified
30 Points	Pass
45 Points	Good
55 Points	Very Good
70 Points	Excellent
85 Points	Outstanding

Table 1.1: BREEAM Rating Thresholds

- 1.5 The categories within BREEAM are weighted according to their level of importance, as indicated in **Table 1.2** below. Each category is allocated a different number of credits and therefore individual credits carry specific weightings, as a percentage of the total points score.
- 1.6 It has been agreed that Hampton Pre-prep is to be assessed under BREEAM New Construction 2018 – Education, Simple Building. The credits within Table 1.2 reflect those available for a Simple Building.
- 1.7 BREEAM awards additional credits in recognition of sustainability related benefits or performance levels which are not currently recognised by standard BREEAM assessment issues and criteria, to reward buildings that go beyond best practice. An additional 1% can be added to a building’s overall score for each ‘Innovation Credit’ achieved up to a maximum of 10 credits for any one building. Innovation credits can be awarded regardless of the building’s final BREEAM rating.

Categories of Environmental Impact	Total Credits Available in each Category*	Weighting Factor (% points contribution)	Approximate Weighted Value of each Credit
Management	12	7.50%	0.63
Health & Wellbeing	17	16.50%	0.97
Energy	14	11.50%	0.82
Transport	12	11.50%	0.96
Water	8	7.50%	0.94
Materials	14	17.50%	1.25
Waste	9	7.00%	0.78
Land Use and Ecology	13	15.00%	1.15
Pollution	8	15.00%	0.75
Innovation	10	10.00%	1.00
Total	-	110.00%	-

Table 1.2: Total Credits Available, Weighting Factors and Points (BREEAM New Construction 2018 Technical Guide – Education, Simple Building)

**The number of credits available is based on the scoping of appropriate assessment criteria produced within BRE’s assessment tool. This is based on the type of building and room functions within.*

BREEAM Minimum Standards

- 1.8 The BREEAM standard includes mandatory minimum performance standards in the following areas, which must be met in order to achieve the BREEAM rating sought.

BREEAM issue	Minimum standards by BREEAM rating level				
	Pass	Good	Very Good	Excellent	Outstanding
Man 03 Responsible construction practices	None	None	None	One credit (responsible construction management)	Two credits (responsible construction management)
Man 04 Commissioning and handover	None	None	One credit (commissioning-test schedule and responsibilities)	One credit (commissioning-test schedule and responsibilities)	One credit (commissioning-test schedule and responsibilities)
Man 04 Commissioning and handover	None	None	Criterion 1 1 (Building User Guide)	Criterion 1 1 (Building User Guide)	Criterion 1 1 (Building User Guide)
Man 05 Aftercare	None	None	None	One credit (commissioning-implementation)	One credit (commissioning-implementation)
Ene 01 Reduction of energy use and carbon emissions	None	None	None	Four credits (Energy performance)	Six credits (Energy performance) and Four credits (Energy modelling and reporting)
Ene 02 Energy monitoring	None	None	One credit (First sub-metering credit)	One credit (First sub-metering credit)	One credit (First sub-metering credit)
Wat 01 Water consumption	None	One credit	One credit	One credit	Two credits
Wat 02 Water monitoring	None	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Mat 03 Responsible sourcing of construction products	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Wst 01 Construction waste management	None	None	None	None	One credit
Wst 03 Operational waste	None	None	None	One credit	One credit

Table 1.3: BREEAM Minimum Standards

- 1.9 The BREEAM rating can only be achieved if the above mandatory issues achieve the minimum standards as set out in the BREEAM New Construction 2018 Technical Guidance. All other credits are tradable (i.e. they are voluntary and a developer/designer can make choices on the most appropriate standards/credits for a given site). It is these tradable credits that provide the flexibility within the BREEAM standard. Once all mandatory credits are achieved the developer is then free to make up the credits required for the target rating from the tradable credits, to give an overall score.

BREEAM Pre-Assessment Scoring Strategy

- 1.10 A BREEAM 2018 New Construction – Education (Simple Building) Pre-Assessment has been carried out for the Hampton Pre-Prep School Extension by licensed BREEAM assessors and Accredited Professionals.
- 1.11 The BREEAM pre-assessment checklist provides an approximate indication of how a future formal assessment will score and the rating that will be achieved. The prediction checklist should therefore not be used as a guarantee of a subsequent rating but will inform how credits should be targeted during the formal assessment procedure.
- 1.12 The current prediction is that a ‘Very Good’ rating is likely to be achieved, with a score of 60.57%, where evidence is supplied to support the award of the BREEAM credits. The prediction indicates that all minimum standards will be achieved to meet the BREEAM ‘Very Good’ rating.
- 1.13 The London Borough of Richmond-upon-Thames requires that a target of BREEAM Excellent be achieved, as stated within its Local Plan (adopted July 2018). Due the limited size of the development and the site constraints it would not be practicable due to technical and financial constraints to achieve a BREEAM rating of Excellent.
- 1.14 A BREEAM pre-assessment has been carefully prepared, in consultation with all relevant parties, taking into consideration the nature of the project, and the current RIBA stage. The site is very constrained in nature, and certain credits, such as Transport, are immediately beyond the reach of the project. For similar reasons many Materials credits cannot be targeted.
- 1.15 Hence, due to the onerous requirement and the nature of the development, a BREEAM ‘Very Good’ rating is the proposed and realistic target for the project.
- 1.16 Although all aspects of BREEAM will be addressed, the main focus will be on the following issues:
- Energy efficiency – the building will be constructed to a high standard of fabric efficiency, with U values well below Part L notional values. All building services will comply with relevant standards, and selection will be based on best performance. PV panels will be installed to maximise energy credits.
 - Materials – all materials will be carefully selected according to their sustainable credentials, with preference given to those with the best overall performance, based on lifecycle analysis.
 - Waste – targets for waste reduction throughout the demolition and construction phases will be set, with the aim of minimising waste on site, through re-use on site, and segregation of waste streams to avoid waste to landfill.

- 1.17 Water and electricity use, and transport of materials to and from site will be closely regulated and monitored. Table 1.4 shows a resume of the BREEAM credits, with the completed BREEAM pre-assessment table in Appendix A.

Issue Category	Credits available	Weighting Factor	Credit value	Credits likely
Management	12	7.50	0.63	12
Health & Wellbeing	17	16.50	0.97	12
Energy	14	11.50	0.82	10
Transport	12	11.50	0.96	3
Water	8	7.50	0.94	5
Materials	14	17.50	1.25	4
Waste	9	7.00	0.78	8
Land Use	13	15.00	1.15	6
Pollution	8	6.00	0.75	6
Innovation credits	10	10.00	1.00	3
Totals	117			69
Overall Score				60.57
Overall Rating				Very Good

Table 1.4: BREEAM Pre-Assessment – Hampton Pre-Prep School Extension

- 1.18 The detailed BREEAM pre-assessment checklist for the scheme detailing the commitments made by the design team can be found in Appendix A.
- 1.19 A formal assessment will take place once the tender documentation is produced and will require submission of a full evidence bundle from the client and the design team to show compliance with the credits. The BREEAM assessor and BREEAM Accredited Professional have been and will continue to form an integral part of the design team and a consistent point for reference, review and questions. Experience has proved that this approach offers the surest route to a successful BREEAM certification and holistic sustainable design.

APPENDICES

APPENDIX A

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
MANAGEMENT						
Man 01 - Project brief and Design	Stakeholder consultation (project delivery) Prior to completion of the Concept Design (RIBA Stage 2 or equivalent), the project delivery stakeholders have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery. In defining the roles and responsibilities for each key phase of the project, the following must be considered: End user requirements, Aims of the design and design strategy, Particular installation and construction requirements/limitations, Occupiers' budget and technical expertise in maintaining any proposed systems, Maintainability and adaptability of the proposals, Requirements for the production of project and end user documentation, Requirements for commissioning, training and aftercare support. The project team demonstrate how the project delivery stakeholder contributions and the outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design.	Stakeholder consultation (project delivery) : Meeting minutes, project programme, appointment documents will fulfil this requirement. 1 credit targeted.	1	1		project team
	Stakeholder consultation (third party) Prior to completion of the Concept Design stage, all relevant third party stakeholders have been consulted by the design team and this covers the minimum consultation content. The project must demonstrate how the stakeholder contributions and outcomes of the consultation exercise have influenced or changed the Initial Project Brief and Concept Design. Prior to completion of the detailed design (RIBA Stage 4, Technical Design or equivalent), consultation feedback has been given to, and received by, all relevant parties.	Stakeholder consultation (third party): This has been undertaken in line with the BREEAM requirements therefore can be targeted	1	1		project team
	BREEAM Advisory Professional (Concept Design) A BREEAM AP is appointed to monitor progress against the agreed BREEAM performance target(s) throughout the design process and formally report progress to the client and design team - team to include 'Sustainability' as an agenda item on all meeting minutes	Exemplary credit. BREEAM AP appointed at RIBA Stage 2. Credit currently assumed. Slight additional cost.				BREEAM AP
	BREEAM Advisory Professional (Developed Design) A BREEAM AP is appointed to monitor progress against the agreed BREEAM performance target(s) throughout the design process and formally report progress to the client and design team. To do this the Sustainability Champion must attend key project/design team meetings during the Concept Design, Developed Design and Technical Design stages, as defined by the RIBA Plan of Work 2013, reporting during, and prior to, completion of each stage, as a minimum.	Exemplary credit. BREEAM AP appointed to work with project team throughout developed design phase. Credit currently assumed. Slight additional cost				BREEAM AP
Man 02 - Life cycle cost and service life planning	One credit - Capital cost reporting Report the capital cost for the building in pounds per square metre (£/m ²), via the BREEAM Assessment Scoring and Reporting tool, Assessment Issue Scoring tab, Management section.	Capital cost reporting - 1 credit assumed for Cost Consultant to issue cost plan	1	1		QS
Man 03 - Responsible construction practices	Pre-requisite All timber and timber based products used on the project is 'Legally harvested and traded timber'. Note: For other materials there are no pre-requisite requirements at this stage.	All timber will be legally harvested and traded	N/A			
	Environmental management The principal contractor operates an environmental management system (EMS) covering their main operations. The EMS must be either: Third party certified, to ISO 14001/EMAS or equivalent standard; or Have a structure that is in compliance with BS 8555:2003 and has reached phase four of the implementation stage, 'implementation and operation of the environmental management system', and has completed phase audits one to four, as defined in BS 8555:2003. The principal contractor implements best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction and demolition sites, PDG61	Credit targeted - the contractor will be EMS certified.	1	1		Contractor
	Responsible Construction Management Either CCS scheme score of >35 for two credits, or Up to two credits : A dedicated person is responsible for monitoring and reporting on activities for: 1. Vehicle movement (on and near site) 2. Pollution management 3. Tidiness 4. Health and wellbeing 5. Training awareness and feedback 6. Monitoring and reporting of road traffic accidents, incidents and near misses	2 credits currently assumed for score of >35 under CCS. If scheme not registered under CCS, credits are still possible. 1 exemplary credits available for CCS>40 - currently not targeted.	2	2		Contractor
	Monitoring of construction-site impacts - First monitoring credit -Utility consumption Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data (where measured) resulting from all on-site construction processes (and dedicated off-site monitoring) throughout the build programme. To ensure the robust collection of information, this individual(s) must have the appropriate authority and responsibility to request and access the data required. Where appointed, the AP could perform this role. Energy consumption - monitor and record data of the site energy consumption in kWh and report the total kgCO ₂ /project value from the construction process via the BREEAM Assessment Scoring and Reporting tool Water consumption - monitor and record data on water consumption (m ³). Using the collated data report the total net water consumption (m ³) via the BREEAM Assessment Scoring and Reporting tool.	1 credit assumed for monitoring use of electricity and water on site	1	1		Contractor

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
	<p>Monitoring of construction-site impacts - Second monitoring credit - Transport of construction materials and waste</p> <p>Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data (where measured) resulting from all on-site construction processes (and dedicated off-site monitoring) throughout the build programme. To ensure the robust collection of information, this individual(s) must have the appropriate authority and responsibility to request and access the data required. Where appointed, the AP could perform this role.</p> <p>Monitor and record data on transport movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum this must cover:</p> <p>Transport of materials from the factory gate to the building site, including any transport, intermediate storage and distribution, (see Relevant definitions).</p> <p>Scope of this monitoring must cover the following as a minimum:</p> <p>Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01 Life cycle impacts), including insulation materials.</p> <p>Ground works and landscaping materials.</p> <p>Transport of construction waste from the construction gate to waste disposal processing/recovery centre gate. Scope of this monitoring must cover the construction waste groups outlined in the project's waste management plan.</p> <p>Using the collated data, report separately for materials and waste, the total fuel consumption (litres) and total carbon dioxide emissions (kgCO2 eq), plus total distance travelled (km) via the BREEAM Assessment Scoring and Reporting tool.</p>	Simple Building - Exemplary credit - Transport (delivery to, and removal of waste from site) impacts will be measured.				Contractor
Man 04 - Commissioning and handover	<p>Commissioning and testing schedule and responsibilities</p> <p>Commissioning should be carried out, in accordance with Building Regulations where changes are being made to:</p> <p>a) Building services b) Building services control systems c) Changes to the building fabric that will affect thermal performance</p>	A schedule of commissioning and testing will be prepared.	1	1		M&E/contractor
	<p>Handover</p> <p>A Building User Guide (BUG) is developed prior to handover, for distribution to the building occupiers and premises managers.</p> <p>A training schedule is prepared for building occupiers/premises managers, timed appropriately around handover and proposed occupation plans, which includes the following content as a minimum:</p> <ul style="list-style-type: none"> - The building's design intent - The available aftercare provision and aftercare team main contact(s), including any scheduled seasonal commissioning and post occupancy evaluation - Introduction to, and demonstration of, installed systems and key features, particularly building management systems, controls and their interfaces - Introduction to the Building User Guide and other relevant building documentation, e.g. design data, technical guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log book etc. - Maintenance requirements, including any maintenance contracts and regimes in place. 	A non-technical user guide for distribution to the building occupiers will be produced A technical user guide for the premises facilities managers will be produced	1	1		Contractor
Man 05 - Aftercare	<p>Aftercare support</p> <p>Operational infrastructure and resources in place to provide aftercare support to the building occupier(s).</p> <p>Operational infrastructure and resources in place to coordinate collection of energy and water consumption data for a minimum of 12 months.</p>	Aftercare - 1 month weekly meetings, 12 months support offered eg. helpline. Collect energy and water consumption over period of 12 months. 1 credit targeted	1	1		Client
	<p>Commissioning - implementation</p> <p>Specialist Commissioning Manager - Testing of all building services under full load conditions within complex systems over a minimum 12 month period.</p> <p>Review of thermal comfort, ventilation and lighting at three, six and nine month intervals after initial occupation completed over a minimum 12-month period.</p> <p>Produce monthly reports comparing sub-metered energy performance to the predicted one</p>	Commissioning - implementation - testing under full/part load, monthly reports, recommissioning. Currently not targeted but can be added in	1	1		Client
	<p>Post occupancy evaluation</p> <p>Client or building occupier to make a commitment to carry out a post occupancy evaluation (POE) exercise one year after initial building occupation carried out by an independent party which covers:</p> <p>a) review of design intent and construction process b) feedback from a wide range of building services c) sustainability performance</p>	Post Occupancy Evaluation - common methodology outlined within BRE Design Quality Method. Client has to commit to funding in order for credit to be awarded. Additional cost.	1	1		Client
Total - Management:			12	12	0	0
Credit value:			0.63%			
HEALTH & WELLBEING						
Hea 01 - Visual comfort	<p>Glare control from sunlight</p> <p>Identify areas at risk of glare using a glare control assessment. The glare control assessment also justifies any areas deemed not at risk of glare.</p> <p>A glare control strategy designs out potential glare in all relevant building areas where risk has been identified. This strategy must not increase consumption used for lighting. This is achieved by:</p> <ol style="list-style-type: none"> 1. Maximising daylighting levels in all weather, cloudy or sunny AND 2. Ensuring the use or location of shading does not conflict with the operation of lighting control systems 	Glare control from sunlight: This study needs to identify areas subject to glare and measures to mitigate for that (e.g. Blinds) Credit assumed.	1	1		daylight consultant

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
	<p>Relevant building area - occupied for 30 mins or more.</p> <p>Daylighting</p> <p>Daylighting criteria have been met using either of the following options: Relevant building area - ADF of 2% in a minimum of 80% of floor area (2 credits) and a uniformity ratio of 0.3</p>	Daylighting: targeted - would need additional work from daylight consultant.	2	2		daylight consultant
	<p>View out</p> <p>95% of the floor area in each relevant building areas is within 8m of a wall which has a window or permanent opening that provides an adequate view out. The window/opening must be \geq 20% of the surrounding wall area. Where the room depth is greater than 8m, compliance is only possible where the percentage of window/opening is the same as, or greater than, the values in table 1.0 of BS 82061.</p>	Could this be achieved? Potential credit	1	1		daylight consultant/architect
	<p>Internal and external lighting levels, zoning and control</p> <p>Internal lighting - all fluorescent lamps are fitted with high frequency ballasts. External lighting - able to perform outdoor tasks efficiently Zoning and occupant control of internal lighting.</p>	Internal and external lighting, zoning and control - to be confirmed by M&E as compliant. 1 credit assumed.	1	1		M&E
Hea 02 - Indoor Air Quality	<p>Indoor Air Quality Plan</p> <p>Pre-requisite- Minimising indoor air pollution during design, construction and occupation of building. Production of an Air Quality Plan.</p>	Indoor air quality plan: Will be commissioned at Stage 3 - pre-requisite to achieving any credits. Additional cost.	N/A			TBC - Create?
	<p>Ventilation</p> <p>The building has been designed to minimise the concentration and recirculation of pollutants in the building as follows: Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation. Design ventilation pathways to minimise the build-up of air pollutants in the building. The design of naturally ventilated buildings should minimise the build-up of air pollutants. Ventilation intakes and airflow pathways should be designed using the following methods: - Following guidance given in: - BRE FB 30 Ventilation for healthy buildings: Reducing the impact of urban air pollution (2011), - BRE IP 9/14 Locating ventilation inlets to reduce ingress of external pollutants into buildings (2014), and, - CIBSE TM21 Minimising pollutants at air intakes (1999), as appropriate. These give guidance on ventilation strategies, and the optimum location of ventilation inlets, openable windows, and trickle and background ventilators to reduce ingress of external pollutants into buildings. - Positioning openable windows/ and background ventilators over at least 10m of horizontal distance from sources of external pollution (including the location of any building-related air exhausts).</p>	Ventilation: Will need to check intake and extract distances as this can often be the criteria that is difficult to meet. 1 credit assumed.	1	1		M&E
	<p>Emissions from construction products</p> <p>One credit: Three out of the five product types meet the emission limits, testing requirements and any additional requirements. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum. Two credits All of the product types listed meet the emission limits, testing requirements and any additional requirements listed in the BREEAM guidance</p>	Emissions from construction products: Considers low VOC levels in finishes to meet emission limits outlined by BREEAM. No credits targeted	2		2	Architect
Hea 04 - Thermal Comfort	<p>Thermal modelling</p> <p>Thermal modelling has been carried out using software in accordance with CIBSE AM11 Building Energy and Environmental Modelling. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11). The modelling demonstrates that: For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type). For naturally ventilated / free running buildings: Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type). The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings. For air conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.</p>	Thermal modelling would need to be carried out (Overheating assessment). Credit not targeted - additional cost	1		1	TBC M&E/energy consultant

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
	Design for future thermal comfort Criteria 1-4 achieved, thermal modelling demonstrates that the relevant requirements set out in in criterion 3 are achieved for a projected climate change environment.	Thermal modelling has not been carried out (Overheating assessment). Credit not targeted.- Additional cost	1		1	
	Thermal zoning and controls Thermal modelling analysis has informed the temperature control strategy for the building and its users.	To be carried out by M&E contractor.- not targeted as thermal modelling is the pre-requisite	1		1	
Hea 05 - Acoustic performance	Sound Insulation Criteria The sound insulation between rooms and other occupied areas complies with the performance criteria given in Section 7 of BS 8233:2014. Alternatively, propose performance standard based on demonstrably best practice. Testing requirement A programme of pre-completion acoustic testing is carried out by a compliant test body	Acoustician will need to advise at the beginning of Stage 3. Credit assumed.	1	1		Acoustic
	Indoor ambient noise level Criteria Achieve indoor ambient noise levels that comply with the design ranges given in Section 7 of BS 8233:2014. Testing requirement A programme of pre-completion acoustic testing is carried out by a compliant test body	As above	1	1		Acoustic
	Room acoustics Criteria Achieve the requirements relating to sound absorption and reverberation times, where applicable, set out in Section 7 of BS 8233:2014 Testing Requirement: Teaching and study spaces A programme of acoustic measurements is carried out by a compliant test body	As above	1	1		Acoustic
Hea 06 - Security of Site	Security of site and building A Suitably Qualified Security Specialist (SQSS) conducts an evidence based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent). The SQSS develops a set of recommendations or solutions during or prior to Concept Design (RIBA Stage 2 or equivalent). These recommendations or solutions aim to ensure that the design of buildings, public and private car parks and public or amenity space are planned, designed and specified to address the issues identified in the preceding SNA. The recommendations or solutions proposed by the SQSS are implemented. Any deviation from those recommendations or solutions will need to be justified, documented and agreed in advance with a suitably qualified security specialist.	Security Needs Assessment to be undertaken with recommendations implemented by the end of Stage 4. Worth enquiring with police to clarify if they will undertake this. Needs to be undertaken at Stage 2 Credit can still be awarded post Stage 2 if it can be demonstrated that advanced design does not prevent measures from being implemented.	1	1		Project manager
Hea 07 - Safe and Healthy Surroundings	Safe and healthy surroundings There is an outside space providing building users with an external amenity area. The space needs to be an appropriate size to provide enough amenity for the predicted number of building users during coffee or lunch breaks to gather, socialise, relax and connect with the natural environment. The outside space must: - be an outdoor landscaped area, for example a garden, balcony or terrace. The majority of the space must be open to the sky. - have appropriate seating areas and be non-smoking - be located to ensure it is accessible to all building users and avoids areas that will have disturbances from noise.	Credit for safe access could be achievable - currently assumed. Are there external areas included in the assessment? If not credit awarded by default	2	2		Architect
Total - Health& Wellbeing:			17	12	5	0
Credit value:			0.97%			
ENERGY						
Ene 01 - Reduction of energy use and carbon emissions	Reduction of energy use and carbon emissions Calculate an Energy Performance Ratio for New Constructions (EPR NC). Compare the EPR NC achieved with the benchmarks and award the corresponding number of BREEAM credits.	Initial energy modelling confirms 7 credits can be achieved	9	7	2	energy
	Pre-requisite Achieve Man 01 Project brief and design to hold a preliminary design workshop focusing on the design for operational energy performance	Credit not targeted.	No			

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
emissions	<p>Energy modelling and reporting</p> <p>Undertake additional energy modelling during the design and post construction stage to generate predicted operational energy consumption figures Report predicted energy consumption targets by end use, design assumptions and input data (with justifications) Carry out a risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.</p>	Exemplary only. Credits not targeted.				
Ene 02 -Energy monitoring	<p>Sub-metering of major energy consuming systems</p> <p>The systems in smaller buildings are metered either with an energy monitoring and management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system. The energy consuming end uses are identifiable to the building users, for example through labelling or data outputs.</p>	Credit assumed.	1	1		M&E
Ene 03 -External lighting	<p>External lighting</p> <p>The average initial luminous efficacy of the external light fittings within the construction zone is not less than 70 luminaire lumens per circuit Watt. All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.</p>	Credit assumed.	1	1		M&E
Ene 04 - Low Carbon Design	<p>Passive design analysis</p> <p>Hea 04.1 Thermal comfort has been achieved to demonstrate the building design can deliver appropriate thermal comfort levels in occupied spaces. The project team carries out an analysis of the proposed building design/development to influence decisions made during Concept Design stage (RIBA Stage 2 or equivalent) and identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. The building uses passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis and the analysis demonstrates a meaningful reduction in the total energy demand as a result. Reduced total energy demand and carbon dioxide (CO2) emissions resulting from passive design measures need to be quantified.</p>	Credit targeted for LZC feasibility study. Would require some additional work. Additional cost	1		1	TBC M&E/Energy
	<p>Free cooling</p> <p>The passive design analysis has been undertaken and the relevant credit (Ene 04.1) is achieved. The passive design analysis carried out includes an analysis of free cooling and identifies opportunities for the implementation of free cooling solutions. The building uses ANY of the free cooling strategies to reduce the cooling energy demand.</p>		1		1	
	<p>Low and zero carbon technologies</p> <p>A feasibility study has been carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent) by an energy specialist to establish the most appropriate recognised local (on-site or near site) low or zero carbon (LZC) energy source(s) for the building/development. A local LZC technology/technologies has/have been specified for the building/development in line with the recommendations of this feasibility study and this method of supply results in a meaningful reduction in regulated carbon dioxide (CO2) emissions. Reduced total energy demand and carbon dioxide (CO2) emissions resulting from passive design measures need to be quantified.</p>		1	1	0	
Total - Energy:			14	10	4	0
Credit value:			0.82%			
TRANSPORT						
Tra 01 - Transport assessment and travel plan	<p>Travel Plan</p> <p>A travel plan has been developed as part of the feasibility and design stages. A site specific travel assessment/statement has been undertaken to ensure the travel plan is structured to meet the needs of the particular site and covers the following (as a minimum):</p> <ul style="list-style-type: none"> - Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. - Travel patterns and transport impact of future building users. - Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children). - Reporting of the number and type of existing accessible amenities - Disabled access (accounting for varying levels of disability and visual impairment). - Public transport links serving the site. - Calculation of the existing public transport Accessibility Index (AI) - Current facilities for cyclists. <p>The travel plan includes a package of measures to encourage the use of sustainable modes of transport and movement of people and goods during the building's operation and use. If the occupier is known, they must be involved in the development of the travel plan and they must confirm that the travel plan will be implemented post construction and be supported by the building's management in operation.</p>	Pre-requisite for achieving Tra 02 credits. These credits must be targeted in order to gain any Tra credits.	2	2		Transport consultant

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
Tra 02 - Sustainable transport measures	<p>Alternative modes of Transport</p> <p>Consider the following when providing alternative means of transport to the development</p> <ol style="list-style-type: none"> The existing AI calculated in Tra 01 must achieve >8 Demonstrate an increase over the existing Accessibility index through negotiation with local bus, train or tram companies to increase the frequency of the local service provision for the development OR demonstrate an increase of the existing Accessibility Index. This could be through the provision of a diverted bus route, a new or enhanced bus stop, or other similar solutions OR provide a dedicated service, such as a bus route or service Provide a public transport information system in a publicly accessible areas, to allow building users access to up-to-date information on the available public transport and transport infrastructure. This may include signposting to public transport cycling walking infrastructure or local amenities. Demonstrate electric vehicles using charging points have lower CO2 emissions than petrol or diesel counterparts. Set up a car sharing group or facility to facilitate and encourage building users to car share; Ensure new amenities are provided for the users of the building (this could include; access to cash, access to an outdoor space, access to a recreation or leisure facility, publicly available postal or sports, community facility, over the counter services associated with a pharmacy, Child care facility or school). Install compliant cycle storage spaces to meet the minimum levels <p>- Provide at least two compliant facilities for the building users (i.e. showers, changing facilities, lockers, drying spaces)</p>	<p>1 credit NOT ACHIEVED assumed for AI >8. Additional credits could be achieved for eg: Provision of local transport info in accessible area - no Set up car sharing group - no Compliant cycle storage - 1 space per 10staff - No Space to add cycle storage Compliant cyclist facilities - showers, lockers, changing facilities, drying spaces - no - not targeted Existing amenities - food outlet, access to cash, access to open space, recreation, postal facility etc within 500 m - targeted</p>	10	1	9	Architect
Total - Transport:			12	3	9	0
Credit value:			0.96%			
WATER						
Wat 01 - Water consumption	<p>Water efficiency</p> <p>An assessment of the efficiency of newly specified domestic-water consuming components and measures specified to retrofit existing devices is undertaken using the BREEAM Wat01 calculator. Water consumption (litres/person/day) is compared against a baseline performance. BREEAM credits available on % improvement over baseline building water consumption. The efficiency of the following 'domestic scale' water-consuming components must be included in the assessment (where specified):</p> <ul style="list-style-type: none"> - WCs - Urinals - Taps (wash hand basins and where specified kitchen taps and waste disposal unit) - Showers - Dishwashers (domestic and commercial sized) - Washing machines (domestic and commercial or industrial sized). 	<p>Low flow sanitaryware fittings will be specified to ensure internal water consumption is minimised, contributing to a climate resilient building. Flow rates: WC- EFV 3.5litres Hand basin taps: 5 litres/min Kitchen taps: 6 litres/min</p>	5	3	2	Architect
Wat 02 - Water monitoring	<p>Pre-requisite</p> <p>The specification of a water meter on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source.</p>	<p>Water meter with sub metering and pulsed output will be used (minimum standard).</p>	N/A			M&E/Contract or
	<p>Water monitoring</p> <p>Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area. As a minimum, this includes the following (where present):</p> <ul style="list-style-type: none"> - Buildings with a swimming pool and its associated changing facilities (toilets, showers etc.). - On sites with multiple units or buildings, e.g. shopping centres, industrial units, retail parks etc. separate sub meters are fitted on the water supply to the following areas (where present): - Each individual unit supplied with water - Common areas (covering the supply to toilet blocks) - Service areas (covering the supply to outlets within storage, delivery, waste disposal areas etc.) - Ancillary/separate buildings to the main development with water supply. <p>Each meter (main and sub) has a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption (see Relevant definitions). If the site on which the building is located has an existing BMS, managed by the same occupier/owner (as the new building), the pulsed/digital water meter(s) for the new building must be connected to the existing BMS.</p>	<p>A water meter will be required on the building with sub metering to any high consuming areas (i.e. W/C areas). These will need to have a pulsed output for connection to BMS. The proposed building has minimal sources of water consumption (i.e. W/Cs) therefore sub metering may not be required on this building</p>	1	1		M&E
Wat 03 - Water Leak Detection & Prevention	<p>Leak detection system</p> <p>A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed. The leak detection system must be:</p> <ul style="list-style-type: none"> - A permanent automated water leak detection system that alerts the building occupants to the leak OR an inbuilt automated diagnostic procedure for detecting leaks is installed. - Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time. - 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 waterconsuming plant such as chillers. 	<p>Credit assumed</p>	1	1		M&E

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
	Flow control devices Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fittings).	Flow control devices would need to be installed - eg. PIR control/solenoid valves- difficult to implement.	1	0	1	M&E
Total - Water:			8	5	3	0
Credit value:			0.94%			
MATERIALS						
Mat 01 - Life cycle impacts	Environmental impact from construction Up to seven credits: BREEAM awards credits on the basis of the building's quantified environmental life cycle impact through assessment of the main building elements. Using LCA IMPACT compliant software, the scheme's substructure, superstructure and hard landscaping are considered at RIBA stages 2 and 4. This exercise will need to be verified by a third party verification body	LCA required at Stage 2 for all credits to be awarded, Not currently targeted	7	0	7	Architect
Mat 02 - Environmental Impacts of Construction Products	Environmental impacts from construction products Specify construction products with EPD that achieve a total EPD points score of at least 20. Details should be inputted into the Mat 01 result submission tool, including the material category classification.	Products to be specified with EPDs, to achieve total EPD score of 20.	1	1		Contractor
Mat 03 - Responsible sourcing of materials	Pre-requisite All timber and timber-based products used on the project is Legally harvested and traded timber Note: It is a minimum requirement for achieving a BREEAM rating (for any rating level) that compliance with criterion 1 is confirmed. Sustainable procurement plan The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan. A plan that sets out a clear framework for the responsible sourcing of materials to guide procurement throughout a project and by all involved in the specification and procurement of construction materials. The plan may be prepared and adopted at an organisational level or be site/project specific, and for the purposes of BREEAM compliance, will cover the following as a minimum: - Risks and opportunities are identified against a broad range of social, environmental and economic issues. BS 8902:2009 Responsible sourcing sector certification schemes for construction products- Specification can be used as a guide to identify these issues. - Aims, objectives and targets to guide sustainable procurement activities. - The strategic assessment of sustainably sourced materials available locally and nationally. There should be a policy to procure materials locally where possible. - Procedures are in place to check and verify that the sustainable procurement plan is being implemented/adhered to on individual projects. These could include setting out measurement criteria, methodology and performance indicators to assess progress and demonstrate success. A sustainable procurement plan must be in place before the end of RIBA Stage 2 Responsible sourcing of materials The available RSM credits can be awarded where the applicable building materials are responsibly sourced in accordance with the BREEAM methodology.	A procurement plan detailing sustainability best practice principles in respect to material sourcing will need to be developed by the end of Stage 2. Responsible Sourcing of Materials: To be included in the contractor's sustainability requirements at Stage 4	4	2	2	Contractor
Mat 05 - Designing for durability and resilience	Designing for durability and resilience Protecting vulnerable parts of the building from damage The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This must include, but is not necessarily limited to: Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas. Protecting exposed parts of the building from material degradation The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors. The following outlines the process: 1. Identify from the list of 'applicable building elements' under Table 50 the elements that are appropriate to the building being assessed. 2. Establish from the 'environmental factors' list those factors that are likely to cause material degradation effects in the identified applicable building elements. 3. Confirm the design and specification measures in place to limit these degradation effects. 4. The assessor should use their professional judgement in determining whether the design team have adequately demonstrated that they have designed and specified materials and/or measures which will be effective in preventing unnecessary deterioration, so reducing frequent replacements, repairs and maintenance through the life cycle of the building. 5. At post construction stage, where the design and specification measures installed differ from those proposed at design stage, the assessor	To be considered with the project team at Stage 3. Vulnerable parts of the building will be protected from damage. In addition, exposed parts of the building will be protected from damage due to environmental factors.	1	1		Architect

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
Mat 06 - Material Efficiency	<p>Minimise environmental impact of material - Materials Optimisation</p> <p>Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life. The above is carried out by the design/construction team in consultation with the relevant parties at each of the following RIBA stages: Preparation and Brief Concept Design Developed Design Technical Design Construction. Relevant parties: All parties (as relevant to the project stage) involved in the design, specification and/or construction of the building should be consulted. This includes but is not limited to, the following: Client/developer, Cost consultant, Architect, Structural/civil engineers, Building services engineers - mechanical, electrical, Principal contractor, Demolition/strip-out contractor, Environmental consultant, Project management consultant, Materials/component manufacturers/suppliers.</p>	Required to be done at Stage 1 so not targeted	1		1	
	Total - Materials:		14	4	10	0
Credit value:			1.25%			
WASTE						
Wst 01 - Construction Waste Management	<p>Pre-demolition audit</p> <p>Carry out a pre-demolition audit by the end of RIBA Stage 2 by a competent person prior to stripout or demolition works. This informs the design of materials to consider for reuse and set targets for waste management. All contractors should be engaged in the process of maximising high grade reuse and recycling opportunities Actual waste arisings and waste management routes used with those forecast should be compared and investigate significant deviations from planned targets</p>	No demolition				Contractor
	<p>Construction resource efficiency</p> <p>Where a Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction (see CN3). Where construction waste related to on-site construction and dedicated off-site manufacture/fabrication excluding demolition and excavation waste) meets or is lower than the following One credit - Simple buildings - Construction resource efficiency 13 Produce a Resource Management Plan (RMP) with the aim of minimising and monitoring waste. Two credits - Simple buildings - RMP measurements and reporting 14 Meet compliance with criterion 13. 15 Waste management procedures recorded in the RMP and implemented. Measure and report: 15.a Construction waste generated by the project in m³ or tonnes per 100m² gross internal floor area, excluding demolition and excavation waste 15.b The proportion of construction waste diverted from landfill, i.e. reused, recycled or recovered.</p>	Compliant resource management plan (SWMP) will be produced. Criteria for Simple Buildings assumed to be met. 3 credits targeted.	3	3		Contractor
	<p>Diversion of resources from landfill</p> <p>The following percentages of non-hazardous construction (on-site and off-site manufacture/fabrication in a dedicated facility), demolition and excavation waste (where applicable) generated by the project have been diverted from landfill: BREEAM credits One credit: Type of waste Non demolition 70% volume 80% tonnage Demolition 80% volume 90% tonnage Excavation N/A Exemplary level Non demolition 85% 90% Demolition 85% 95% Excavation 95% 95%</p>	Diversion of resources from landfill: To be included in the contractor's sustainability requirements at Stage 4 Assumptions made regarding waste diverted from landfill for 1 credit. The waste will be sorted into separate waste groups	1	1		Contractor
Wst 02 - Recycled aggregates	<p>Use of recycled and sustainably sourced aggregates</p> <p>Identify all aggregate uses and type on the project, determine the quantity in tonnes for each identified use and aggregate type, identify the region in which the aggregate source is located and identify the distance in kilometres travelled by all aggregates by transport type. This information is then entered into BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points. The corresponding number of BREEAM credits will be awarded.</p>	No recycled aggregates (i.e. from the existing building) are currently proposed.	1		1	

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
Wst 03 - Operational Waste	<p>Operational waste</p> <p>Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be:</p> <p>Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams</p> <p>Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors</p> <p>Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities and occupancy rates.</p> <p>Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operation, the following facilities are provided:</p> <p>Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space.</p> <p>Vessel(s) for composting suitable organic waste resulting from the building's daily operation and use;</p> <p>OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility.</p> <p>Where organic waste is to be stored/composted on-site, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes.</p>	Space for recycled waste - at least 2m2 for each 1000m2 GIA. Space for general waste in addition. Space must be accessible.	1	1		Architect
Wst 05 - Adaptation to Climate Change	<p>Adaptation to climate change – structural and fabric resilience</p> <p>1 Conduct a climate change adaptation strategy appraisal using:</p> <p>1.a A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects.</p>	Climate change risk register to be issued for completion before the end of Stage 2.	1	1		Architect
Wst 06 - Design for disassembly and Adaptability	<p>One credit - Design for disassembly and functional adaptability - recommendations</p> <p>1 Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios (see Methodology below) by the end of Concept Design.</p> <p>2 Develop recommendations or solutions (see Methodology below) based on the study (criterion 1 above), during or prior to Concept Design, that aim to enable and facilitate disassembly and functional adaptation.</p> <p>One credit - Disassembly and functional adaptability – implementation</p> <p>3 Achieve criteria 1 and 2</p> <p>4 Provide an update, during Technical Design, on:</p> <p>4.a How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor.</p> <p>4.b Changes to the recommendations and solutions during the development of the Technical Design.</p> <p>5 Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.</p>	Design for disassembly and functional adaptability -recommendations: Team to include statements in Stage 2 reports to demonstrate considered to functional adaptability and disassembly of the proposed extension. Design for disassembly and functional adaptability -implementation: To be reviewed with the team at Stage 4 Functional adaptation strategy:Feasibility, Accessibility, Versatility, Adaptability, Convertability, Expandability and refurbishment potential.	2	2		Architect
Total - Waste:			9	8	1	0
Credit value:			0.78%			
LAND USE & ECOLOGY						
LE 01 - Site Selection	<p>Previously occupied land</p> <p>At least 75% of the proposed development's footprint is on an area of land which has previously been occupied</p> <p>Contaminated land</p> <p>A contaminated land professional's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. The site investigation, risk assessment and appraisal have identified:</p> <p>The degree of contamination</p> <p>The contaminant sources/types</p> <p>The options for remediating sources of contamination which present an unacceptable risk.</p> <p>The client or principal contractor confirms that remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan as recommended by the contaminated land professional.</p> <p>Prerequisite - Assessment route selection</p>	Existing plans required to show site was previously hardstanding.	1	1		Architect
LE 02 - Ecological value of site and protection of ecological features	<p>1 An assessment route for the project has been determined using BREEAM Guidance Note GN34 BREEAM Ecological Risk Evaluation Checklist.</p> <p>2 The client or contractor confirms compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.</p> <p>Survey and evaluation</p>	For full credits appointment of Ecologist is required. Area to be developed is hardstanding. Deemed not financially viable to appoint an ecologist Route 1 only one credit available	2	1	1	Ecologist

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
LE 03 - Minimising Impact on Existing Site Ecology	<p>Prerequisite – Identification and understanding the risks and opportunities for the site 1 LE 02 has been achieved. 2 The client or contractor has confirmed that compliance is monitored against all relevant UK, and EU or International legislation relating to the ecology of the site</p> <p>One credit – Planning, liaison, implementation and data</p> <p>Up to two credits – Managing negative impacts of the project Route 2 (two credits) Negative impacts from site preparation and construction works have been managed according to the hierarchy and, either: No net loss of ecological value has occurred (2 credits) OR The loss of ecological value has been minimised (Minimising Loss) (1 credit)</p>	<p>For full credits appointment of Ecologist is required LE02 must be achieved in order to gain these credits.</p> <p>Route 1 only two credits available</p>	3	2	1	Ecologist
LE 04 - Enhancing Site Ecology	<p>Prerequisite - Identifying and understanding the risks and opportunities for the project 1 LE 03 has been achieved.</p> <p>One credit - Liaison, implementation and data collection Change and enhancement of Ecology - Route 2 - up to 3 credits Up to three credits are awarded based on the calculation of the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2. Credits are awarded as follows: Minimising loss of ecological value (one credit - percentage score of 75-94) No net loss of ecological value (two credits - percentage score of 95-104) Net gain of ecological value (three credits - percentage score of 105-109)</p>	<p>For full credits appointment of Ecologist is required Pre-requisite - LE03 Planning, liaison, implementation and data credit must be achieved. Assumed 3 credits achievable via Route 2.</p> <p>Route 1 only one credit available</p>	4	1	3	Ecologist
LE 05 - Long Term Impact on Biodiversity	<p>Prerequisite - Roles and responsibilities, implementation, statutory obligations 1 The client or contractor has confirmed that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. LE 03 has been achieved.</p> <p>One credit - Planning, liaison, data, monitoring and review management and maintenance Landscape and ecology management plan (or similar) development One credit - Planning, liaison, data, monitoring and review management and maintenance</p>	<p>For full credits appointment of Ecologist is required Pre-requisite - LE03 Planning, liaison, implementation and data credit must be achieved, and 1 credit under LE04, Change and enhancement of ecology. Potential for 2 credits achievable via Route 2.</p> <p>Route 1 only one credit available</p>	2	1	1	Ecologist
Total Land Use & Ecology:			13	6	7	0
Credit value:			1.15%			
POLLUTION						
Pol 02 - Local Air Quality	<p>Local Air Quality</p> <p>All installed combustion plant that provide space heating and domestic hot water and for which minimum emission levels have been set under European Directive 2009/125(215) must meet the following emission levels. If electrically sourced then the associated local NOx emissions are considered to be zero. If gas boilers are utilised then the following standards must be met : 1 credit : 27mg/kWh (outside AQMA), 27 mg/kWh (inside AQMA) 2 credits : 24mg/kWh (outside AQMA), 24 mg/kWh (inside AQMA)</p>	Will need to be confirmed by M&E	2	2		M&E
Pol 03 - Surface water run off	<p>Flood resilience</p> <p>2 credits - Low flood risk - Where a site-specific flood risk assessment (FRA) confirms the development is situated in a flood zone that is defined as having a low annual probability of flooding (in accordance with current best practice national planning guidance. The FRA must take all current and future sources of flooding into consideration.</p>	<p>2 credits for low flood risk. For small simple sites (2000m² and less), an acceptable FRA could be a brief report carried out by the contractor's engineer confirming the risk of flooding. This must include the risk from all sources of flooding, and information obtained from the Environment Agency, water company or sewerage undertaker, other relevant statutory authorities, site investigation and local knowledge.</p>	2	2		Drainage consultant
	<p>Surface water run off</p> <p>An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with the following criteria: One credit: There is no increase in the impermeable surfaces as a result of the new construction; Two credit: There is a decrease in the impermeable area by 50% or more, from the pre-existing impermeable hard surfaces. OR All run-off from the roof, including new and existing parts of the building, has been managed on site using source control methods. This must be achieved for rainfall depths up to 5mm.</p>	Assumed one credit	2	1	1	Drainage consultant
	<p>Minimising watercourse pollution</p> <p>There is no discharge from the developed site for rainfall up to 5mm (confirmed by the Appropriate Consultant). In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques.</p>	Minimising water course pollution may be difficult.	1		1	Drainage consultant

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
Pol 04 - Reduction of night time light pollution	Reduction of night time light pollution Where external lighting pollution has been eliminated through effective design that removes the need for external lighting without adversely affecting the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows: The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011.	Compliant external lighting will be installed.	1	1		M&E
Total - Pollution:			8	6	2	0
Credit value:			0.75%			
INNOVATION						
Man 01 - Project brief and Design	BREEAM Advisory Professional (Concept Design)	BREEAM AP credits 1 and 2 confirmed.	1	1		BREEAM AP
Man 01 - Project brief and Design	BREEAM Advisory Professional (Developed Design)	BREEAM AP credits 1 and 2 confirmed.	1	1		BREEAM AP
Man 03 - Responsible construction practices	2 credits available - transport of materials to and from site, and CCS score>40	1 credit targeted for transport of materials to and from site.	2	1	2	
Hea 01 - Visual Comfort	Daylighting criteria have been met using either of the following options: Relevant building areas meet exemplary daylight factor(s) and the relevant criteria in Table 15 . OR Relevant building areas meet exemplary average and minimum point daylight illuminance criteria in Table 16 .		1		1	
Hea 02 - Indoor Air Quality	Three of the product types listed meet the emission limits, testing requirements and any additional requirements listed in the BREEAM manual. Where wood-based products are not one of the three selected product types, all wood-based products used for internal fixture and fittings must be tested and classified as formaldehyde E1 class as a minimum		1		1	
Hea 06-Security	Undertake a compliant risk based security rating scheme. The performance against the scheme has been confirmed by independent assessment and verification. At the time of issue the only recognised risk based security rating scheme is SABRE		1		1	
Ene 01 - Reduction of energy use and carbon emissions	Energy modelling and reporting Undertake additional energy modelling during the design and post construction stage to generate predicted operational energy consumption figures Report predicted energy consumption targets by end use, design assumptions and input data (with justifications) Carry out a risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.	Exemplary only. Credits not targeted.	7		7	
Wat 01 -Water Consumption	65% improvement over baseline building water consumption		1		1	
Mat 01 - Life cycle impacts	When undertaking an Life Cycle Assessment 2 exemplary credits are awarded where the following has been confirmed: 1. During RIBA Stage 2 the LCA options appraisal considers at least 3 significantly different core building services design options to identify reductions in environmental impacts. (Not applicable as shell only) 2. Achieve Elemental LCC plan and Component Level LCC options appraisal credits and incorporate the design options for the LCC plans into the LCA appraisal. 3. A suitably qualified 3rd party shall verify the results of the LCA appraisal as accurately representing the designs under consideration at RIBA stages 2 and 4. For each LCA option, the report shall itemise the findings of the verification checks made by the suitably qualified 3rd party.		3		3	
Mat 03 - Responsible sourcing of materials	As per the benchmarks for Mat 03 plus core building services and ≥50% of available points achieved		1		1	
Wst 01 - Construction Waste Management	Non-hazardous construction waste generated by the building's design and on-site construction and offsite manufacture or fabrication (excluding demolition and excavation waste) is no greater than the exemplary level resource efficiency benchmark.		1		1	
Wst 02 - Recycled aggregates	The percentage of high grade aggregate that is recycled or secondary aggregate, specified in each application (present) must meet the exemplary minimum levels (by weight or volume), as defined in Table 54 .		1		1	
Wst 05 - Adaptation to Climate Change	Responding to climate change A holistic approach to the design and construction of the current building's life cycle, to mitigate against the impacts of climate change, is represented by the achievement of these criteria.		1		1	

Credit Criteria Red- Minimum standards		Comments	Number of credits available	TARGETED	Unachievable	Responsibility
LE 02 - Ecological Value of Site and Protection of Ecological Features	When determining the optimal ecological outcome for the site consider, in addition to those outlined in criteria 8-10, the wider site sustainability-related activities and the potential for ecosystem service related benefits.		1			
Pol 03 - Surface water run off	For 'simple buildings', the criteria below should be applied to award one or two credits. Alternatively, two credits and an Exemplary credit is awarded where criteria 5-16 on the previous page are achieved.	1 exemplary credit for meeting surface water criteria for non-simple building	1		1	Drainage consultant
Approved Innovation			1		1	
Total - Innovation - Maximum credit : 10			10	3	7	3
Credit value: 1.00%						
			60.57	60.57	0.00	
			Very Good	Outstanding	0	