

# The Newhouse Centre, Hampton

BREEAM New Construction 2014

Design Stage Pre-Assessment - Planning Issue

Based on the BREEAM New Construction 2014 Design Stage Criteria (Issue 5.0)

Education Buildings (Schools)

Revision P5, 22 February 2017

BRE Reference Number: TBC



## The Newhouse Centre - BREEAM Pre-Assessment

BREEAM, the UK's Building Research Establishment's Environmental Assessment Method, is used to rate the environmental performance of new or existing buildings, as designed and constructed and/or in operation. A BREEAM rating of 'Pass', 'Good', 'Very Good', 'Excellent' or 'Outstanding' can be awarded where sufficient credits have been gained on the basis of meeting environmental performance criteria in each of the categories: Management, Health and Wellbeing, Energy, Transport, Water, This pre-assessment has been carried out based on the BREEAM 2014 New Construction Design Stage Criteria for Education buildings. This scheme is applicable to new build projects. In addition to a range of standard issues assessed for all building types, this also includes requirements specific to Education buildings which have been included in the pre-assessment.

Please note that this pre-assessment includes a summary of the requirements for each credit but the BREEAM Technical Manual should be referred to for full details.

### Scoring and mandatory requirements

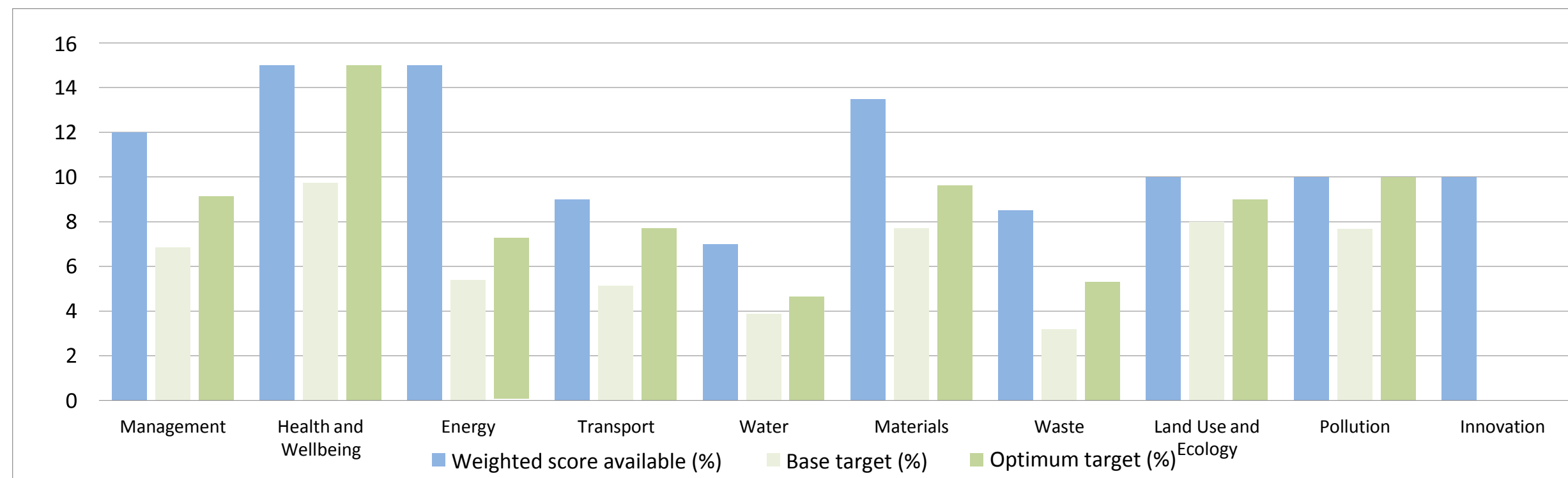
BREEAM requires the achievement of a minimum percentage score in order to achieve a particular rating. This is determined through achieving credits which are assigned to issues under each of the sections noted above. These sections are all weighted differently so credits in different sections equate to a different percentage score to those in other sections. The percentage contribution of each credit to the final score is noted at the end of each section in the following pages.

In addition to the achievement of a minimum score, BREEAM also contains mandatory credits/requirements which MUST be achieved in order to obtain a particular rating. If these are not achieved, the required rating cannot be obtained regardless of the percentage score achieved. In BREEAM 2014, there are also 'pre-requisites' which do not carry a score, but must be achieved in order to award a credit and/or rating. Where a pre-requisite or mandatory credit is present, this is clearly highlighted in the main summary spreadsheet below. A list of the mandatory credits can also be found at the end of this summary sheet.

Project Targets
<b>MINIMUM BREEAM RATING REQUIRED: Good</b> (This equates to a score of 45% and requires the achievement of certain mandatory credits.)
It should be noted that until sufficient evidence is provided by the project team to the BREEAM Assessor to demonstrate that the full requirements have been met, none of these scores can be assumed to have been achieved, but remain as targets until the assessor confirms otherwise. This pre-assessment is based on discussions at project team meetings and additional correspondence.
The base target shows the minimum credits anticipated to be achieved for the development. This equals 45.08% which is a rating of Good.

This graph below shows the number of credits available for each environmental issue and the number targeted for this project.

Expected Scores (%)	
Minimum required	45
Base Target	45.08



**Base Target**

The base target shows the minimum credits anticipated to be achieved for the development. This equals 45.08% which is a rating of Good.

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>MANAGEMENT</b>							
<b>Man 01</b>	<b>Project brief and design</b>	<b>To recognise and encourage an integrated design process that optimises building performance.</b>					
<b>Project brief and design</b>							
<b>Stakeholder Consultation (Project Delivery) (1-3)</b>	1	0	<p>Credit awarded where, prior to completion of the RIBA Stage 2, the client, building occupier, design team and contractor contribute to the decision making process for the project. As a minimum this includes meeting to identify and define their roles, responsibilities and contributions during each phase of the project.</p> <p>Show that consideration was given to all topics as listed in the guidance (requirements 2a-g).</p> <p>The project team should demonstrate how the project delivery stakeholder contributions and outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design.</p>	0.57%	<p>Although early stage consultation has taken place, as the BREEAM requirements are particularly extensive, relevant evidence needs to be reviewed to determine if all requirements have been met.</p> <p><b>Credit not targeted.</b></p>		
<b>Stakeholder Consultation (Third Party) (4-7)</b>	1	0	<p>Credit awarded where, prior to completion of the RIBA Stage 2, all relevant third party stakeholders have been consulted by the design team on the minimum consultation content. Refer to the guidance for full details. The project team must demonstrate how the consultation exercise has influenced or changed the Initial Project Brief and Concept Design.</p> <p>Prior to completion of RIBA Stage 4, consultation feedback must be given to, and received by, all relevant parties.</p> <p>Note that for schools, the Consultation exercise must use a method carried out by a independent party.</p>	0.57%	<p>The level of consultation required to achieve this credit is substantial and given the scope of the development is considered inappropriate. Notably any consultation would not be undertaken by a third party using a DQI methodology.</p> <p><b>Credit not targeted.</b></p>		
<b>Sustainability Champion (BREEAM AP) (Design) (8-10)</b>	1	0	<p>Credit awarded where a Sustainability Champion is appointed to facilitate the setting and achievement of BREEAM performance targets for the project during the preparation and brief stages (RIBA Stage 1). AND The BREEAM performance targets have been contractually agreed between the client and design team by the end of RIBA Stage 2.</p> <p>To achieve this credit at design stage, the agreed BREEAM performance targets must be achieved by the project design.</p>	0.57%	<p>Although Georgie James of Method is a BREEAM AP she was not appointed at an early enough stage to enable this credit to be achieved.</p> <p><b>Credit not targeted.</b></p>		
<b>Sustainability Champion (BREEAM AP) (Monitoring Progress) (11-12)</b>	1	0	<p>Credit awarded where the first BREEAM AP credit is achieved and the Sustainability Champion is appointed to monitor progress against the agreed BREEAM targets throughout the design process, and reports progress to the client and design team. The Sustainability Champion must attend key project/design team meetings during the design stages (RIBA Stages 2, 3 &amp; 4) and reports during, and prior to, completion of each stage, as a minimum.</p>	0.57%	<p>Although Georgie James of Method is a BREEAM AP she was not appointed at an early enough stage to enable this credit to be achieved. This would also require an enhanced level of BREEAM AP input which is not considered appropriate for this scale of project.</p> <p><b>Credit not targeted.</b></p>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Man 02</b>	<b>Life cycle cost and service life planning</b>		<b>To deliver whole life value from investment and promote economic sustainability by recognising and encouraging the use of life cycle costing and service life planning to improve design, specification and through-life maintenance and operation.</b>				
<b>Elemental Life Cycle Cost (LCC) (1-2)</b>	2	0	<p>Two credits awarded where an outline, entire asset elemental life cycle cost (LCC) plan is carried out in line with 'Standardized method of life cycle costing for construction procurement' PD 156865:2008, at RIBA Stage 2.</p> <p>The LCC analysis must provide an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years) and includes service life, maintenance and operation cost estimates.</p> <p>Demonstrate how the elemental LCC plan has influenced building and systems design/specifications to minimise life cycle costs and maximise critical value.</p>	1.14%	<p>The scope of LCC analysis and service life planning required to achieve these credits is not considered appropriate for this scale of project.</p> <p><b>Credits not targeted.</b></p>		
<b>Component Level LCC Plan (3-4)</b>	1	0	<p>Credit awarded where a component LCC plan is developed to include envelope, services, finishes and external spaces before the end of RIBA Stage 4.</p> <p>Demonstrate how the component level LCC plan has influenced building and systems design/specifications to minimise life cycle costs and maximise critical value.</p>	0.57%	<p>The scope of LCC analysis required to achieve this credit is not considered appropriate for this scale of project.</p> <p><b>Credit not targeted.</b></p>		
<b>Capital Cost Reporting (5)</b>	1	1	<p>Credit awarded where the project team reports the predicted capital cost for the building in £k/m<sup>2</sup>. At the design stage, this can be awarded based on confirmation of the predicted cost, and a client commitment to provide the information on the final cost at the end of the project.</p>	0.57%	<p>This credit will be targeted. It should be noted that the cost figures provided as evidence are not made public, and are only used by the BRE for statistical purposes.</p> <p><b>Credit targeted.</b></p>		
<b>Man 03</b>	<b>Responsible construction practices</b>		<b>To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.</b>		<b>Mandatory minimum requirement: One credit for Excellent and two credits for Outstanding for Considerate Construction.</b>		
<b>Pre-requisite</b>	0	Y	<p><b>MANDATORY FOR ALL RATINGS: All timber and timber based products used in the project must be "Legally harvested and traded timber".</b></p>	0.00%	<p>As a mandatory requirement, this pre-requisite must be achieved. The Contractor will be required to source all timber responsibly.</p> <p><b>Pre-requisite targeted.</b></p>		
<b>Environmental Management (1-2)</b>	1	1	<p>Credit awarded where the principal contractor operates an EMS covering main operations. This is typically ISO 14001 certification.</p> <p>AND</p> <p>The principal contractor implements best practice pollution prevention policies on site, in line with PPG 6.</p>	0.57%	<p>The appointed Contractor should be required to have ISO 14001 certification and to implement pollution prevention policies on site.</p> <p><b>Credit targeted.</b></p>		
<b>Sustainability Champion (BREEAM AP/BRE SSM) (Construction) (3-5)</b>	1	0	<p>Credit awarded where a Sustainability Champion is appointed to monitor the project to ensure compliance with relevant sustainability criteria and BREEAM targets during Construction, Handover and Close Out stages (RIBA stages 5 and 6). The agreed BREEAM targets form a requirement of the principal contractors contract and are achieved.</p> <p>Note that to achieve this, the Sustainability Champion must be site based or visit the site regularly to carry out spot checks, with sufficient frequency. They will attend regular progress meetings and report progress against the BREEAM targets.</p>	0.57%	<p>This credit is not currently targeted, although the Contractor will have the option to appoint a BREEAM AP/Site Sustainability Manager to achieve this credit.</p> <p><b>Contractor option to target.</b></p>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Considerate Construction (6)	2	1	<b>MANDATORY FOR EXCELLENT:</b> One credit awarded where a CCS score of 25-34 is achieved with 5 in each section. <b>MANDATORY FOR OUTSTANDING:</b> Two credits awarded where the score is between 35-39 with 7 in each section.	1.14%	The Contractor will be required to register the site with CCS and achieve a score of at least 25 with 5 in each section.  <b>One of two credits targeted.</b>		
Monitoring of Construction Site Impacts (Utility Consumption) (7-13)	1	0	Credit awarded where responsibility for monitoring all on-site energy use and potable water consumption from construction processes (and dedicated off-site monitoring) has been assigned to an individual. AND Potable water (m <sup>3</sup> ) and energy (kWh/litres of fuel) used by all construction plant, equipment (fixed and mobile) and site accommodation is monitored and reported on. Provide the final CO <sub>2</sub> emissions (total kgCO <sub>2</sub> /project value) and total net potable water consumption (m <sup>3</sup> ) at the end of the project.	0.57%	<b>Credit not targeted.</b>		
Monitoring of Construction Site Impacts (Transport) (7, 14-16)	1	0	Credit awarded where responsibility has been assigned to an individual to monitor and record transport movement and impact data from delivery of the majority of construction materials to, and waste from, site. Transport, intermediate storage and distribution of materials from factory gate to building site to be included as minimum.  Report separately for materials and waste, the total fuel consumption (litres) and total CO <sub>2</sub> emissions (kgCO <sub>2</sub> eq), plus distance travelled (km). Provide the final figures at the end of the project.	0.57%	<b>Credit not targeted.</b>		
Man 04	Commissioning and handover		<b>To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.</b>		<b>Mandatory minimum requirement: Criterion 9 (Building User Guide) for Excellent and Outstanding.</b>		
Commissioning and Testing Schedule and Responsibilities (1-4)	1	1	Credit awarded where a schedule of commissioning is prepared which identifies a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services, control systems and building fabric and the appropriate standards that all commissioning activities will be carried out in accordance with. Please refer to the technical guidance for details of the appropriate standards and BMS commissioning procedures. AND An appropriate project team member is appointed to monitor and programme pre-commissioning, commissioning and, where necessary, re-commissioning on behalf of the client. AND The principal contractor accounts for the commissioning programme, responsibilities and criteria within their budget and programme of works.	0.57%	This credit is targeted as part of best practice. Compliant commissioning must be carried out, and an appropriate team member appointed to monitor and programme commissioning activities and to prepare a commissioning schedule.  <b>Credit targeted.</b>		
Commissioning Building Services (5)	1	1	Credit awarded where the first commissioning credit has been achieved and a specialist commissioning manager is appointed during RIBA Stage 4 for buildings with complex building services and systems. Responsibility should cover: 1. Undertaking design reviews and advising on commissionability. 2. Providing input to programming. 3. Management of commissioning, performance testing and handover/post hand-over stages.	0.57%	This credit is targeted as part of best practice. One or more specialist commissioning managers will need to be appointed in relation to specified systems. Examples of complex systems currently specified include a BEMS system.  <b>Credit targeted.</b>		
Testing and Inspecting Building Fabric (6-8)	1	0	Credit awarded where the first commissioning credit is achieved, and a post construction thermographic survey and airtightness testing and inspection is completed to assure the quality of the building fabric, including insulation continuity, avoidance of thermal bridging and air leakage paths. Defects identified must be rectified prior to building handover. All testing must be carried out by a Suitably Qualified Professional, in line with the relevant standard.	0.57%	<b>Credit not targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Handover (9-10)	0	Y	<b>MANDATORY FOR EXCELLENT AND ABOVE:</b> A Building User Guide is developed prior to handover covering all functions and uses of the building.	0.00%	This pre-requisite is mandatory for the credit to be achieved, and the Contractor will be required to produce a Building User Guide to achieve this. <b>Pre-requisite targeted.</b>		
	1	1	A training schedule is prepared for building occupiers, timed appropriately around handover and proposed occupation plans, which includes the following content as a minimum: a) The building's design intent. b) The proposed aftercare provision, including main contacts, seasonal commissioning and POE. c) Demonstration of installed systems and key features. d) Introduction to the BUG and other relevant building documentation. e) Maintenance requirements.	0.57%	The Contractor will be required to include for meeting the BREEAM requirements for this issue in the scope of their handover services. <b>Credit targeted.</b>		
Man 05	Aftercare		<b>To provide post-handover aftercare to the building owner/occupants during the first year of occupation to ensure the building operates and adapts, where relevant, in accordance with the design intent and operational demands.</b>	<b>Mandatory minimum requirement: One credit (Seasonal Commissioning) for Excellent and Outstanding.</b>			
Aftercare Support (1-2)	1	0	Credit awarded where the principal contractor commits to provide aftercare support to the building occupier, which includes a meeting, walkabout of the building, introduction to the building systems, on-site attendance for a month after handover and longer term support at least the first 12 months from occupation. AND The client/building occupier commits to collect and monitor energy and water consumption data for a minimum of 12 months, once the building is occupied, to analyse discrepancies between actual and predicted performance.	0.57%	<b>Credit not targeted.</b>		
Seasonal Commissioning (3)	1	0	<b>MANDATORY FOR EXCELLENT AND ABOVE: Complex systems - Specialist commissioning manager (over a minimum 12 month period after occupation)</b> a. Testing of all building services under full load conditions, i.e. heating equipment in mid-winter, cooling/ventilation equipment in mid-summer, and under part load conditions (spring/autumn); b. Where applicable, testing should also be carried out during periods of extreme (high or low) occupancy; c. Interviews with building occupants (where they are affected by the complex services); Recommissioning of systems (following any work needed to serve revised loads), and incorporating any revisions in operating procedures into the O&M manuals.  <b>Simple systems (naturally ventilated) - external consultant/ facilities manager</b> a. Review thermal comfort, ventilation, and lighting, at three, six and nine month intervals after initial occupation, either by measurement or occupant feedback; take all reasonable steps to recommission systems following the review to take account of deficiencies identified and incorporate any relevant revisions in operating procedures into the O&M manuals.	0.57%	<b>Credit not targeted.</b>		
Post Occupancy Evaluation (4-5)	1	0	The client makes a commitment to carry out a Post Occupancy Evaluation (POE) one year after building occupation, to gain building performance feedback. The POE should be carried out by an independent third party. See technical guidance for full list of what should be included.  The client makes a commitment to produce a case study on the building's post occupancy performance in order to share any good practice and lessons learned, and inform changes in user behaviour, building operational processes and procedures, and system controls.	0.57%	This credit is not currently targeted, as it is considered inappropriate given the scope of the development. <b>Credit not targeted.</b>		
<b>Sub-Total</b>	<b>21</b>	<b>6</b>					
<b>Weighted Sub-Total</b>	<b>12</b>	<b>3.43</b>	<b>One management credit equals 0.57%</b>				

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>HEALTH &amp; WELLBEING</b>							
<b>Hea 01</b>	<b>Visual comfort</b>		<b>To ensure daylighting and occupant controls are considered at the design stage to ensure best practice visual performance and comfort for building occupants.</b>				
<b>Glare Control (1-2)</b>	1	1	<p>Credit awarded when the potential for disabling glare has been designed out of all relevant building areas either through building layout (e.g. low eaves) or building design (e.g. brise soleil, bioclimatic design or blinds).</p> <p>The glare control strategy avoids increasing lighting energy consumption by maximising daylight levels whilst avoiding disabling glare. System should not inhibit daylight entering the space under cloudy conditions, and the location of shading should not conflict with operating lighting controls. Occupant controlled devices such as blinds should have a transmittance value of &lt;0.1 (10%).</p>	0.83%	<p>Compliant glare control will be specified for relevant rooms.</p> <p><b>Credit targeted.</b></p>		
<b>Daylighting (3)</b>	2	0	<p>Two credits awarded where calculations have been carried out which demonstrate that at least 80% of floor area in occupied spaces is adequately daylit.</p> <p>Note: For all education buildings, where the Education Funding Agency daylighting criteria have been achieved for all relevant rooms within the building, two credits can be awarded by default. Evidence would need to be provided that the EFA requirements have been met.</p>	1.67%	<b>Credits not targeted.</b>		
<b>View Out (4-6)</b>	1	1	<p>Credit awarded when 95% of floor space within each relevant building area (inc. workstations, close work areas or areas where a view out is deemed beneficial to occupants of the space) are within 7m of a wall which has a window or permanent opening that provides an adequate view out.</p> <p>The window/opening must be equal to, or greater than, 20% of the surrounding wall area. Where the room depth is greater than the 7m requirement, compliance is only possible where the % of window/opening is ≥ the values in table 1.0 of BS 8206.</p>	0.83%	<p>Given room depths and the size of glazed areas, all relevant rooms should achieve the view out requirements.</p> <p><b>Credit targeted.</b></p>		
<b>Internal and External Lighting Levels, Zoning and Control (7-13)</b>	1	1	<p>Credit awarded where high frequency ballasts are fitted to all fluorescent and compact fluorescent lamps.</p> <p>AND</p> <p>All internal and external lighting is designed to provide illuminance levels appropriate to tasks undertaken, recommended by SLL Code for Lighting 2012, CIBSE LG 7 or other relevant industry standard for internal lighting, and BS 5489-1:2013 and BS EN 12464-2:2014 for external lighting.</p> <p>AND</p> <p>Lighting must be appropriately zoned and allow for occupant control. Areas used for teaching, seminar or lecture purposes must have controls specified in accordance with CIBSE LG5. Manual lighting controls should be easily accessible for the teacher whilst teaching and on entering/leaving the teaching space.</p>	0.83%	<p>This credit is targeted. The detailed design should ensure that zoning, daylight dimming and manual control of lighting are BREEAM compliant.</p> <p><b>Credit targeted.</b></p>		
<b>Hea 02</b>	<b>Indoor air quality</b>		<b>To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.</b>				
<b>Indoor Air Quality Plan (1)</b>	1	0	<p>Credit awarded where an Indoor Air Quality (IAQ) plan has been produced, to identify methods that can minimise indoor air pollution during occupation of the building by considering:</p> <ol style="list-style-type: none"> <li>Removal of contaminant sources</li> <li>Dilution and control of contaminant sources</li> <li>Procedures for pre-occupancy flush out</li> <li>Third party testing and analysis</li> <li>Maintaining indoor air quality in-use</li> </ol>	0.83%	<b>Credit not targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Ventilation (2-5)	1	0	<p>Credit awarded where the building has been designed to minimise the concentration and recirculation of pollutants in the building by providing fresh air in to the building in accordance with relevant standards for ventilation.</p> <p><b>1. In air-conditioned and mixed-mode buildings/spaces:</b> The building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution. OR The location of the building's air intakes and exhausts, in relation to each other and external sources of pollution, is designed in accordance with BS EN 13779:2007 Annex A2.</p> <p><b>2. In naturally-ventilated buildings/spaces:</b> openable windows/ventilators are over 10m from sources of external pollution.</p> <p>Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, in line with BS EN 13779:2007.</p>	0.83%	<p>The majority of spaces are naturally ventilated, with the exception of the sensory room which has an AHU. However, at this stage it is considered that intakes and extracts will be the required distance apart and that although most of the openable windows/intakes of naturally ventilated spaces are over 10m from external sources of pollution (i.e. roads), the windows to the NE elevation of the new KS2 classroom are within 10m of the proposed car park areas, which are considered sources of external pollution.</p> <p><b>Credit not currently targeted.</b></p>		
Volatile Organic Compounds (Emission levels) (6-7)	1	0	<p>Areas of the building subject to large and unpredictable/variable occupancy patterns should have CO or</p> <p>Credit awarded where all decorative paints and varnishes specified meet the criteria in the EU Directive 2004/42/CE ('Paints Directive'). At least five of the other seven remaining product categories meet the testing requirements and emission level criteria for Volatile Organic Compound (VOC) emissions.</p> <p>The seven categories are: wood panels, timber structures, wood flooring, textile and laminated floor coverings, suspended ceiling tiles, flooring adhesives and wall coverings.</p>	0.83%	<b>Credit not targeted.</b>		
Volatile Organic Compounds (Testing) (8-12)	1	0	<p>Credit awarded where formaldehyde and total volatile organic compound (TVOC) concentrations meet the required standards and are measured via post construction (but pre-occupation) testing in accordance with the relevant standards.</p>	0.83%	<p>Given the size and scope of the extension works, there are no proposals to undertake pre-occupation VOC testing.</p> <p><b>Credit not targeted.</b></p>		
Adaptability - Potential for Natural Ventilation (13-14)	1	0	<p>Credit awarded where the ventilation strategy is flexible and adaptable to potential occupant needs and climatic scenarios, and the design shows that occupied spaces are capable of providing fresh air entirely via natural ventilation. AND EITHER</p> <p>Room depths are designed in accordance with CIBSE AM10, and the openable window area in each occupied space is 5% of GIFA of that floor plate.</p> <p>OR</p> <p>The natural ventilation strategy provides adequate cross flow of air to maintain required thermal comfort/ventilation rates, demonstrated using design tool types that meet the requirements of CIBSE AM10 or ClassVent. For strategies that do not rely on openable windows, or with room depths greater than 15m, the second option must be used to demonstrate compliance.</p> <p>The design team must demonstrate how the natural ventilation strategy provides at least two levels of user-control. Any opening mechanisms must be easily accessible, and avoid draughts.</p>	0.83%	<p>Although the majority of occupied spaces have the potential for natural ventilation, the sensory room does not. As the sensory room cannot be excluded from requirements this credit is not currently achievable, although a query could be raised with the BRE to request that it is excluded so that this credit can be achieved.</p> <p><b>Credit not targeted.</b></p>		



Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Hea 04	Thermal comfort		To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.				
Thermal Modelling (1-4)	1	1	<p>Credit awarded when thermal modelling has been carried out using software in accordance with CIBSE AM11, and provides full dynamic thermal analysis. ClassCool can be used for schools with a straightforward servicing strategy.</p> <p>The modelling should show the building design and services strategy can deliver thermal comfort levels in occupied spaces as follows:</p> <p>a) <b>In air-conditioned buildings:</b> Summer and Winter operative temperature ranges in accordance with the criteria set out in BB101.</p> <p>b) <b>Naturally ventilated/free running buildings:</b> Winter operative temperature ranges in accordance with BB101 AND the building is designed to limit the risk of overheating in accordance with CIBSE TM52.</p> <p>For air-conditioned buildings, the PMV and PPD indices should be provided.</p>	0.83%	<p>Initial modelling calculations confirm that the classrooms will meet overheating requirements in summer, although further modelling will be required to confirm winter operative temperature ranges are met as well as modelling of meeting rooms etc. to demonstrate compliance with CIBSE Guide A/TM52.</p> <p><b>Credit targeted.</b></p>		
Adaptability - For a projected climate change scenario (5-8)	1	0	<p>Credit awarded where the first Hea 04 credit has been achieved, and the thermal modelling demonstrates that the building design and services strategy can deliver the same thermal comfort levels in occupied spaces under a projected climate change environment.</p> <p>Where thermal comfort criteria are not met for the projected climate change environment, the project team should demonstrate how the building has been adapted, or is adaptable in future using passive design solutions to achieve above criteria.</p> <p>For air-conditioned buildings, the PMV and PPD indices are reported, based on the modelling.</p>	0.83%	<p>Modelling against a future climate change is not proposed.</p> <p><b>Credit not targeted.</b></p>		
Thermal Zoning and Controls (9-11)	1	1	<p>Credit awarded where the first Hea 04 credit has been achieved, and the thermal modelling analysis has informed the temperature control strategy for the building and its users.</p> <p>The strategy for proposed heating/cooling system(s) demonstrates that it has addressed the following:</p> <p>a. Zones within the building and how to effectively heat or cool these areas.</p> <p>b. The level of user control required, based on discussions with the end user.</p> <p>c. How systems will interact and how this may affect the building users.</p> <p>d. Whether a manual override is required for any automatic systems.</p>	0.83%	<p>This credit is targeted and appropriate zoning and control will be implemented, and a temperature control strategy produced at the appropriate time.</p> <p><b>Credit targeted.</b></p>		

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	Credits Available	Base Target					
<b>Hea 05</b>	<b>Acoustic performance</b>		<b>To ensure the buildings' acoustic performance including sound insulation meet the appropriate standards for its purpose.</b>				
<b>Acoustic Performance (1)</b>	3	3	<p>Credits awarded where the contractor programmes in pre-completion acoustic testing, by a compliant test body to ensure the building areas meet the appropriate acoustic performance standards and testing requirements and the relevant standards are achieved.</p> <p>One credit: Sound Insulation -Achieve performance standards set out in Section 1 of BB 93: Acoustic design of schools: performance standards, relating to airborne sound insulation between spaces and impact sound insulation of floors.</p> <p>One credit: Internal Ambient Noise Levels - Achieve the standards in Section 1 of BB93 for all room types. . For lightweight roofs or roofs with glazing/rooflights, demonstrate via calculations that the reverberant sound pressure level for teaching and learning areas is not more than 25 dB above the limits presented within Section 1 of BB93.</p> <p>One credit - Reverberation - Achieve the standards in table 6 in Section 1 of BB93 for teaching and study spaces. Achieve the standards relating to speech transmission index in Section 1.8 of BB93 for open plan teaching spaces. Achieve the requirements for sound absorption for corridors and stairwells that give direct access to teaching/study spaces.</p>	2.50%	<p>KPA Acoustics have been appointed as the SQA to the project, and it is currently anticipated that all three credits will be achievable. The Contractor will be required to undertake pre-completion acoustic testing to confirm compliance.</p> <p><b>Three of three credits targeted.</b></p>	Aco	
<b>Hea 06</b>	<b>Safety and security</b>		<b>To recognise and encourage effective measures that promote safe and secure use and access to and from the building.</b>				
<b>Safe Access (1-10)</b>	1	0	<p>Credit awarded where the site is designed to allow for safe access for pedestrians and cyclists. Level of detail is comprehensive - refer to compliance notes for details. Points to consider include: cycle paths and footpaths connecting to any off site paths, drop off areas to be located off/adjoining access road with direct access to footpath, road raised to pavement level at crossings, lighting in line with BS 5489-1:2013.</p> <p>Where delivery access areas and drop off areas exist: delivery areas are not directly accessed through general parking areas and do not cross or share pedestrian and cyclist routes and other outside amenity areas, provide a separate parking/waiting area for goods vehicles, ensure parking/turning areas are designed for simple manoeuvring and provide a dedicated space for refuse skips and pallets, away from delivery areas and staff/visitor parking.</p>	0.83%	<p>The requirements of this credit are complex, and require a detailed review of the relationship between pedestrian, cyclist and vehicular access to confirm if compliance is possible. This will be reviewed once site layout plans and access routes are confirmed.</p> <p><b>Credit not targeted.</b></p>		
<b>Security of Site and Building (11-13)</b>	1	0	<p>Credit awarded where an evidence-based Security Needs Assessment (SNA) is conducted by a Suitably Qualified Security Specialist (SQSS) by the end of RIBA Stage 2.</p> <p>The SQSS develops a set of recommendations or solutions during or prior to RIBA Stage 2 which 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 SNA.</p> <p>The recommendations from the SQSS are implemented. Any deviations from the recommendations will need to be justified, documented and agreed in advance with the SQSS.</p>	0.83%	<p>This credit is not currently targeted as it is considered that current security arrangements are robust and the scope of works provides limited scope to improve on this. It is also noted that it is proving very challenging for teams to find a local CPDA/ALO who is willing or able to provide an SNA in the format now required for BREEAM.</p> <p><b>Credit not targeted.</b></p>		
<b>Sub-Total</b>	<b>18</b>	<b>8</b>	<b>One health &amp; wellbeing credit equals 0.83%</b>				
<b>Weighted Sub-Total</b>	<b>15</b>	<b>6.67</b>					

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>ENERGY</b>							
<b>Ene 01</b>	<b>Reduction of energy use and carbon emissions</b>		<b>To recognise and encourage buildings designed to minimise operational energy demand, consumption and CO<sub>2</sub> emissions.</b>		<b>Mandatory minimum requirements: Five credits for Excellent and eight credits for Outstanding.</b>		
<b>Energy Performance (1)</b>	12	9	Up to 12 credits can be awarded where there is an improvement in the building operational related CO <sub>2</sub> emissions. The number of credits is based on the Energy Performance Ratio for New Constructions (using the BREEAM calculator). <b>FIVE CREDITS MANDATORY FOR EXCELLENT, EIGHT CREDITS MANDATORY FOR OUTSTANDING.</b>	9.47%	Latest BRUKL results for the extension works confirm that nine credits are achievable. <b>Nine of twelve credits targeted.</b>		
<b>Ene 02</b>	<b>Energy monitoring</b>		<b>To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.</b>		<b>Mandatory minimum requirements: One credit (sub-metering of major energy consuming systems) for Very Good, Excellent and Outstanding.</b>		
<b>Sub-metering of Major Energy Consuming Systems (1-4)</b>	1	0	<b>MANDATORY FOR VERY GOOD AND ABOVE:</b> Credit awarded where energy metering systems are installed that enable 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. This includes the following: Space heating; Domestic Hot Water; Humidification; Cooling; Ventilation; Pumps; Lighting; Small power; Renewable or low carbon systems (separately); Controls and other major energy-consuming systems/plant.  The energy consuming systems in buildings with a total useful floor area >1000m <sup>2</sup> are metered using an appropriate energy monitoring and management system. For smaller buildings, separate accessible sub-meters with pulsed outputs are acceptable.  The energy consuming end uses should be identifiable to the building user, for example through labelling or data outputs.	0.79%	<b>Credit not targeted.</b>		
<b>Ene 03</b>	<b>External lighting</b>		<b>To recognise and encourage the specification of energy-efficient light fittings for external areas of the development.</b>				
<b>External Lighting (1-3)</b>	1	1	Credit awarded where the average luminaire efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. AND All external light fittings are automatically controlled to prevent daytime operation and have presence detection in areas of intermittent use.  Note, this is achieved by default where there is no external lighting.	0.79%	The scope of this issue applies to new and existing lighting within the construction zone of the new build areas. New external lighting will be specified with appropriate efficacies and these will have timeclock control. The car park is considered to be an area with intermittent use and lighting will have PIR to these areas.  <b>Credit targeted.</b>		
<b>Ene 04</b>	<b>Low carbon design</b>		<b>To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.</b>				
<b>Passive Design (Passive Design Analysis) (1-3)</b>	1	0	Credit awarded where the first Hea 04 credit has been achieved and the design team conduct an analysis of building design by the end of RIBA Stage 2, to identify opportunities for passive design solutions to reduce energy consuming services. AND Passive design measures are specified in line with the analysis to reduce the energy consumption of the building and the design team demonstrates that these result in at least a 5% reduction in the total energy consumption.	0.79%	A formal Passive Design Analysis was not carried out at RIBA Stage 2 in line with requirements, so this credit is not targeted.  <b>Credit not targeted.</b>		
<b>Passive Design (Free Cooling) (4-6)</b>	1	0	Credit awarded where the first Ene 04 credit is achieved, and the passive design analysis includes an analysis of free cooling solutions and the feasibility of implementing them. AND Free cooling solutions are implemented to reduce the cooling energy consumption of the building.  Examples include: night-time cooling, ground coupled air cooling, displacement ventilation (not linked to any active cooling), ground water cooling, surface water cooling, evaporative cooling, desiccant dehumidification and evaporative cooling using waste heat, and absorption cooling using waste heat.	0.79%	Although the majority of spaces are naturally ventilated as a Passive Design Analysis has not been undertaken this credit is not achievable.  <b>Credit not targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Low and Zero Carbon Technologies (LZC Feasibility Study) (7-8)</b>	1	0	Credit awarded when an energy specialist conducts a feasibility study by the end of RIBA Stage 2, to establish the most appropriate recognised local (on-site or near-site) LZC energy sources for the development.  A local LZC energy technology/technologies must be specified for the building/development in line with the recommendations of this feasibility study, and this results in a meaningful reduction in regulated CO <sub>2</sub> emissions (as a guide, this should be at least 5%).	0.79%	Given the size and scope of the extension works, there are no proposals to include low or zero carbon technologies.  <b>Credit not targeted.</b>		
<b>Ene 08</b>	<b>Energy efficient equipment</b>		<b>To recognise and encourage procurement of energy efficient equipment to ensure optimum performance and energy savings in operation.</b>				
<b>Energy Efficient Equipment (1-3)</b>	2	0	Credit awarded where the building's unregulated energy consuming loads are identified and their contribution to the total annual unregulated energy consumption of the building is estimated, assuming a typical/standard specification.  Identify which of the following systems/process that will be responsible for a significant proportion of total annual unregulated energy consumption of the building and demonstrate a meaningful reduction in energy consumption.  Small power, plug in equipment; swimming pool; communal laundry facilities with commercial sized appliances; data centre; IT intensive operating area; residential areas with domestic scale appliances; kitchen and catering equipment.	1.58%	The only relevant unregulated energy use is for small power and plug in equipment, which will be the responsibility of the Client to procure. If existing equipment is re-used, this should also comply so the requirements may be more challenging to meet for all relevant equipment. Therefore the credits are an optimum target only pending a review by the client.  <b>Credits in optimum target only at this stage, pending Client review.</b>		
<b>Sub-Total</b>	<b>19</b>	<b>10</b>	<b>One energy credit equals 0.79%</b>				
<b>Weighted Sub-Total</b>	<b>15</b>	<b>7.9</b>					
<b>TRANSPORT</b>							
<b>Tra 01</b>	<b>Public transport accessibility</b>		<b>To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion.</b>				
<b>Accessibility Index (1-2)</b>	3	2	Up to 3 credits are available where the public transport Accessibility Index (AI) for the assessed building is calculated based on the mode of transport, frequency of services and distance from building entrance to accessible public transport nodes or PTAL rating.  Where a development is unable to achieve any of the available credits using the AI, one credit can be achieved when the building occupier provides, or commits to providing a dedicated bus service to and from the building relating to shift patterns.	3.86%	The PTAL rating for the site is 4.39 which achieves 2 credits.  <b>Two of three credits targeted.</b>		
<b>Tra 02</b>	<b>Proximity to amenities</b>		<b>To encourage and reward a building location that facilitates easy access to local services and so reduces the environmental, social and economic impacts resulting from multiple or extended building user journeys, including transport related emissions and traffic congestion.</b>				
<b>Proximity to Amenities (1)</b>	1	1	Credit awarded where the building is located within 500m of 3 local amenities, via a safe pedestrian route.  This should include at least 2 of a food outlet, access to cash or access to a recreation/leisure facility for fitness/sports PLUS either a core amenity, or one of the following: posting facilities, community facility, pharmacy or an outdoor open space.  Note: Pre-School and School developments are 'Building Type 2'.	1.29%	There is a Sainsbury's on Tangle Park Road providing a food outlet and access to cash within 350m, as well as a nearby Post Office within 220m, Hampton Common is also within 500m providing an outdoor open space.  <b>Credit targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Tra 03</b>	<b>Cyclist facilities</b>		<b>To encourage building users to cycle, so promoting exercise and helping reduce congestion and emissions, by ensuring adequate provision of cyclist facilities,</b>				
<b>Cycle Storage (1)</b>	1	1	Credit awarded where compliant cycle storage facilities are provided. This requires the following: <b>Primary School buildings:</b> 5 spaces per form or class in a year group  Please refer to the BREEAM manual for details of additional criteria for compliant cycle storage.	1.29%	50% to 5 spaces as 2 credits are achieved under Tra 01.  At least five cycle storage spaces will be provided which will be appropriately spaced.  <b>Credit targeted.</b>		
<b>Cyclist Facilities (2-3)</b>	1	0	If the first Tra 03 credit has been achieved above, one credit can be awarded where at least two types of the following compliant cyclist facilities have been provided; Showers; Changing facilities; Lockers or Drying Spaces.  Please refer to the BREEAM manual for details of additional criteria for compliant cyclist facilities.	1.29%	One shower and associated changing facilities are required for staff use (both Male and Female) to achieve this credit, and this function should not impede the use of any disabled WC facilities within the same room.  Although showers are included within the girls disabled WC and hygiene room these will not be available for staff use.  <b>Credit not targeted.</b>		
<b>Tra 05</b>	<b>Travel plan</b>		<b>To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.</b>				
<b>Travel Plan (1-4)</b>	1	1	Credit awarded where the development of a travel plan and site specific travel assessment has been undertaken (involving occupier, if known) to ensure the travel plan is structured to meet the needs of the particular site and covers the following (as a minimum): the existing patterns and opinions of occupiers cycling and walking to the site/building, to identify issues; the travel patterns and transport impact of future building users; the current environment and facilities of walkers/cyclists; the current public transport and disabled access to the site (accounting for varying levels of disability and visual impairment).  The travel plan should include a package of measure to encourage the use of sustainable modes of transport and the movement of people and goods during the buildings operation and use. The occupier must confirm that the plan will be implemented post-construction.	1.29%	It is assumed that Transport Statement & School Travel Plan will be undertaken/updated to achieve this credit.  <b>Credit targeted.</b>		
<b>Sub-Total</b>	<b>7</b>	<b>5</b>	<b>One transport credit equals 1.29%</b>				
<b>Weighted Sub-Total</b>	<b>9</b>	<b>6.43</b>					
<b>WATER</b>							
<b>Wat 01</b>	<b>Water consumption</b>		<b>To reduce the consumption of potable water for sanitary use in new buildings from all sources through the use of water efficient components and water recycling systems.</b>		<b>Mandatory minimum requirement: One credit for Good, Very Good and Excellent. Two credits for Outstanding.</b>		
<b>Water Consumption (1-5)</b>	5	2	Up to five credits awarded depending on the efficiency of the specified water consuming components compared to a baseline. This includes the following components where specified: WCs, urinals, taps (wash hand basins, kitchen taps, waste disposal), showers, baths, dishwashers and washing machines (domestic/commercial/industrial sized).  Greywater and/or rainwater systems can help offset the potable water consumption where these are used to supply water consuming components. Additional requirements apply where this is the case - please refer to the technical guidance.  <b>ONE CREDIT MANDATORY FOR GOOD AND ABOVE. TWO CREDITS MANDATORY FOR OUTSTANDING.</b>	3.89%	It is anticipated that two credits will be achievable pending confirmation of sanitaryware specifications.  <b>Two of five credits targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Wat 02</b>	<b>Water monitoring</b>		<b>To ensure water consumption can be monitored and managed and therefore encourage reductions in water consumption.</b>		<b>Mandatory minimum requirement: Criterion 1 (water meter on mains supply) for Good, Very Good, Excellent and Outstanding.</b>		
<b>Pre-requisite (1)</b>	0	Y	<b>MANDATORY FOR GOOD AND ABOVE - A water meter is specified on the mains water supply to each building, including where water is supplied via a borehole or other private source.</b>	0.00%	The existing building has a mains water meter to achieve this mandatory requirement, although it is unlikely that this has a pulsed output, so whilst the mandatory requirement will be met, the credit will not be achievable.		
<b>Water Monitoring (2-4)</b>	1	0	Credit awarded where water consuming plant or building areas, consuming 10% or more of the buildings total water demand, should be fitted with either: easily accessible sub meters or have water monitoring equipment integral to the plant or area.  Each main and sub meter should have a pulsed output or other open protocol communication output enabling connection to a Building Management System (BMS) for monitoring consumption.  If the site has an existing BMS managed by the same occupier/owner, the pulsed/digital water meter(s) for the new building should be connected to existing BMS.	0.78%	Proposals do not include for replacing the existing meter with one that is pulsed output. There are no areas that require further sub-metering.  <b>Credit not targeted.</b>		
<b>Wat 03</b>	<b>Water leak detection</b>		<b>To reduce the impact of water leaks that may otherwise go undetected.</b>				
<b>Leak Detection System (1)</b>	1	0	Credit awarded where a leak detection system, capable of detecting a major leak on the mains supply within the building and between the building and the utilities water meter, is installed.  It must be a permanent automated water leak detection system capable of alerting occupants to a leak OR an in-built automated diagnostic procedure for detecting leaks.  It must be programmable by the occupier, avoid false alarms and be capable of identifying different flow/leakage rates. Activation should occur when flow through the meter is at a rate above a pre-set maximum over a pre-set period of time.	0.78%	<b>Credit not targeted.</b>		
<b>Flow Control Devices (2)</b>	1	1	Credit awarded where 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).  An example of a flow control device is a presence detector and controller (i.e. PIR linked to a solenoid valve).	0.78%	Sanitary supply shut-off will be specified for all WC and shower areas, including single WCs/shower rooms.  <b>Credit targeted.</b>		
<b>Wat 04</b>	<b>Water efficient equipment</b>		<b>To reduce unregulated water consumption by encouraging specification of water efficient equipment.</b>				
<b>Water Efficient Equipment (1-2)</b>	1	1	Credit awarded when the project team identify the building's unregulated water demands that could be realistically mitigated or reduced (e.g. for irrigation, vehicle wash plant/equipment).  The project team should then identify the system(s) or processes to reduce the unregulated water demand of the development and its operation, and demonstrate through either good practice design or specification a meaningful reduction in the total water demand of the building.	0.78%	The only relevant unregulated water use is to areas of existing and new planting, and these will rely on precipitation and manual watering only to achieve this credit.  <b>Credit targeted.</b>		
<b>Sub-Total</b>	<b>9</b>	<b>4</b>	<b>One water credit equals 0.78%</b>				
<b>Weighted Sub-Total</b>	<b>7</b>	<b>3.11</b>					

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>MATERIALS</b>							
<b>Mat 01</b>	<b>Life cycle impacts</b>		<b>To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building.</b>				
<b>Materials Life Cycle Impacts (1-3)</b>	6	4	Up to six credits are awarded, determined by the Green Guide to Specification ratings for the external walls, windows, roof, upper floor slabs, internal walls and floor finishing elements of the build. Materials with an Environmental Product Declaration (EPD) may enable scores to be further enhanced.	5.79%	At least four credits should be achievable with the potential for five credits plus one exemplary credit which could be achieved if some products also have Environmental Product Declarations (EPDs), in addition to high Green Guide ratings.  <b>Four of six credits targeted.</b>		
<b>Mat 02</b>	<b>Hard landscaping and boundary protection</b>		<b>To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking account of the full life cycle of materials used.</b>				
<b>Hard Landscaping and Boundary Protection (1)</b>	1	0	Credit awarded where at least 80% of external hard landscaping and 80% of boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.	0.96%	<b>Credit not targeted.</b>		
<b>Mat 03</b>	<b>Responsible sourcing of materials</b>		<b>To recognise and encourage the specification of responsibly sourced materials for key building elements.</b>		<b>Mandatory minimum requirement: All timber used on the project is 'Legally harvested and traded timber' for Pass, Good, Very Good, Excellent and Outstanding.</b>		
<b>Pre-requisite (1)</b>	0	Y	<b>MANDATORY FOR ALL RATINGS: Pre-requisite - All timber used on the project is 'Legally harvested and traded timber'</b>	0.00%	This pre-requisite must be met for any rating to be achievable. The Contractor will be required to ensure that all timber is compliant.  <b>Pre-requisite targeted.</b>		
<b>Sustainable Procurement Plan (2)</b>	1	0	Credit awarded where the principal contractor sources materials for the project in accordance with a documented sustainable procurement plan.	0.96%	<b>Credit not targeted.</b>		
<b>Responsible Sourcing of Materials (3)</b>	3	1	Up to 3 credits can be awarded where the applicable building and hard landscaping materials, in applicable locations, are responsibly sourced in accordance with the BREEAM methodology. Applicable materials categories include: Timber/timber-based products; concrete/cementitious; metal; stone/aggregate; clay-based; gypsum; glass; plastic, polymer, resin, paint, chemicals and bituminous; animal fibre/skin, cellulose fibre; other.  Responsible sourcing accreditations include PEFC, FSC, ISO 14001 and BES 6001.  1 credit where 18% of available points are achieved (2 credits for 36%, and 3 credits for 54%).	2.89%	<b>One credit targeted.</b>		
<b>Mat 04</b>	<b>Insulation</b>		<b>To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties</b>				
<b>Embodied Impact (2-4)</b>	1	1	Any new insulation specified for use within the following building elements must be assessed: 1. External walls 2. Ground floor 3. Roof 4. Building services  Credit awarded where the insulation index for the building fabric and services insulation is the same as or greater than 2.5, calculated using the volume of insulation, the thermal conductivity and the Green Guide rating.	0.96%	This credit will be targeted, and is straight forward to achieve. The majority of insulation products should be specified with an A or A+ Green Guide rating and appropriate thermal conductivity levels to achieve this credit.  <b>Credit targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Mat 05</b>	<b>Designing for durability and resilience</b>		<b>To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimisation.</b>				
<b>Designing for Durability and Resilience (1-2)</b>	1	1	<p>Credit awarded where the following is demonstrated:</p> <p>Part One: Protection is given to vulnerable parts of the building and landscaping against impact damage (both internal and external), including areas exposed to high pedestrian traffic, vehicular and trolley movements.</p> <p>Part Two: Protection is given to exposed parts of the building against material degradation due to environmental factors. Please refer the technical guidance for details of the methodology to follow.</p>	0.96%	<p>This credit will be targeted. Internal and external vulnerable areas of the building will be identified and appropriate protection measures specified. External materials should be specified to protect against environmental degradation.</p> <p><b>Credit targeted.</b></p>		
<b>Mat 06</b>	<b>Material efficiency</b>		<b>To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste.</b>				
<b>Material Efficiency (1)</b>	1	0	<p>Credit awarded when opportunities and measures to optimise the use of materials in building design, procurement, construction, maintenance and end of life have been identified, investigated and implemented by the design/construction team as appropriate in consultation with the relevant parties at each of the following RIBA stages:</p> <ol style="list-style-type: none"> <li>1. Preparation and Brief</li> <li>2. Concept Design</li> <li>3. Development Design</li> <li>4. Technical Design</li> <li>5. Construction</li> </ol>	0.96%	<p>This credit has not been targeted. The requirements of these credit are onerous and require early stage action.</p> <p><b>Credit not targeted</b></p>	-	
<b>Sub-Total</b>	<b>14</b>	<b>7</b>	<b>One materials credit equals 0.96%</b>				
<b>Weighted Sub-Total</b>	<b>13.5</b>	<b>6.75</b>					



Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>WASTE</b>							
<b>Wst 01</b>	<b>Construction waste management</b>	<b>To promote resource efficiency via the effective management and reduction of construction waste. An additional exemplary credit is available - see Innovation section below for details.</b>			<b>Mandatory minimum requirement: One credit for Outstanding.</b>		
<b>Construction Resource Efficiency (1-3)</b>	3	1	<p><b>Pre-demolition audit</b> Where existing buildings on the site will be demolished, a pre-demolition audit must be completed to determine if refurbishment/reuse is feasible and, if not, to maximise the recovery of material. The audit must be referenced in the RMP and include identification of the key materials and their potential applications in accordance with the waste hierarchy.</p> <p><b>Minimising construction waste and RMP</b> Up to three credits awarded where a Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to onsite construction and dedicated offsite manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction. Where construction waste related to on-site construction and off-site manufacture/fabrication (excluding demolition and excavation waste) meets or is lower than the benchmarks as follows (per 100m<sup>2</sup> GIFA): One credit = 13.3m<sup>3</sup> / 11.1 tonnes, Two credits = 7.5m<sup>3</sup> / 6.5 tonnes, Three credits = 3.4m<sup>3</sup> / 3.2 tonnes.</p> <p>Dedicated off-site manufacturing or fabrication refers to producing a component or material in an off-site manufacturing facility that has been set up for a particular project.</p> <p><b>ONE CREDIT MANDATORY FOR OUTSTANDING.</b></p>	3.19%	<p><b>Pre-demolition Audit:</b> An audit will be undertaken and current proposals include the re-use of the temporary building elsewhere and it is anticipated that there will be a small amount of waste materials from the limited demolition required to facilitate the extension works, which will be recycled where possible.</p> <p><b>Minimising construction waste and RMP:</b> The Contractor will be required to operate a compliant RMP (SWMP) and to achieve at least 1 credit for waste generation.</p> <p><b>One of three credits targeted.</b></p>		
<b>Diversion of Resources from Landfill (4-5)</b>	1	1	<p>One credit awarded where 70% by volume/80% by tonnage of non-hazardous construction waste and 80% by volume/90% by tonnage of non-hazardous demolition waste generated by the development will be diverted from landfill and reused or recycled.</p> <p>Materials should be sorted into separate key waste groups, according to the waste streams generated by the scope of the works, either on or off-site.</p>	1.06%	<p>This credit will be targeted. The Contractor will be required to include relevant targets in the RMP/SWMP and maintain records of recycling rates etc. for waste materials from the demolition and main construction phases.</p> <p><b>Credit targeted.</b></p>		
<b>Wst 02</b>	<b>Recycled aggregates</b>	<b>To recognise and encourage the use of recycled and secondary aggregates, thereby reducing the demand for virgin material and optimising material efficiency in construction. An additional exemplary credit is available - see Innovation section below for details.</b>					
<b>Recycled Aggregates (1-3)</b>	1	0	<p>Credit awarded where at least 25% (by weight or volume) of the total high grade aggregate used on site comprises recycled or secondary aggregates. The recycled and/or secondary aggregates are EITHER:</p> <ol style="list-style-type: none"> <li>1. Construction, demolition and excavation waste obtained onsite or offsite OR</li> <li>2. Secondary aggregates obtained from a non-construction post-consumer industrial by-product source.</li> </ol> <p>In addition the specification of minimum levels of recycled aggregates applying to different applications is required, see compliance notes.</p>	1.06%	<p>Sourcing appropriate types and quantities of recycled aggregates can be particularly difficult in the London area, so this credit is not targeted.</p> <p><b>Credit not targeted.</b></p>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Wst 03	Operational waste		To recognise and encourage the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that this waste is diverted from landfill or incineration.		Mandatory minimum requirement: One credit for Excellent and Outstanding.		
Operational Waste (1-2)	1	1	<p><b>MANDATORY FOR EXCELLENT AND ABOVE:</b> Credit awarded where there is dedicated space(s) to cater for the segregation and storage of operational recyclable waste generated by the assessed building.</p> <p>The space must be clearly labelled, accessible and of a capacity appropriate to the building type, size, number of units and predicted volumes of waste. Where the building occupier is not known, a default size of 2m<sup>2</sup> per 1000m<sup>2</sup> GIFA, with an additional 2m<sup>2</sup> per 1000m<sup>2</sup> where there is catering (subject to a maximum size of 20m<sup>2</sup>) can be used to size the recycling storage area.</p> <p>Where appropriate, the following facilities are provided as part of its waste management strategy a) Static waste compactor(s) or baler(s); b) Vessel(s) for composting suitable organic waste OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility; c) A water outlet where compostable food waste and organic material will be stored.</p>	1.06%	<p>Based on the proposed GEA of 840m<sup>2</sup> and that the kitchen will produce food waste, an area of 4m<sup>2</sup> should be provided for recycled waste plus an area for storage of general and food waste (m<sup>2</sup> unspecified), which should also contain a tap for washdown facilities.</p> <p>The current bin store is to be relocated and should meet this minimum requirement.</p> <p><b>Credit targeted.</b></p>		
Wst 05	Adaptation to climate change		To recognise and encourage measures taken to mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building.				
Structural and Fabric Resilience (1)	1	0	<p>Credit awarded when a climate change adaptation strategy appraisal is conducted for structural and fabric resilience by the end of RIBA Stage 2, in accordance with the following approach:</p> <p>Carry out a systematic risk assessment (specific to structural and fabric resilience) to identify and evaluate the impact of the expected increase in extreme weather conditions arising from climate change on the building over the projected life-cycle of the building, and where feasible mitigate against these impacts. The assessment should cover the following stages:</p> <ol style="list-style-type: none"> <li>1. Hazard Identification</li> <li>2. Hazard assessment</li> <li>3. Risk estimation</li> <li>4. Risk Evaluation</li> <li>5. Risk Management</li> </ol>	1.06%	<p>The requirements of this credit are onerous and require early stage action, and is therefore not targeted.</p> <p><b>Credit not targeted.</b></p>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Wst 06</b>	<b>Functional adaptability</b>		<b>To recognise and encourage measures taken to accommodate future changes of use of the building over its lifespan.</b>				
<b>Functional Adaptability (1-2)</b>	1	0	<p>Credit awarded when a building specific functional adaptation strategy study is conducted by the client and design team by RIBA Stage 2, which includes recommendations for measures to be incorporated to facilitate future adaption, including:</p> <p>a. Ability for major refurbishment, including replacing the façade.  b. Design for ease of replacement of all major plant within the life of the building e.g. panels in floors/ walls that can be removed without affecting the structure, providing lifting beams and hoists.  c. Adaptability of the internal environment to accommodate changes in working practices.  d. Adaptability of the internal physical space and external shell to accommodate change in use.  e. Local services accessibility, such as local power, data etc.</p> <p>Functional adaptation measures have been implemented by the end of RIBA Stage 4 in accordance with the functional adaptation strategy where practical and cost effective.</p>	1.06%	The requirements of this credit are onerous and require early stage action, and is therefore not targeted.  <b>Credit not targeted.</b>		
<b>Sub-Total</b>	<b>8</b>	<b>3</b>	<b>One waste credit equals 1.06%</b>				
<b>Weighted Sub-Total</b>	<b>8.5</b>	<b>3.19</b>					
<b>LAND USE &amp; ECOLOGY</b>							
<b>LE 01</b>	<b>Site selection</b>		<b>To encourage the use of previously developed and/or contaminated land and avoid land which has not been previously disturbed</b>				
<b>Previously Occupied Land (1)</b>	1	1	Credit awarded where at least 75% of the footprint of the proposed development (including temporary site works) has been previously occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.	1.00%	This credit is targeted as at least 75% of the new build extensions will fall on previously developed land.  <b>Credit targeted.</b>		
<b>Contaminated Land (2-3)</b>	1	0	<p>Credit awarded where the land within the site is deemed to be significantly contaminated by a contaminated land professional, who identifies the degree of contamination, sources/types of contamination and remediation options.</p> <p>AND</p> <p>The client/principal contractor commits to undertaking all remediation in line with the remediation strategy recommended by the specialist and this is carried out prior to development.</p>	1.00%	It is currently considered unlikely that there is any significant contamination on site requiring remediation, but this will be reviewed in due course.  <b>Credit not targeted.</b>		
<b>LE 02</b>	<b>Ecological value and protection of ecological features</b>		<b>To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.</b>				
<b>Ecological Value of Site (1)</b>	1	0	<p>Credit awarded where land within the assessment zone is defined as 'land of low ecological value' using either:  The BREEAM checklist for defining land of low ecological value  OR  A Suitably Qualified Ecologist (SQE) who has identified the land as being of 'low ecological value' within an ecological assessment report, based on a site survey.</p>	1.00%	An SQA has been appointed to confirm the ecological value of the site. Credit not currently targeted pending confirmation from the ecologist of the ecological value of the site.  <b>Credit not currently targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Protection of Ecological Features (2-3)	1	0	Credit awarded where all existing features of ecological value within and surrounding the assessment zone and site boundary area are adequately protected from damage during clearance, site preparation and construction activities in line with BS42020: 2013. The assessment zone is any land on site being developed plus a 3m wide zone measured outward from these areas.  In all cases, the principal contractor is required to construct ecological protection prior to any preliminary site construction or preparation works (e.g. clearing of the site or erection of temporary site facilities).	1.00%	As proposals included the removal of some existing hedging it is assumed that this credit will not be achieved, unless the ecologist confirms that this is of low ecological value. It is noted that new planting will mitigate the loss of any existing ecological features. The Contractor will be required to protect all ecological features identified for retention.  <b>Credit not targeted.</b>		
LE 03	Minimising impact on existing site ecology		<b>To minimise the impact of a building development on existing site ecology.</b>		<b>Mandatory minimum requirements: One credit for Very Good, Excellent and Outstanding.</b>		
Change in Ecological Value (1-2)	2	2	<b>MANDATORY FOR VERY GOOD AND ABOVE:</b> One credit is awarded where the change in the site's existing ecological value, as a result of development, is between 0 and -9. Two credits are awarded where there is no negative change in the site's existing ecological value, as a result of development. Credits can be awarded with or without the appointment of an ecologist.	2.00%	Any ecological loss resulting from the new development will be completely mitigated by new planting. The ecologist will be required to confirm this via calculation once final planting proposals known.  <b>Two of two credits targeted.</b>		
LE 04	Enhancing site ecology		<b>To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.</b>				
Ecologist's Report and Recommendations (1-3)	1	0	One credit is awarded where the Client or project representative appoints an SQE by the end of RIBA Stage 1 to advise on enhancing the ecological value of the site. The SQE has provided an ecology report with appropriate recommendations for the enhancement of the site's ecology at RIBA Stage 2, based on a site survey/visit. Early stage advice and recommendations of the ecology report for the enhancement of site ecology have been, or will be, implemented in the final design and build.  <b>APPOINTMENT OF SQE BY RIBA STAGE 1 ECOLOGICAL SURVEY TO BE UNDERTAKEN DURING RIBA STAGE 2</b>	1.00%	An SQE has been appointed to undertake a site survey, although this was later than RIBA Stage 1 so this credit is not achievable.  <b>Credit not targeted.</b>		
Increase in Ecological Value (4-6)	1	0	The LE 04 Ecologist's report and recommendations credit above has been achieved.  The recommendations of the ecology report for the enhancement of site ecology have been implemented, and the SQE confirms that this will result in an increase in ecological value of 6 or more.	1.00%	As the first credit is not achieved, this credit cannot be achieved either, although given the limited opportunities for additional planting it is unlikely that sufficient enhancement would be possible anyway.  <b>Credit not targeted.</b>		
LE05	Long term impact on biodiversity		<b>To minimise the long term impact of the development on the site and the surrounding area's biodiversity.</b>				
Long Term Impact on Biodiversity (1-3)	2	0	Two credits available where an SQE is appointed prior to activities onsite and confirms that all relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with. AND a site-specific 5 year landscape and habitat management plan is produced in accordance with BS 42020:2013 Section 11.1.  One credit awarded where, in addition to the above, two of the 'additional measures' in the technical guidance have been met. Two credits awarded where four of the 'additional measures' have been met.  This includes the option for the design team to set up a partnership with a local wildlife group to seek advice on protecting and/or providing habitats for species of local importance and ensuring the design is in keeping with the local environment as well as ongoing advice for the school.	2.00%	<b>Credits not targeted.</b>		
<b>Sub-Total</b>	<b>10</b>	<b>3</b>					
<b>Weighted Sub-Total</b>	<b>10</b>	<b>3.00</b>	<b>One land use and ecology credit equals 1%</b>				

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>POLLUTION</b>							
<b>Pol 01</b>	<b>Impact of refrigerants</b>	<b>To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from the building.</b>					
<b>Pre-requisite</b>	0	Y	Where there are refrigerants specified within the installed plant/systems: All systems must comply with the requirements of BS EN 378:2008 (Parts 2 and 3) and, if they contain ammonia, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice	0.00%	A small AHU unit is to be specified to the sensory room, and the specified system will comply with the requirements of the pre-requisite.  <b>Pre-requisite targeted.</b>		
<b>Impact of Refrigerants (1-7)</b>	3	1	One credit is awarded where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions of 1000kgCO2e/kW cooling capacity. Two credits are awarded where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions of 100kgCO2e/kW cooling capacity OR refrigerants have a GWP of <10. An additional credit is awarded where a robust and tested refrigerant leak detection system is installed, capable of continuously monitoring for leaks.  All three credits awarded where there are no refrigerants within the installed plant/systems.	2.31%	It is likely that the specified AHU will have a refrigerant charge of less than 6kg enabling at least one credit to be achieved.  <b>One of three credits targeted.</b>		
<b>Pol 02</b>	<b>NO<sub>x</sub> emissions</b>	<b>To contribute to a reduction in national NO<sub>x</sub> emission levels through the use of low emission heat sources in the building.</b>					
<b>NO<sub>x</sub> Emissions (1)</b>	3	2	One credit is awarded where the dry NO <sub>x</sub> emissions from plant installed to meet delivered space heating AND hot water demand are ≤100 mg/kWh (at 0% excess O <sub>2</sub> ), or two credits for ≤70 mg/kWh, or three credits for ≤40 mg/kWh.  Provide the direct and indirect NO <sub>x</sub> emissions in mg/kWh and energy consumption in kWh/m <sup>2</sup> /yr arising from systems installed to meet the building's space heating, cooling and hot water demands	2.31%	There is an existing gas boiler which will also serve the new extension. As this is only about 5 years old it should achieve at least 2 credits.  <b>Two of three credits awarded.</b>		
<b>Pol 03</b>	<b>Surface water run-off</b>	<b>To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, therefore minimising the risk of localised flooding on and off site, watercourse pollution and other environmental damage.</b>					
<b>Flood Resilience (1-3)</b>	2	0	One credit is awarded where the assessed development is located in a zone defined as having a medium or high annual probability of flooding and is not in a functional floodplain AND the ground level of the building, car parking and access is 600mm above the design flood level for the site's location. OR, where final building and site design reflects recommendations made by appropriate consultant, in accordance with BS 8533: 2011.  Two credits are awarded where the assessed development is located in a zone defined as having a low annual probability of flooding and there is a low risk of flooding from all sources: fluvial, tidal, surface water, groundwater, sewers, reservoirs, canals and other artificial sources. All current and future sources of flooding must be taken into account.	1.54%	The EA Flood Map confirms the site to be in a low flood risk zone, although a short FRA will be required to confirm a low flood risk from all relevant sources, which given the scale of the development is not currently proposed.  <b>Credits not targeted.</b>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Pre-requisite	0	Y	An appropriate consultant is appointed to demonstrate compliance with the following:	0.00%	An appropriate consultant will be appointed to design the drainage systems.		
Surface Water Run-Off (4-14)	2	1	<p>One credit is awarded where surface water drainage measures are specified to ensure the peak run-off rate is no greater post-development than it was pre-development, in line with 1 year and 100 year return period events, and relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place.</p> <p>A second credit is awarded where flooding of property will not occur in the event of local drainage system failure. In addition the drainage strategy must meet certain other requirements from one of two options detailed in the BREEAM guidance. Maintenance agreements should be in put place for the ownership, operation and maintenance of specified SUDs.</p> <p>All calculations must include an allowance for climate change, in accordance with current best practice guidelines.</p>	1.54%	<p>It is anticipated that at least one credit will be achievable. It is noted that permeable paving and a soakaway will form part of the drainage strategy for the site. The potential to achieve the second credit will be reviewed once detailed calculations are undertaken for the final drainage design.</p> <p><b>One of two credits targeted.</b></p>		
Minimising Watercourse Pollution (15-22)	1	0	<p>Credit awarded where there is no discharge from the developed site for rainfall up to 5mm AND Effective on site treatment has been specified in areas that could be a source of watercourse pollution, including low and high risk (oil/petrol interceptors required) areas. All systems must be designed and installed in line with PPG3 and the SUDS manual and with PPG13 for vehicle wash areas.</p> <p>A comprehensive up-to-date drainage plan should be handed over to building/site occupiers at the end of the project.</p>	0.77%	<p>Given the scope of the development, it is considered that retention of rainfall up to 5mm on site will not be possible. Given the size of the car parks they are considered to be a low risk of pollution and permeable paving will provide an appropriate pollution prevention solution.</p> <p><b>Credit not targeted.</b></p>		
Pol 04	Reduction of night time light pollution		To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.				
Reduction of Night Time Light Pollution (1-5)	1	1	<p>Credit awarded where the external lighting design is in compliance with the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011 and all external lighting (except security lighting) is automatically switched off between 2300-0700.</p> <p>If safety or security lighting is provided, these dim down to the lower levels in Table 2 of the ILP's guidance notes. Specific requirements apply to illuminated advertisements - please see the technical guidance for details.</p>	0.77%	<p>External lighting will be designed in line with the ILP guidance with timeclock control.</p> <p><b>Credit targeted.</b></p>		

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
<b>Pol 05</b>	<b>Reduction of noise pollution</b>		<b>To reduce the likelihood of noise arising from fixed installations on the new development affecting nearby noise-sensitive buildings.</b>				
<b>Reduction of Noise Pollution (1-5)</b>	1	1	A noise impact assessment is carried out by suitably qualified acoustic consultant in compliance with BS 7445, and measures: a) Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed building b) The rating noise level resulting from the new-noise source.  The noise levels from the proposed development, when measured at the nearest/most exposed noise sensitive development, should have a difference no greater than +5dB during the day (0700hrs to 2300hrs) and +3dB at night (2300hrs to 0700) compared to background noise levels. Where changes in noise level exceed this, measures should be installed to attenuate noise at its source in order to comply with these levels. OR	0.77%	An SQA has been appointed and given that the only new plant proposed is an AHU, the requirements should be easily met.  <b>Credit targeted.</b>		
<b>Sub-Total</b>	<b>13</b>	<b>6</b>					
<b>Weighted Sub-Total</b>	<b>10</b>	<b>4.62</b>	<b>One pollution credit equals 0.77%</b>				
<b>INNOVATION CREDITS/EXEMPLARY LEVEL CREDITS - A maximum of 10 credits are available in aggregate from any combination of the following:</b>							
<b>Man 03</b>	<b>Responsible Construction Practices (17)</b>	1	0	Credit awarded where the CCS score achieved is 40 or above with 7 in each section.	1.00%	The Contractor may be able to achieve higher CCS scores to enable this credit to be achieved, although this can be more challenging on restricted sites.  <b>Credit not targeted.</b>	
<b>Man 05</b>	<b>Aftercare (6)</b>	1	0	Credit awarded where the client commits to undertaking a more enhanced level of data collection for 3 years after occupation, including gathering occupant satisfaction, energy and water consumption data, setting targets and disseminating 'lessons learnt'.	1.00%	<b>Credit not targeted.</b>	
<b>Hea 01</b>	<b>Visual Comfort (14)</b>	1	0	Credit awarded where a higher level of daylighting is achieved. Please refer to the technical guidance for details.	1.00%	<b>Credit not targeted.</b>	
<b>Hea 02</b>	<b>Indoor Air Quality (15-20)</b>	2	0	Up to two credits awarded where products are specified to comply with lower levels of formaldehyde and VOCs, demonstrated via the appropriate product testing. Please refer to the technical guidance for details.	1.00%	<b>Credit not targeted.</b>	
<b>Ene 01</b>	<b>Reduction of Energy Use and Carbon Emissions (2-4)</b>	5	0	Up to five credits awarded where the building achieves a minimum EPR <sub>NC</sub> and zero net CO <sub>2</sub> emissions through on-site renewable energy generation. Five credits awarded where the building is carbon negative in terms of its total modelled energy consumption.	1.00%	<b>Credits not targeted.</b>	
<b>Wat 01</b>	<b>Water Consumption (1-6)</b>	1	0	Credit awarded where a 65% improvement over baseline building water consumption is achieved.	1.00%	<b>Credit not targeted.</b>	
<b>Mat 01</b>	<b>Life Cycle Impacts (4-8)</b>	3	0	One credit awarded for exceeding the number of points required to achieve maximum credits under Mat 01 by at least two points.  Two credits awarded where an IMPACT compliant software tool (or equivalent) is used to measure and reduce the environmental impact of the building.	1.00%	One additional credit may be achievable pending Mat 01 calculator results.  <b>Credits not currently targeted.</b>	
<b>Mat 03</b>	<b>Responsible Sourcing of Materials (4)</b>	1	0	Credit awarded where at least 70% of the available responsible sourcing points have been achieved.	1.00%	<b>Credit not targeted.</b>	
<b>Wst 01</b>	<b>Construction Waste Management (6-8)</b>	1	0	Credit awarded where the total non-hazardous construction waste and final diversion of resources from landfill figures exceed the benchmarks set. Please refer to the technical guidance for details.	1.00%	<b>Credit not targeted.</b>	

Credit Title	CREDITS		Summary of Requirements (refer to the BREEAM Guidance Notes for the full credit requirements)	Total Value (%)	Comments/Actions		
	Credits Available	Base Target					
Wst 02 Recycled Aggregates (4-6)	1	0	Credit awarded where the total amount of recycled and/or secondary aggregate specified is greater than 35% (by weight or volume) of the total high-grade aggregate use.	1.00%	Credit not targeted.		
Wst 05 Responding to Adaptation to Climate Change (2)	1	0	Credit awarded where the criteria for Wst 05 have been achieved plus certain criteria from Hea 04, Ene 01, Ene 04, Wat 01, Mat 05 and Pol 03.	1.00%	Credit not targeted.		
Inn 01 Special Innovative Feature (2)	10	0	Up to ten credits can be awarded if a successful application is made to the BRE to have any particular building feature, technology, system or process associated with the project recognised as 'innovative'. One credit available per successful application.	10.00%	Given the scope of the development there are no innovative features proposed. Credits not targeted		
<b>Sub-Total</b>	<b>10</b>	<b>0</b>	<b>One Innovation credit = 1%. A maximum of 10% can be awarded in this section.</b>				
<b>Weighted Sub-Total</b>	<b>10</b>	<b>0.00</b>					

**TOTALS**

The following table shows the mandatory credits and requirements for the project and indicates whether these have been met in the targets above. Please note that sufficient evidence will need to be provided to demonstrate that each of these requirements is achieved.

Base Target	45.08
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	Credit Title	Summary of mandatory requirements	Met?
Total required for 'Pass'			
Total Required for 'Good'	Wat 01 Water Consumption	At least one credit for Good and above. At least two credits for Outstanding.	Y
Total required for 'Very Good'	Wat 02 Water Monitoring	A water meter on the mains supply to each building for Good and above.	Y
Total required for 'Excellent'	Mat 03 Responsible Sourcing of Materials	All timber used on the project is 'legally harvested and traded timber'.	Y
Total required for 'Outstanding'			
Mandatory Requirements Met?			

Meeting record: 15/12/2016	
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PROJECT TEAM KEY:	
PM = Project Manager: London Borough of Richmond (Shirley Clifford)	CE = Civil Engineer
Arch = Architect: DHP (Matthew Clarke)	TP = Transport Planner
QS = Quantity Surveyor	Eco = Ecologist: Crossman
M&E = Mechanical and Electrical Engineer: DHP (Jack Allen, Lee Mason)	Aco = Acoustician: KPA
LA = Landscape Architect: DHP	AP = BREEAM Accredited Professional = Georgie James (Method Consulting LLP)
SE = Structural Engineer	<b>BREEAM ASSESSOR/AP (Method):</b> Method Consulting LLP (Georgie James)

Completed by: ELM Date: 17/02/2017

Checked by: ELM Date: 17/02/2017

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