

Project Number	21345
Project Name	Golden Jubilee - Opthamology
BREEAM Scheme	BREEAM NC 2014
Project Registration	Registration Pending
BREEAM Assessor	Jonathan McMillan - AP
Prepared by	Jonathan McMillan - AP

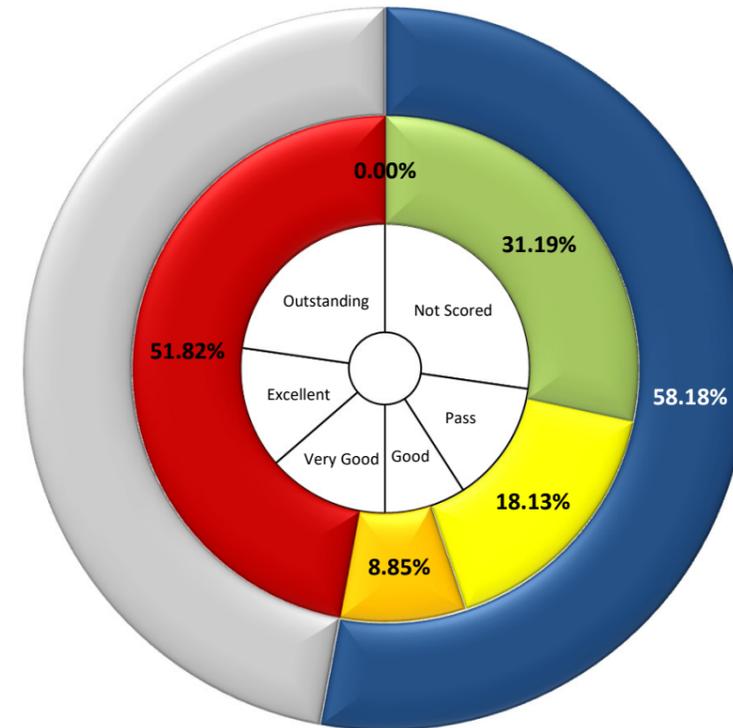
Issue Number	1
Revision	Revision Note
First Issue	First Issue - For Comment



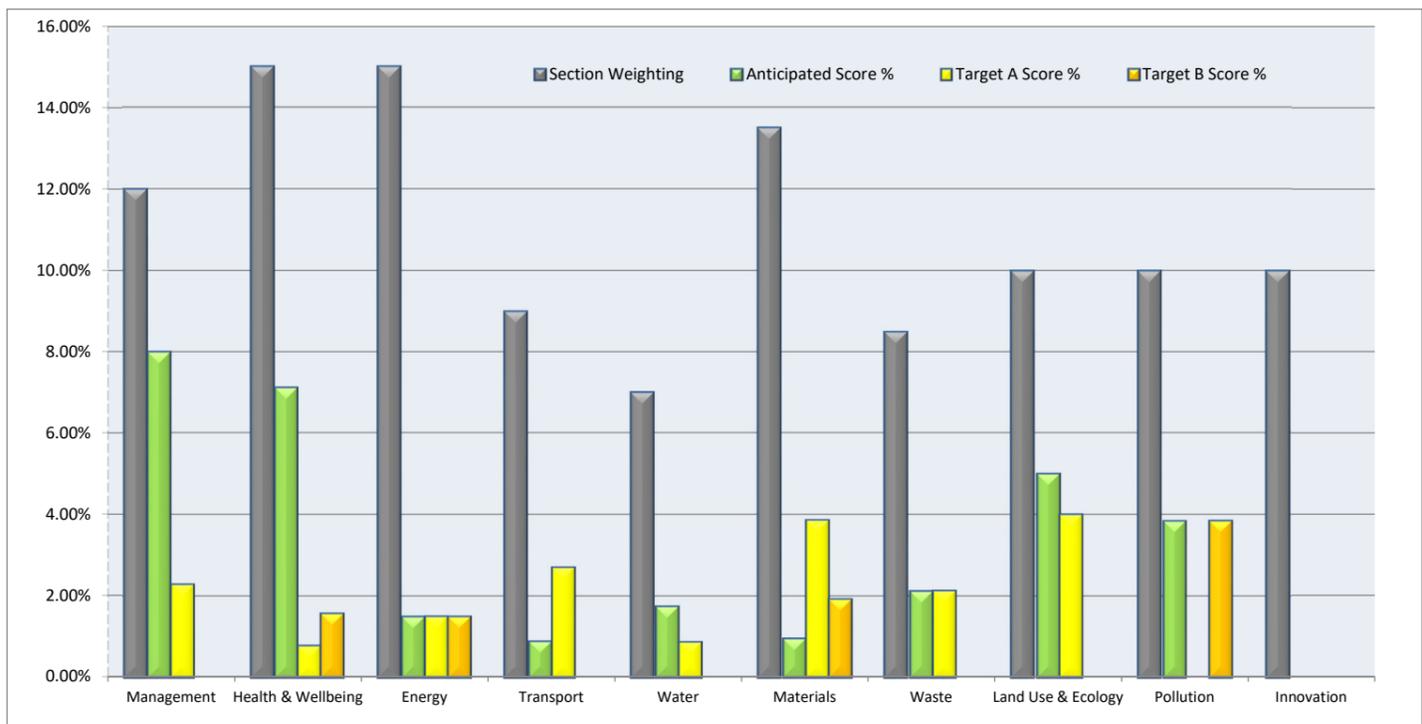
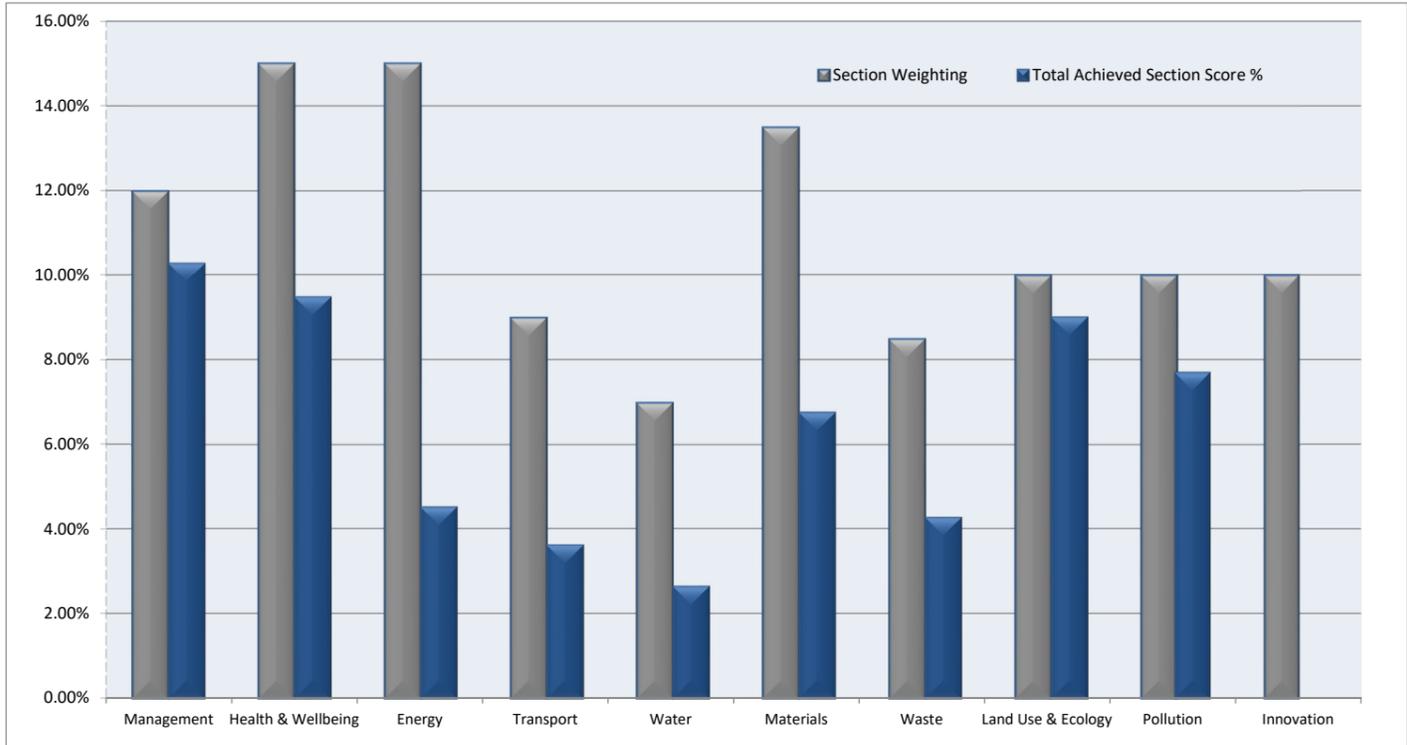
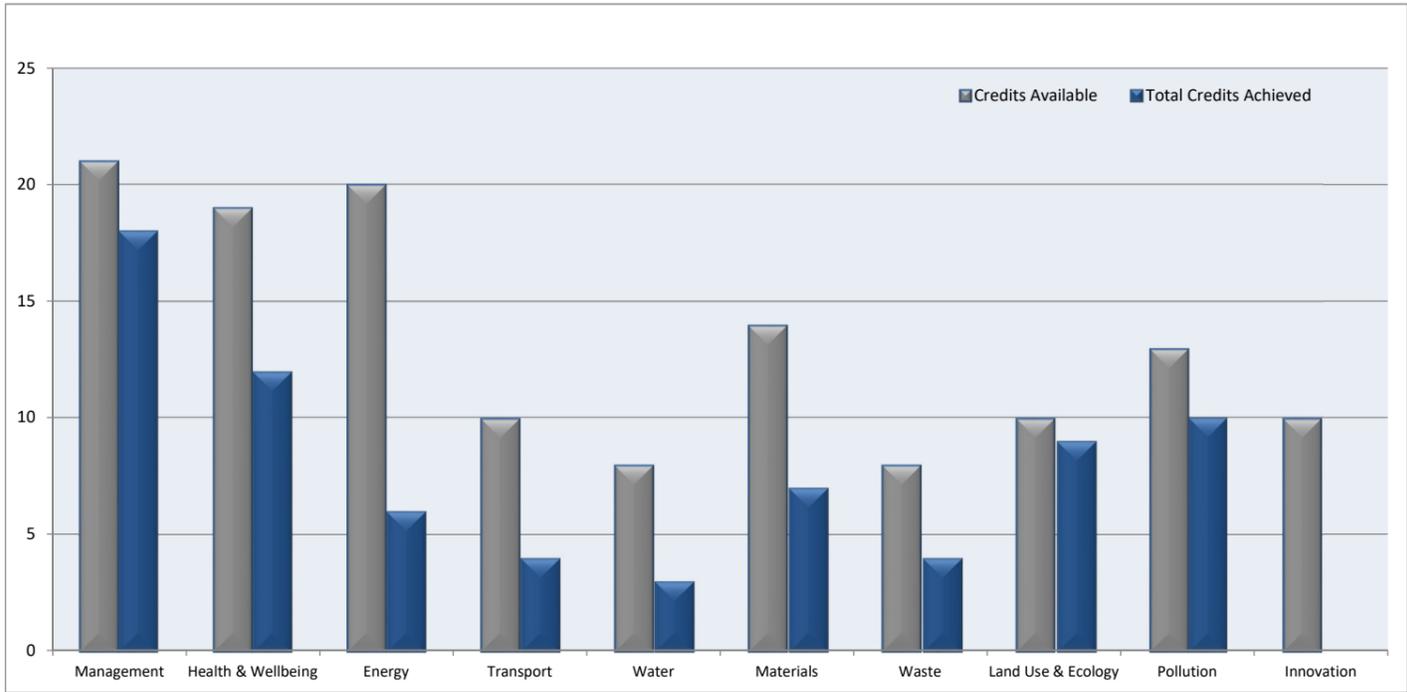
BREEAM Bandings	
Not Scored	<30%
Pass	30%
Good	45%
Very Good	55%
Excellent	70%
Outstanding	85%

BREEAM Scoring	
Maximum Target Score	58.18%
Awarded Credits	
Maximum Target Rating	Very Good

BREEAM Scoring Breakdown		
Anticipated credits	Low risk, best value credits	31.19%
Target A credits	Medium risk with design/cost implications to be tested	18.13%
Target B credits	High risk with design/cost implications to be tested	8.85%
Unlikely credits	Deemed unlikely and/or unachievable by design team	51.82%
Awarded Credits	Credit awarded by the assessor	0.00%
Target Score	Building Target Score as agreed with the Project Team	58.18%



	Credits Available	Total Credits Achieved	Section Weighting	Total Achieved Section Score %	Anticipated Score %	Target A Score %	Target B Score %
Management	21	18	12.00%	10.29%	8.00%	2.29%	0.00%
Health & Wellbeing	19	12	15.00%	9.47%	7.11%	0.79%	1.58%
Energy	20	6	15.00%	4.50%	1.50%	1.50%	1.50%
Transport	10	4	9.00%	3.60%	0.90%	2.70%	0.00%
Water	8	3	7.00%	2.63%	1.75%	0.88%	0.00%
Materials	14	7	13.50%	6.75%	0.96%	3.86%	1.93%
Waste	8	4	8.50%	4.25%	2.13%	2.13%	0.00%
Land Use & Ecology	10	9	10.00%	9.00%	5.00%	4.00%	0.00%
Pollution	13	10	10.00%	7.69%	3.85%	0.00%	3.85%
Innovation	10	0	10.00%	0.00%	0.00%	0.00%	0.00%
<b>Totals</b>	<b>133.00</b>	<b>73.00</b>	<b>110.00%</b>	<b>58.18%</b>	<b>31.19%</b>	<b>18.13%</b>	<b>8.85%</b>



BREEAM 2014 UK New Construction Pre-Assessment Tracker

Section 01 Management Credit Summary

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
Man01 Project Brief and Design			4	1	1	0	2	Criteria requirements	Assessor's comments
Will stakeholder consultation (project delivery) take place?	Man 01 -01	Project Manager	1	1				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.	Credit Anticipated
	Man 01 -02	Project Manager						In defining the roles and responsibilities for each key phase of the project, the following must be considered: a.End user requirements b.Aims of the design and design strategy c.Particular installation and construction requirements/limitations d.Occupiers' budget and technical expertise in maintaining any proposed systems e.Maintainability and adaptability of the proposals f.Requirements for the production of project and end user documentation g.Requirements for commissioning, training and aftercare support.	
	Man 01 -03	Project Manager						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.	
Will stakeholder consultation (third party) take place?	Man 01 -04	Project Manager	1		1			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 (compliance note CN3).	Credits have been awarded on the basis of dialogue with key stakeholders during the initial feasibility stages of the project.  Has a consultation plan been prepared for the project.
	Man 01 -05	Project Manager						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.	
	Man 01 -06	Project Manager						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.	
	Man 01 -07	Project Manager						The consultation exercise used a method carried out by an independent party.	
Will a sustainability champion (design) be assigned?	Man 01 -08	Sustainability Champion	1				1	A Sustainability Champion has been appointed to facilitate the setting and achievement of BREEAM performance targets for the project. The design stage Sustainability Champion is appointed to perform this role during the feasibility stage (Stage 1, Preparation and Brief stage, as defined by the RIBA Plan of Work 2013 or equivalent).	Credits discounted. A Sustainability Champion has not been appointed for the project.
	Man 01 -09	Project Manager						The defined BREEAM performance target(s) has been formally agreed (see Relevant definitions) between the client and design/project team no later than the Concept Design stage (RIBA Stage 2 or equivalent).	
	Man 01 -10	Project Manager						To achieve this credit at the interim design stage assessment, the agreed BREEAM performance target(s) must be demonstrably achieved by the project design. This must be demonstrated via the BREEAM assessor's design stage assessment report.	
Will a sustainability champion (monitoring progress) be assigned?	Man 01 -11	Project Manager	1				1	The Sustainability Champion criteria 8, 9 and 10 have been achieved.	
	Man 01 -12	Sustainability Champion						A Sustainability Champion is appointed to monitor progress against the agreed BREEAM performance target(s) throughout the design process and formally report progress to the client and design team.	
Man02 Life Cycle Cost and Service Life Planning			4	1	2	0	1	Criteria requirements	Assessor's comments
Will an elemental life cycle cost (LCC) analysis be carried out?	Man 02 - 01	Cost Consultant	2		2			An elemental life cycle cost (LCC) analysis has been carried out at Process Stage 2 (equivalent to Concept Design - RIBA Stage 2) together with any design option appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:2008.	The Cost Consultant is required to confirm the level of Life Cycle Cost analysis undertaken for the project.
	Man 02 - 02	Cost Consultant						The LCC analysis shows: a. An outline LCC plan for the project based on the building's basic structure and envelope, appraising a range of options and based on multiple cash flow scenarios e.g. 20, 30, 50+ years; b. The fabric and servicing strategy for the project outlining services component and fit-out options (if applicable) over a 15 year period, in the form of an 'elemental LCC Plan'.	
Will a component level LCC plan be developed?	Man 02 - 03	Cost Consultant	1				1	A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to Technical Design - RIBA Stage 4) in line with PD 156865:2008 and includes the following component types (where present): a. Envelope, e.g. cladding, windows, and/or roofing b. Services, e.g. heat source cooling source, and/or controls c. Finishes, e.g. walls, floors and/or ceilings d. External spaces, e.g. alternative hard landscaping, boundary protection.	It has been assumed that an elemental life cycle cost analysis has been prepared.  The credit associated with component level LCCA has been discounted at this stage; however this could be revisited at Stage 4 if required.
	Man 02 - 04	Cost Consultant						Demonstrate, using appropriate examples provided by the design team, how the component level LCC plan has been used to influence building and systems design/specification to minimise life cycle costs and maximise critical value.	
Will the predicted capital cost be reported?	Man 02 - 05	Cost Consultant	1	1				Report the capital cost for the building in pounds per square metre (£k/m <sup>2</sup> ), via the BREEAM Assessment Scoring and Reporting tool, Assessment Issue Scoring tab, Management section.	It is assumed that construction capital cost will be reported.



Man04 Commissioning and Handover		Credit Clause	Owner	4	4	0	0	0	Criteria requirements	Assessor's comments
Will commissioning schedule and responsibilities be developed & accounted for?	Man 04 - 01	Contractor	1	1					A schedule of commissioning and testing that identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and testing and inspecting building fabric.	Credit Anticipated
	Man 04 - 02	Contractor							The schedule will identify the appropriate standards that all commissioning activities will be conducted in accordance with, such as current Building Regulations, BSRIA1 and CIBSE2 guidelines and/or other appropriate standards, where applicable. Where a building management system (BMS) is specified, refer to compliance note CN3.2 on BMS commissioning procedures.	
	Man 04 - 03	Contractor							An appropriate project team member(s) is appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client.	
	Man 04 - 04	Contractor							The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of works, allowing for the required time to complete all commissioning and testing activities prior to handover.	
Will a commissioning manager be appointed?	Man 04 - 05	Contractor	1	1					The commissioning and testing schedule and responsibilities credit is achieved.	Credit Anticipated
	Man 04 - 06	Contractor							For buildings with complex building services and systems, a specialist commissioning manager is appointed during the design stage (by either the client or the principal contractor) with responsibility for: a.Undertaking design reviews and giving advice on suitability for ease of commissioning. b.Providing commissioning management input to construction programming and during installation stages. c.Management of commissioning, performance testing and handover/post-handover stages.	
Will the building fabric be commissioned?	Man 04 - 07	Contractor	1	1					The commissioning and testing schedule and responsibilities credit is achieved.	The credit associated with Thermographic Image Testing has been targeted. Team to confirm if this is included in current scope. A worthwhile credit.
	Man 04 - 08	Contractor							The integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths is quality assured through completion of post construction testing and inspection. Dependent on building type or construction, this can be demonstrated through the completion of a thermographic survey as well as an airtightness test and inspection (see compliance notes CN3.3 and CN3.4. The survey and testing is undertaken by a Suitably Qualified Professional in accordance with the appropriate standard.	
	Man 04 - 09	Contractor							Any defects identified in the thermographic survey or the airtightness testing reports are rectified prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building/element.	
Will a building user guide be developed prior to handover?	Man 04 - 10	Contractor	1	1					A Building User Guide (BUG) is developed prior to handover, for distribution to the building occupiers and premises managers.	Credit Anticipated
Will a training schedule be prepared for building occupiers/managers at Handover?	Man 04 - 11	Contractor							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: a.The building's design intent b.The available aftercare provision and aftercare team main contact(s), including any scheduled seasonal commissioning and post occupancy evaluation c.Introduction to, and demonstration of, installed systems and key features, particularly building management systems, controls and their interfaces d.Introduction to the Building User Guide and other relevant building documentation, e.g. design data, technical guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log book etc. e.Maintenance requirements, including any maintenance contracts and regimes in place.	

Man05 Aftercare		Credit Clause	Owner	3	2	1	0	0	Criteria requirements	Assessor's comments
Management	Will aftercare support be provided to building occupiers?	Man 05 - 01	Contractor	1	1				<p>There is (or will be) operational infrastructure and resources in place to provide aftercare support to the building occupier(s), which includes the following as a minimum:</p> <p>a.A meeting programmed to occur between the aftercare team/individual and the building occupier/management (prior to initial occupation, or as soon as possible thereafter) to:</p> <p>i.Introduce the aftercare team or individual to the aftercare support available, including the Building User Guide (where existing) and training schedule/content.</p> <p>ii.Present key information about the building including the design intent and how to use the building to ensure it operates as efficiently and effectively as possible.</p> <p>b.On-site facilities management training, to include a walkabout of the building and introduction to and familiarisation with the building systems, their controls and how to operate them in accordance with the design intent and operational demands.</p> <p>c.Initial aftercare support provision for at least the first month of building occupation, e.g. on-site attendance on a weekly basis to support building users and management (this could be more or less frequent depending on the complexity of the building and building operations).</p> <p>d.Longer term aftercare support provision for occupants for at least the first 12 months from occupation.</p> <p>There is (or will be) operational infrastructure and resources in place to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied. This is done to facilitate analysis of discrepancies between actual and predicted performance, with a view to adjusting systems and/or user behaviours accordingly.</p>	Credit Anticipated
		Man 05 - 02	Contractor							
	Will seasonal commissioning occur over 12 months once substantially occupied?	Man 05 - 03	Contractor	1	1				<p>The following seasonal commissioning activities will be completed over a minimum 12-month period, once the building becomes substantially occupied:</p> <p>a.Complex systems - Specialist Commissioning Manager:</p> <p>i.Testing of all building services under full load conditions, i.e. heating equipment in mid-winter, cooling/ventilation equipment in mid-summer, and under part load conditions (spring/autumn).</p> <p>ii.Where applicable, testing should also be carried out during periods of extreme (high or low) occupancy.</p> <p>iii.Interviews with building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems.</p> <p>iv.Re-commissioning of systems (following any work needed to serve revised loads), and incorporating any revisions in operating procedures into the operations and maintenance (O&amp;M) manuals.</p>	Credit Anticipated
Will a post occupancy evaluation be carried out 1 year after occupation?	Man 05 - 04	Client	1		1			<p>The client or building occupier makes a commitment to carry out a post occupancy evaluation (POE) exercise one year after initial building occupation. This is done to gain in-use performance feedback from building users to inform operational processes, including re-commissioning activities, and maintain or improve productivity, health, safety and comfort. The POE is carried out by an independent third party (see Man 01 Project brief and design – Relevant definitions) and needs to cover:</p> <p>a.A review of the design intent and construction process (review of design, procurement, construction and handover processes).</p> <p>b.Feedback from a wide range of building users including Facilities Management on the design and environmental conditions of the building covering:</p> <p>i.Internal environmental conditions (light, noise, temperature, air quality)</p> <p>ii.Control, operation and maintenance</p> <p>iii.Facilities and amenities</p> <p>iv.Access and layout</p> <p>v.Other relevant issues</p> <p>vi.Sustainability performance</p> <p>The client or building occupier makes a commitment to carry out the appropriate dissemination of information on the building's post occupancy performance. This is done to share good practice and lessons learned and inform changes in user behaviour, building operational processes and procedures, and system controls. Refer to compliance notes CN3.1 and CN3.2 for a definition of appropriate dissemination. This also provides advice on appropriate dissemination where the building or building information is commercially or security sensitive.</p>	Credits have been awarded on the basis that a Post Occupancy evaluation will be undertaken for the project by an appropriate third party. Team to confirm where responsibility for this item lies (NHS or Contractor)	
Will exemplary level criteria be met?	Man 05 - 05	Client								
	Man 05 - 06									
	Section %		21	14	4	0	3			
	12.000%		0.571%	8.000%	2.286%	0.000%	1.714%			

Section 02 Health and Wellbeing Credit Summary

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
Credit Issue			6	2	0	0	4	Criteria requirements	Assessor's comments
Hea01 Visual Comfort	Will the design provide adequate glare control for building users?	Hea 01 - 01	Architect	1	1			The potential for disabling glare has been designed out of all relevant building areas using a glare control strategy, either through building form and layout and/or building design measures (see compliance note CN3). The glare control strategy avoids increasing lighting energy consumption, by ensuring that: a.The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The system should not inhibit daylight from entering the space under cloudy conditions, or when sunlight is not on the facade. AND b.The use or location of shading does not conflict with the operation of lighting control systems.	The credit has been awarded on the assumption that user operated blinds will be installed in relevant building areas.
		Hea 01 - 02	Architect						
	Will relevant building areas be designed to achieve appropriate daylight factor(s)?	Hea 01 - 03	Architect	2			2	Daylighting criteria have been met using either of the following options: a.The relevant building areas meet good practice daylight factor(s) and other criterion as outlined in Table - 10 and Table - 11. OR b.The relevant building areas meet good practice average and minimum point daylight illuminance criteria as outlined in Table - 12.	Credit not targeted at this stage
Will the design comply with the view out criteria for building users?		Hea 01 - 04	Architect	2			2	95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out.	Credit not targeted at this stage
		Hea 01 - 05	Architect					The window/opening must be ≥ 20% of the surrounding wall area (refer to Relevant definitions in the Additional information section). Where the room depth is greater than 7m, compliance is only possible where the percentage of window/opening is the same as, or greater than, the values in table 1.0 of BS 8206.	
		Hea 01 - 06	Architect					In addition, the building type criteria in Table - 13 are applicable to view out criteria.	
Will internal/external lighting levels, zoning and controls be specified in accordance with the relevant CIBSE Guides/British Standards?		Hea 01 - 07	M&E Engineer	1	1			All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts.	Credit Anticipated
		Hea 01 - 08	M&E Engineer					Internal lighting in all relevant areas of the building is designed to provide an illuminance (lux) level appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. This can be demonstrated through a lighting design strategy that provides illuminance levels in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard.	
		Hea 01 - 09	M&E Engineer					For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 sections 3.3, 4.6, 4.7, 4.8 and 4.9. This gives recommendations highlighting: a. Limits to the luminance of the luminaires to avoid screen reflections. (Manufacturers' data for the luminaires should be sought to confirm this.) b.For up lighting, the recommendations refer to the luminance of the lit ceiling rather than the luminaire; a design team calculation is usually required to demonstrate this. c. Recommendations for direct lighting, ceiling illuminance, and average wall illuminance.	
		Hea 01 - 10	M&E Engineer					All external lighting located within the construction zone is designed to provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. To demonstrate this, external lighting provided is specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places.	
		Hea 01 - 11	M&E Engineer					Internal lighting is zoned to allow for occupant control (see Relevant definitions) in accordance with the criteria below for relevant areas present within the building:  h.Dining, restaurant, café areas: separate zoning of servery and seating/dining areas i.Retail: separate zoning of display and counter areas j.Bar areas: separate zoning of bar and seating areas k.Wards or bedded areas: zoned lighting control for individual bed spaces and control for staff over groups of bed spaces l.Treatment areas, dayrooms, waiting areas: zoning of seating and activity areas and circulation space with controls accessible to staff.	
Will exemplary level criteria be met?	Hea 01 - 14								

edl-being



Hea04 Thermal Comfort		Credit Clause	Owner	3	3	0	0	0	Criteria requirements	Assessor's comments
Will thermal modelling of the design be carried out?	Hea 04 - 01	M&E Engineer	1	1					<p>Thermal modelling has been carried out using software in accordance with CIBSE AM111 Building Energy and Environmental Modelling.</p> <p>The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis.</p> <p>For naturally ventilated/free running buildings:</p> <p>i. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type).</p> <p>ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings.</p> <p>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>	Credits have been awarded on the assumption that detailed thermal modelling will be undertaken for the building, for both current and future weather files (future weather files for 2050s for free running areas and 2030s for mechanically ventilated areas)
	Hea 04 - 02	M&E Engineer								
	Hea 04 - 03	M&E Engineer								
Hea 04 - 04	M&E Engineer									
Will the building design be adapted for a projected climate change scenario?	Hea 04 - 05	M&E Engineer	1	1				<p>Criteria 1 to 4 are achieved.</p> <p>The thermal modelling demonstrates that the relevant requirements set out in criterion 3 are achieved for a projected climate change environment.</p> <p>Where thermal comfort criteria are not met for the projected climate change environment, the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements under criterion 6.</p>		
	Hea 04 - 06	M&E Engineer								
	Hea 04 - 07	M&E Engineer								
Will the modelling inform the development of a thermal zoning and control strategy?	Hea 04 - 09	M&E Engineer	1	1				<p>Criteria 1 to 4 are achieved.</p> <p>The thermal modelling analysis (undertaken for compliance with criteria 1 to 4) 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: a.Zones within the building and how the building services could efficiently and appropriately heat or cool these areas. For example consider the different requirements for the central core of a building compared with the external perimeter adjacent to the windows.</p> <p>b.The degree of occupant control required for these zones, based on discussions with the end user (or alternatively building type or use specific design guidance, case studies, feedback) considers:</p> <p>i.User knowledge of building services</p> <p>ii.Occupancy type, patterns and room functions (and therefore appropriate level of control required)</p> <p>iii.How the user is likely to operate or interact with the system(s), e.g. are they likely to open windows, access thermostatic radiator valves (TRV) on radiators, change air-conditioning settings etc.</p> <p>iv.The user expectations (this may differ in the summer and winter) and degree of individual control (i.e. obtaining the balance between occupant preferences, for example some occupants like fresh air and others dislike drafts).</p> <p>c.How the proposed systems will interact with each other (where there is more than one system) and how this may affect the thermal comfort of the building occupants.</p> <p>d.The need or otherwise for an accessible building user actuated manual override for any automatic systems.</p>		
	Hea 04 - 10	M&E Engineer								
	Hea 04 - 11	M&E Engineer								
Hea05 Acoustic Performance		Credit Clause	Owner	3	2	0	1	0	Criteria requirements	Assessor's comments
Will the building meet the appropriate acoustic performance standards and testing requirements?	Hea 05 - 01-03	Acoustician	3	2		1			<p>The building meets the appropriate acoustic performance standards and testing requirements defined in the checklists and tables section which defines criteria for the acoustic principles of:</p> <p>a.Sound insulation</p> <p>b.Indoor ambient noise level</p> <p>c.Reverberation times.</p>	<p>Credits have been awarded on the assumption that the building will meet the requirements of SHTM 08-01.</p> <p>As the design develops, the proposed construction details should be considered by the project acoustician. Early design commentary should be considered a priority.</p> <p>12/09/18: 1 credit (a. Sound insulation moved to target B)</p>

Health and Well-being

Hea06 Safety and Security	Credit Clause	Owner	2	0	1	0	1	Criteria requirements	Assessor's comments
Where external site areas are present will safe access be designed for pedestrians and cyclists?	Hea 06 - 01	Security Consultant	1				1	<b>Where external site areas form part of the assessed development the following apply:</b> Dedicated cycle paths provide direct access from the site entrance(s) to any cycle storage provided, without the need to deviate from the cycle path and, if relevant, connect to off-site cycle paths (or other appropriate safe route) where these run adjacent to the development's site boundary.	Credits for safe access by cycle paths and pedestrian walkways have been discounted, as the existing site would not meet the minimum credit requirements.
	Hea 06 - 02	Security Consultant						Footpaths on-site provide direct access from the site entrance(s) to the building entrance(s) and connect to public footpaths off-site (where existing), providing practical and convenient access to local transport nodes and other off-site amenities (where existing).	
	Hea 06 - 03	Security Consultant						Where provided, drop-off areas are designed off/adjoining to the access road and provide direct access to pedestrian footpaths, therefore avoiding the need for the pedestrian to cross vehicle access routes.	
	Hea 06 - 04	Security Consultant						Dedicated pedestrian crossings are provided where pedestrian routes cross vehicle access routes, and appropriate traffic calming measures are in place to slow traffic down at these crossing points.	
	Hea 06 - 05	Security Consultant						For large developments with a high number of public users or visitors, pedestrian footpaths must be signposted to other local amenities and public transport nodes off-site (where existing).	
	Hea 06 - 06	Security Consultant						The lighting for access roads, pedestrian routes and cycle lanes is compliant with the external lighting criteria defined in Hea 01 Visual comfort, i.e. in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas.	
	Hea 06 - 07	Security Consultant						<b>Where vehicle delivery access and drop-off areas form part of the assessed development, the following apply:</b> 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 accessible to building users and general public.	
	Hea 06 - 08	Security Consultant						There is a dedicated parking/waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking.	
	Hea 06 - 09	Security Consultant						Parking and turning areas are designed for simple manoeuvring according to the type of delivery vehicle likely to access the site, thus avoiding the need for repeated shunting.	
	Hea 06 - 10	Security Consultant						There is a dedicated space for the storage of refuse skips and pallets away from the delivery vehicle manoeuvring area and staff/visitor car parking (if appropriate given the building type/function).	
Will a suitably qualified security consultant be appointed and security considerations accounted for?	Hea 06 - 11	Security Consultant	1		1			A Suitably Qualified Security Specialist (SQSS) conducts an evidence based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent).	Credits have been awarded on the basis that the team will enter dialogue with an Architectural Liaison Officer (ALO).
	Hea 06 - 12	Security Consultant						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.	
	Hea 06 - 13	Security Consultant						The recommendations or solutions proposed by the SQSS are implemented (see CN3.6. Any deviation from those recommendations or solutions will need to be justified, documented and agreed in advance with a suitably qualified security specialist.	
Section %			19	9	1	2	7		
15.00%			0.789%	7.105%	0.789%	1.579%	5.526%		

Section 03 Energy Credit Summary

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments	
Energy	Ene01 Reduction of Energy Use and Carbon Emissions	Credit Clause	12	0	0	0	12	Criteria requirements	Assessor's comments	
	Energy performance	Ene 01 - 01	M&E Engineer	12				12	Calculate an Energy Performance Ratio for New Constructions (EPR NC). Compare the EPR NC achieved with the benchmarks in Table - 25 and award the corresponding number of BREEAM credits.	<p>It has been confirmed that the building will be considered as an extension for Building Warrant purposes and as such will not be subject to Section 6.1.</p> <p>The building will be served from existing heating and chilled water plant located in the existing hospital. The credit performance will be limited by the efficiency of existing LTHW and CHW systems</p> <p>2 credits awarded at this stage as a conservative estimate</p> <p>12/09/18: Mechanical Engineer said that the credits were unlikely to be achieved.</p>
	Will exemplary level criteria be met?									
	Ene02 Energy Monitoring	Credit Clause	2	1	0	1	0	Criteria requirements	Assessor's comments	
	Will a BMS or sub-meters be specified to monitor energy use from major building services systems?	Ene 02 - 01	M&E Engineer	1	1				<p>Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems.</p> <p>The energy consuming systems in buildings with a total useful floor area greater than 1,000m2 are metered using an appropriate energy monitoring and management system.</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.</p> <p>The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.</p>	<p>Credits have been awarded assuming that energy supplies to the new building will be metered.</p> <p>The level of field energy sub-metering should however be considered. Would this provide useful information? Would installation be value for money?</p>
		Ene 02 - 02	M&E Engineer							
		Ene 02 - 03	M&E Engineer							
		Ene 02 - 04	M&E Engineer							
	Will a BMS or sub-meters be specified to monitor energy use by tenant/building function areas?	Ene 02 - 05	Client	1			1		An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant function areas or departments within the building/unit.	
	Ene03 External Lighting	Credit Clause	1	1	0	0	0	Criteria requirements	Assessor's comments	
Will external light fittings and controls be specified in accordance with the BREEAM criteria?	Ene 03 -01	M&E Engineer	1	1				<p>The building has been designed to operate without the need for external lighting (which includes on the building, signs and at entrances).</p> <p>OR alternatively, where the building does have external lighting, one credit can be awarded as follows: The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt.</p> <p>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 Anticipated	
	Ene 03 -02	M&E Engineer								
	Ene 03 -03	M&E Engineer								
Ene04 Low Carbon Design	Credit Clause	3	0	0	1	2	Criteria requirements	Assessor's comments		
Will passive design measures be used in line with an analysis be carried out during concept design stage (RIBA stage 2 or equivalent)?	Ene 04 - 01	M&E Engineer	1					<p>The first credit within issue Hea 04 Thermal comfort has been achieved to demonstrate the building design can deliver appropriate thermal comfort levels in occupied spaces.</p> <p>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 (see compliance note CN3).</p> <p>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 (see compliance note CN3.12).</p>	<p>A passive design study could be undertaken in conjunction with a review of building structural options.</p> <p>12/09/18: Mechanical Engineer said that the credit was unlikely to be achieved.</p>	
	Ene 04 - 02	Design Team								
	Ene 04 - 03	Architect								
Will free cooling measures be implemented in the whole building in line with the passive design analysis?	Ene 04 - 04	M&E Engineer	1					<p>The passive design analysis credit is achieved.</p> <p>The passive design analysis carried out under criterion 2 includes an analysis of free cooling and identifies opportunities for the implementation of free cooling solutions.</p> <p>The building uses ANY of the free cooling strategies listed in compliance note CN8 to reduce the cooling energy demand.</p>	The building will incorporate a CHW connection.	
	Ene 04 - 05	M&E Engineer								
	Ene 04 - 06	M&E Engineer								
Will a LZC technology be specified in line with a feasibility study carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent)?	Ene 04 - 07	M&E Engineer	1			1		<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 (see Relevant definitions) to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development (see compliance note CN3.3).</p> <p>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 (see compliance note CN3.12).</p>	It has been discussed that the building may incorporate some form of decentralised LZCT, such as PV, however this is to be confirmed.	
	Ene 04 - 08	M&E Engineer								
Ene08 Energy Efficient Equipment	Credit Clause	2	0	2	0	0	Criteria requirements	Assessor's comments		
Will the significant majority contributors to 'unregulated' energy use meet the BREEAM criteria?	Ene 08 - 01	Project Manager	2		2			<p>Identify the building's unregulated energy consuming loads and estimate their contribution to the total annual unregulated energy consumption of the building, assuming a typical/standard specification.</p> <p>Identify the systems and/or processes that use a significant proportion of the total annual unregulated energy consumption of the development and its operation.</p> <p>Demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building. See Table - 28</p>	<p>Credits have been awarded at this stage, however the credit score is related to NHS equipment procurement strategy.</p> <p>NHS required confirming how small scale office equipment will be procured.</p>	
	Ene 08 - 02	Project Manager								
	Ene 08 - 03	Project Manager								
Section %			20	2	2	2	14			
15.00%			0.750%	1.500%	1.500%	1.500%	10.500%			

Section 04 Transport Credit Summary

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
<b>Tra01 Public Transport Accessibility</b>			5	0	1	0	4	Criteria requirements	Assessor's comments
Indicative Public Transport Accessibility Index	Tra 01-01	Architect	5		1		4	The public transport Accessibility Index (AI) for the assessed building is calculated and BREEAM credits awarded in accordance with the table of building types, AI benchmarks and BREEAM credits in Table - 29.	Credits have been awarded based on a desk-top estimate. The team will be required to provide supporting information to determine the actual building accessibility index.  There appears to be very limited public transport provision at the site.
	Tra 02-02	Architect						The Accessibility Index is determined by entering the following information in to the BREEAM Tra 01 calculator: a.The distance (m) from the main building entrance to each compliant public transport node b.The public transport type(s) serving the compliant node e.g. bus or rail c.The average number of services stopping per hour at each compliant node during the operating hours of the building for a typical day.	
	Tra 02-03							OR For buildings with a fixed shift pattern, i.e. where building users will predominantly arrive/depart at set times, one credit can be awarded where the building occupier provides, or commits to providing a dedicated bus service to and from the building at the beginning and end of each shift/day.	
<b>Tra02 Proximity to Amenities</b>			1	0	0	0	1	Criteria requirements	Assessor's comments
Will building be within close proximity of, and accessible to applicable amenities?	Tra 02-01	Architect	1				1	Where the building is located within close proximity of, and accessible to, local amenities which are likely to be frequently required and used by building occupants, as outlined in Table - 31.	Team to confirm which amenities are present in the existing hospital building.  12/09/18: The design team felt that this credit could no longer be targeted. AM. Asked for confirmation.
	Tra 02-02	Architect						Where a building type is indicated to have core amenities ('C' in Table - 31) at least two of these must be provided as a part of the total number required. The remaining number of amenities required can be met using any other applicable amenities (including any remaining core amenities).	
<b>Tra03 Cyclist facilities</b>			2	0	1	0	1	Criteria requirements	Assessor's comments
Will compliant cycle storage spaces be provided?	Tra 03-01	Architect	2		1		1	Compliant cycle storage spaces that meet the minimum levels set out in Table - 32 (see Checklists and tables) are installed.	No current allowance for onsite cyclist facilities.  Credits do not currently contribute to the target score.  12/09/18: First credit being re investigated.
	Tra 03-02							Criterion 1 has been achieved.	
Will compliant cyclist facilities be provided?	Tra 03-03	Architect						At least two of the following types of compliant cyclist facilities have been provided for all building users (including pupils where appropriate to the building type) - see Relevant definitions for the scope of each compliant cyclist facility: a.Showers b.Changing facilities c.Lockers d.Drying spaces .	
	Tra 03-04							Where criteria 1 to 3 have been met for cycle space and cycle facilities requirements.	
<b>Tra04 Maximum Car Parking Capacity</b>			1	0	1	0	0	Criteria requirements	Assessor's comments
Will BREEAM's maximum car parking criteria for the building type/AI be met?	Tra 04-01	Architect	1		1			The building's car parking capacity is compared to the maximum car parking capacity benchmarks in Table - 33 and the relevant number of BREEAM credits awarded. For most building types, except those where stated, the benchmarks vary according to the building's public transport Accessibility Index (AI determined in accordance with BREEAM issue Tra 01 Public transport accessibility). Therefore, for these building types the AI must be determined prior to assessing this issue. This is required to ensure that the building's car parking capacity is relative to the development's accessibility to the public transport network.	Credit awarded on the basis that no new parking spaces will be provided as part of this project
<b>Tra05 Travel Plan</b>			1	1	0	0	0	Criteria requirements	Assessor's comments
Will a transport plan based on site specific travel/survey assessment be developed?	Tra 05-01	Project Manager	1	1				A travel plan has been developed as part of the <b>feasibility and design stages</b> .	It is understood that a travel statement will be prepared to support the planning application.  A copy of the statement is to be issued to the assessor for review.
	Tra 05-02	Architect or Civil/Structural						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): a.Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. b.Travel patterns and transport impact of future building users. c.Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children). d.Disabled access (accounting for varying levels of disability and visual impairment). e.Public transport links serving the site. f.Current facilities for cyclists.	
	Tra 05-03	Architect or Civil/Structural						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.	
	Tra 05-04	Project Manager						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.	
Section %			10	1	3	0	6		
9.00%			0.900%	0.900%	2.700%	0.000%	5.400%		

Transport

**Section 05 Water Credit Summary**

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
<b>Wat01 Water Consumption</b>  What is the target for % reduction in potable water consumption for sanitary use in the building?		Owner	5	1	0	0	4	Criteria requirements	Assessor's comments
	Wat 01-01	Architect	5	1	0	0	4	An assessment of the efficiency of the building's domestic water-consuming components is undertaken using the BREEAM Wat 01 calculator. The water consumption (l/person/day) for the assessed building is compared against a baseline performance and BREEAM The efficiency of the following 'domestic scale' water-consuming components must be included in the assessment (where specified): a.WCs b.Urinals c.Taps (wash hand basins and where specified kitchen taps and waste disposal unit) d.Showers e.Baths f.Dishwashers (domestic and commercial sized) g.Washing machines (domestic and commercial or industrial sized).	The credit has been awarded on the assumption that Tier 1 (12% reduction) in water consumption will be targeted.  The final credit score will be influenced by the specification of sanitary fittings excluding clinical areas.
	Wat 01-02	Architect							
	Wat 01-03	Architect							
	Wat 01-04	Architect or Civil/Structural							
	Wat 01-05	Architect or Civil/Structural							
	Wat 01-06								
Will exemplary level be met? 65% improvement over baseline									
<b>Wat02 Water Monitoring</b>			1	1	0	0	0	Criteria requirements	Assessor's comments
Will there be a water meter on the mains water supply to the building?	Wat 02-01	M&E Engineer	1	1	0	0	0	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.  Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area (see Compliance notes).  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).	Credits awarded assuming that the new water supply (BCWS) will be fitted with a pulsed out-put water meter.
Will metering/monitoring equipment be specified on the water supply to any relevant plant/building areas?	Wat 02-02	M&E Engineer							
Will all specified water meters have a pulsed output?	Wat 02-03	M&E Engineer							
<b>Wat03 Water leak detection</b>			2	0	1	0	1	Criteria requirements	Assessor's comments
Will a mains water leak detection system be installed on the building's mains water supply?	Wat 03-01	M&E Engineer	1				1	A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed. The leak detection system must be: a.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. b.Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time. c.Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods. d.Programmable to suit the owner/occupiers' water consumption criteria. e.Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.	Credit discounted, on the basis that a water leak detection system will not be installed.
Will flow control devices be installed in each sanitary area/facility?	Wat 03-02	M&E Engineer	1		1			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).	It is assumed that any 'public' WC cores will be fitted with appropriate flow control / shut-off.
Section %			8.0	2.0	1.0	0.0	5.0		
7.00%			0.875%	1.750%	0.875%	0.000%	4.375%		

**Section 06 Materials Credit Summary**

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
<b>Mat01 Life cycle impacts</b>			6	0	3	0	3	Criteria requirements	Assessor's comments
Green Guide Rating points and Life cycle greenhouse gas emissions	Mat 01-01	Architect	6		3		3	BREEAM awards credits on the basis of the building's quantified environmental life cycle impact through assessment of the main building elements, including external walls, windows, roof, upper floor slab, internal walls and floor finishes/coverings.	Credits have been awarded, but with a degree of risk, until the final construction method is confirmed.  Building element Green Guide ratings are to be confirmed as the design develops
	Mat 01-02	Architect						Credits are awarded on the basis of the total number of points achieved, as set out in Table - 39, and calculated using the BREEAM Mat 01 calculator. This point's score is based on the Green Guide rating(s) achieved for the specifications that make-up the main building elements (external walls, windows, roof, upper floor slab, internal walls and floor finishes/coverings.).	
	Mat 01-03	Architect						Life cycle greenhouse gas emissions (kgCO2eq.) for each element are also required to be reported based on a 60-year building life. Where specific data is not available for a product or element, generic data should be used. Generic data can be obtained from the online Green Guide for each element and must be entered in to the BREEAM Mat 01 calculator.	
Will exemplary criteria be achieved?									
<b>Mat02 Hard Landscaping &amp; Boundary Protection</b>			1	0	0	1	0	Criteria requirements	Assessor's comments
Will >=80% of all external hard landscaping and boundary protection achieve a Green Guide A or A+ rating?	Mat 02-10	Architect	1			1		Where at least 80% of all external hard landscaping and 80% of all boundary protection (by area) in the construction zone achieves an A or A+ rating, as defined in the Green Guide to Specification. Green Guide ratings for the specification(s) of each element can be found at www.thegreenguide.org.uk	Credits have been discounted at this stage on the basis that external hard landscaping will not meet credit requirements, a Green Guide rating of A / A+
<b>Mat03 Responsible Sourcing of Materials</b>			4	0	0	1	3	Criteria requirements	Assessor's comments
All timber and timber-based products are 'Legally harvested and traded timber'	Pre-requisite Mat 03-01	Architect						All timber and timber-based products used on the project is Legally harvested and traded timber.	
Is there a documented sustainable procurement plan?	Mat 03-02	Contractor	1			1		The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan (see the Relevant definitions in the Additional information section).	Credits have been awarded on the assumption that Keir operate a sustainable procurement plan. A copy of the local plan is to be provided to the assessor for review.
Percentage of available responsible sourcing of materials points achieved.	Mat 03-03	Architect	3				3	The available RSM credits (refer to Table - 43) can be awarded where the applicable building materials (refer to Mat 03 Responsible sourcing of materials) are responsibly sourced in accordance with the BREEAM methodology, as defined in steps 1 to 2 in the Methodology section.	Responsible sourcing of materials credits have been discounted at this stage.
Will exemplary criteria be achieved?									
<b>Mat04 Insulation</b>			1	1	0	0	0	Criteria requirements	Assessor's comments
Will all new insulation specified for use within external walls, ground floor, roof and building services be assessed?	Mat 04-01	Architect/Mech Eng	1	1				Any new insulation specified for use within the following building elements must be assessed: a.External walls b.Ground floor c.Roof d.Building services.	Credit Anticipated
Will the Insulation Index for the insulation is the same or greater than 2.5?	Mat 04-02	Architect/Mech Eng						The Insulation Index for the building fabric and services insulation is the same as or greater than 2.5.	
<b>Mat05 Designing for Durability and Resilience</b>			1	0	1	0	0	Criteria requirements	Assessor's comments
Will suitable durability/protection measures be specified and installed to vulnerable areas of the building?	Mat 05-01	Architect	1		1			The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This must include, but is not necessarily limited to: a.Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). b.Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. c.Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas.	Credits have been awarded on the basis that appropriate durability and protection measures will be incorporated into the design.
Will suitable durability/protection measures be specified and installed to exposed parts of the building?	Mat 05-02	Architect						The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors.	
<b>Mat06 Material efficiency</b>			1	0	0	0	1	Criteria requirements	Assessor's comments
Will material efficiency measures be identified and implemented during all RIBA stages?	Mat 06-01	ALL	1				1	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 credit has been discounted at this stage, but could be introduced if a Material Efficiency study is prepared by the team and reviewed at key project milestones.
	Mat 06-02	ALL						The above is carried out by the design/construction team in consultation with the relevant parties at each of the following RIBA stages: a.Preparation and Brief b.Concept Design c.Developed Design d.Technical Design e.Construction.	
Section %			14.0	1.0	4.0	2.0	7.0		
13.50%			0.964%	0.964%	3.857%	1.929%	6.750%		

Materials

Section 07 Waste Credit Summary

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
<b>Wst01 Construction Waste Management</b>			4	1	2	0	1	Criteria requirements	Assessor's comments
Will a compliant resource management plan be developed and implemented?	Wst 01-01	Client	3	1	1		1	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.	Credits have been awarded assuming that the principal contractor will operate a compliant SWMP and will aim to minimise waste generation and divert significant quantities of waste from landfill.  The credit score may improve once a SWMP has been prepared and project specific KPIs have been set.
Will the waste resource efficiency benchmarks be achieved?	Wst 01-02	Contractor						Where construction waste related to on-site construction and dedicated off-site manufacture/fabrication (excluding demolition and excavation waste) meets or is lower than volumes shown on Table - 51.	
Will a pre-demolition audit for any existing buildings be completed?	Wst 01-03	Contractor						Where existing buildings on the site will be demolished a pre-demolition audit of any existing buildings, structures or hard surfaces is completed to determine if, in the case of demolition, refurbishment/reuse is feasible and, if not, to maximise the recovery of material from demolition for subsequent high grade/value applications. The audit must be referenced in the RMP and cover: a. Identification of the key refurbishment/demolition materials. b. Potential applications and any related issues for the reuse and recycling of the key refurbishment and demolition materials in accordance with the waste hierarchy.	
What percentage of non-hazardous construction and demolition waste (where applicable) will be diverted from landfill?	Wst 01-04	Contractor						1	
	Wst 01-05	Contractor	Waste materials will be sorted into separate key waste groups as per Table - 53 (according to the waste streams generated by the scope of the works) either on-site or through a licensed contractor for recovery.						
Will exemplary criteria be achieved?	Wst 01 06-08								
<b>Wst02 Recycled Aggregates</b>			1	0	0	0	1	Criteria requirements	Assessor's comments
What is the target total % if high-grade aggregate that will be recycled/secondary aggregate?	Wst 02-01	Contractor	1				1	The percentage of high grade aggregate that is recycled or secondary aggregate, specified in each application (present) must meet the following minimum % levels (by weight or volume) to contribute to the total amount of recycled or secondary aggregate, as specified in.	Credit not targeted
	Wst 02-02	Contractor						The total amount of recycled or secondary aggregate specified, and meeting criterion 1, is greater than 25% (by weight or volume) of the total high grade aggregate specified for the project. Where the minimum level in criterion 1 is not met for an application, all the aggregate in that application must be considered as primary aggregate when calculating the total high grade aggregate specified.	
	Wst 02-03	Contractor						The recycled or secondary aggregates are EITHER: a. Construction, demolition and excavation waste obtained on-site or off-site; OR b. Secondary aggregates obtained from a non-construction post-consumer industrial by product source.	
Will exemplary criteria be achieved?	Wst 02 04-06								
<b>Wst03 Operational Waste</b>			1	1	0	0	0	Criteria requirements	Assessor's comments
Will operational recyclable waste volumes be segregated and stored?	Wst 03-01	Clients Agent	1	1				Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be: a. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams b. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities and occupancy rates.	Compliance requires provision of compliant facilities and NHS commitment to adhere to SHTN 3.  Will additional waste processing facilities will be included within the new extension?
Will static waste compactor(s) or baler(s) be specified where appropriate?	Wst 03-02	Architect						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: a. Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space. b. Vessel(s) for composting suitable organic waste resulting from the building's daily operation and use; OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility. c. Where organic waste is to be stored/composted on-site, a water outlet is provided adjacent to or within the facility for cleaning and hygiene purposes.	
<b>Wst05 Adaptation to climate change</b>			1	0	0	0	1	Criteria requirements	Assessor's comments
Will a climate change adaptation strategy appraisal for structural and fabric resilience be conducted by the end of Concept Design (RIBA Stage 2 or equivalent)?	Wst 05-01	Design Team	1				1	Conduct a climate change adaptation strategy appraisal for structural and fabric resilience by the end of Concept Design (RIBA Stage 2 or equivalent), in accordance with the following approach: a. Carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. The assessment should cover the following stages: i. Hazard identification ii. Hazard assessment iii. Risk estimation iv. Risk evaluation v. Risk management.	The credit has been discounted at this stage, but could be introduced if a building specific climate change study is prepared by the team.
Will exemplary criteria be achieved?									
<b>Wst06 Functional Adaptability</b>			1	0	0	0	1	Criteria requirements	Assessor's comments
Will a building-specific functional adaptation strategy appraisal be by Concept Design (RIBA Stage 2 or equivalent)?	Wst 06-01	Design Team	1				1	A building-specific functional adaptation strategy study has been undertaken by the client and design team by Concept Design (RIBA Stage 2 or equivalent), which includes recommendations for measures to be incorporated to facilitate future adaptation.	The credit has been discounted at this stage, but could be introduced if a building specific functional adaptability study is prepared by the team.
Will functional adaptation measures be implemented?	Wst 06-02	Design Team						Functional adaptation measures have been adopted in the design by Technical Design stage (RIBA Stage 4 or equivalent) in accordance with the functional adaptation strategy recommendations, where practical and cost effective. Omissions have been justified in writing to the assessor.	
Section %			8.0	2.0	2.0	0.0	4.0		
8.500%			1.063%	2.125%	2.125%	0.000%	4.250%		

Waste

Section 08 Land Use and Ecology Credit Summary										
Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments	
Land Use and Ecology	<b>LE01 Site Selection</b>		Owner	2	1	0	0	1	Criteria requirements	Assessor's comments
	Will at least 75% of the proposed development's footprint be located on previously occupied land?	LE 01-01	Project Manager	1	1				At least 75% of the proposed development's footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.	The building is an extension, however credits for previously developed land may not be claimed as the majority of the foot print is amenity grass land.  12/09/18: RE-use Credit being revisited; site used to be a factory.
	Is the site deemed to be significantly contaminated?	LE 01-02	Ecologist	1				1	A contaminated land specialist'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: a.The degree of contamination b.The contaminant sources/types c.The options for remediating sources of contamination which present an unacceptable risk.	
		LE 01-03	Contractor						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 specialist.	
	<b>LE02 Ecological Value of Site and Protection of Ecological Features</b>		Owner	2	2	0	0	0	Criteria requirements	Assessor's comments
	Can the land within the construction zone be defined as 'land of low ecological value'?	LE 02-01	Ecologist	1	1				Land within the assessment zone is defined as 'land of low ecological value' using either: a. The BREEAM checklist for defining land of low ecological value (see Checklists and tables below); OR b. 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.	
Will all features of ecological value surrounding the construction zone/site boundary be protected?	LE 02-02	Contractor	1	1				All existing features of ecological value within the assessment zone are adequately protected from damage during clearance, site preparation and construction activities in line with BS42020: 2013.	Credits have been awarded assuming that an Ecology survey will be instructed to quantify / qualify site ecology.	
	LE 02-03	Contractor						In all cases, the principal contractor is required to construct ecological protection recommended by the Suitably Qualified Ecologist (SQE), prior to any preliminary site construction or preparation works (e.g. clearing of the site or erection of temporary site facilities).		
<b>LE03 Minimising Impact on Existing Site Ecology</b>		Owner	2	2	0	0	0	Criteria requirements	Assessor's comments	
What is the likely change in ecological value as a result of the site's development?	LE 03-01	Ecologist	1	1				The change in ecological value of the site is equal to or greater than zero plant species, i.e. no negative change, using the methods outlined in either (a) or (b) below: a. Determine the following information and input this data in to the BREEAM LE 03/LE 04 calculator: i. The broad habitat type(s) that define the landscape of the assessed site in its existing pre-developed state and proposed state (see Table - 56). ii.Area (m2) of the existing and proposed broad habitat types. OR b. Where a Suitably Qualified Ecologist (SQE) has been appointed and, based on their site survey, they confirm the following and either the assessor or ecologist inputs this data in to the BREEAM LE 03/LE 04 calculator: i. The broad habitat types that define the landscape of the assessed site in its existing pre-developed state and proposed state. ii. Area (m2) of the existing and proposed broad habitat plot types. iii. Average total taxon (plant species) richness within each habitat type.	Credits have been awarded assuming that an Ecology survey will be instructed to quantify / qualify site ecology.	
	LE 03-02	Ecologist	1	1				Where the change in ecological value of the site is less than zero but equal to or greater than minus nine plant species i.e. a minimal change, use the methods outlined in either 1(a) or (b) above.		
<b>LE04 Enhancing Site Ecology</b>		Owner	2	0	2	0	0	Criteria requirements	Assessor's comments	
Will a suitably qualified ecologist be appointed to report on enhancing and protecting site ecology?	LE 04-01		1		1			A suitably qualified ecologist (SQE) has been appointed by the client or their project representative by the end of the Preparation and Brief stage (RIBA Stage 1 or equivalent) to advise on enhancing the ecology of the site at an early stage.	Credits have been awarded assuming that an Ecology survey will be instructed to quantify / qualify site ecology.	
	LE 04-02							The SQE has provided an Ecology Report with appropriate recommendations for the enhancement of the site's ecology at Concept Design stage (RIBA Stage 2 or equivalent). The report is based on a site visit/survey by the SQE.		
Will the suitably qualified ecologist's general recommendations be implemented?	LE 04-03							The 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.		
What is the targeted/intended improvement in ecological value as a result of enhancement actions?	LE 04-04		1		1			The criteria of the first credit are met.		
	LE 04-05							The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build, and the SQE confirms that this will result in an increase in ecological value of the site, with an increase of six plant species or greater		
	LE 04-06							The increase in plant species has been calculated using the BREEAM LE 03/LE 04 calculator, using actual plant species numbers.		
<b>LE05 Long Term Impact on Biodiversity</b>		Owner	2	0	2	0	0	Criteria requirements	Assessor's comments	
Will a Suitably Qualified Ecologist be appointed to monitor/minimise impacts of site activities on biodiversity?	LE 05-01	Project Manager	2		2			Where a Suitably Qualified Ecologist (SQE) is appointed prior to commencement of activities on-site and they confirm that all relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with during the design and construction process.	Credits awarded assuming that Keir will undertake advise provided by the suitably qualified ecologist and will fulfil obligations relating to protection of site ecology.	
Will a landscape and habitat management plan be produced covering at least the first five years after project completion in accordance with British Standards?	LE 05-02	Ecologist						Where a landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion in accordance with BS 42020:2013 Section 11.1. This is to be handed over to the building owner/occupants for use by the grounds maintenance staff.		
Number of applicable measures to improve biodiversity confirmed by SQE. Number of applicable measures implemented.	LE 05-03	Ecologist						Where additional measures to improve the assessed site's long term biodiversity are adopted, according to Table - 58.		
Section %			10.0	5.0	4.0	0.0	1.0			
10.000%			1.000%	5.000%	4.000%	0.000%	1.000%			

**Section 09 Pollution Credit Summary**

Credit Issue			Available	Anticipated	Target A	Target B	Unlikely	Credit Criteria	Comments
<b>PoI01 Impact of Refrigerants</b>			<b>3</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>Criteria requirements</b>	<b>Assessor's comments</b>
Where the building does not require the use of refrigerants within its installed plant/systems 3 credits are achieved	<b>POL 01-01</b>	<b>M&amp;E Engineer</b>	3				3	Where the building does not require the use of refrigerants within its installed plant/systems 3 credits are achieved.	Credits have been discounted as the extension will be served by CHW generated from existing chiller plant.
OR when use of refrigerants is required:		<b>M&amp;E Engineer</b>							
Do all systems (with electric compressors) comply with the requirements of BS EN 378:2008 (parts 2 and 3) and where refrigeration systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice?	<b>Pre-requisite POL 01-02</b>	<b>M&amp;E Engineer</b>							
Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions of <=100 kgCO2e/kW cooling/heating capacity	<b>POL 01-03</b>	<b>M&amp;E Engineer</b>							
OR		<b>M&amp;E Engineer</b>							
Is the Global Warming Potential of the specified refrigerant(s) 10 or less?	<b>POL 01-04</b>	<b>M&amp;E Engineer</b>							
OR		<b>M&amp;E Engineer</b>							
What is the target range Direct Effect Life Cycle CO2 equivalent emissions for the system?	<b>POL 01-05</b>	<b>M&amp;E Engineer</b>							
Will a refrigerant leak detection and containment system be specified/installed?	<b>POL 01-06</b>	<b>M&amp;E Engineer</b>						Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELCO2e) of <=1000 kgCO2e/kW cooling/heating capacity.	
	<b>POL 01-07</b>	<b>M&amp;E Engineer</b>						Where systems using refrigerants have a permanent automated refrigerant leak detection system installed; OR where an inbuilt automated diagnostic procedure for detecting leakage is installed. In all instances a robust and tested refrigerant leak detection system must be installed and must be capable of continuously monitoring for leaks. The system must be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident.	
<b>PoI02 NOx Emissions</b>			<b>3</b>	<b>0</b>	<b>0</b>	<b>3</b>	<b>0</b>	<b>Criteria requirements</b>	<b>Assessor's comments</b>
What will the NOx emissions levels for heating and hot water be (mg/kWh)?		<b>Owner</b>	3			3		Credits according to NOx emission level from installed plant.	Credits awarded with a degree of risk. The credit will be determined by existing gas boiler plant.
<=100 mg/kWh: 1 credit <=70 mg/kWh: 2 credits <=40 mg/kWh: 3 credits	<b>POL 02-01</b>	<b>M&amp;E Engineer</b>							
<b>PoI03 Surface Water Run-off</b>			<b>5</b>	<b>3</b>	<b>0</b>	<b>2</b>	<b>0</b>	<b>Criteria requirements</b>	<b>Assessor's comments</b>
What is the actual/likely probability of flooding for the assessed site? Will a flood risk assessment be undertaken?	<b>POL 03-01</b>	<b>Civil / Structural</b>	2	2				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 (see CN3.2).	
	<b>POL 03-02</b>	<b>Civil / Structural</b>							
	<b>POL 03-03</b>	<b>Civil / Structural</b>							
Will the site meet the BREEAM criteria for peak rate surface water run-off?	<b>Pre-requisite POL 03-04</b>	<b>Civil / Structural</b>	1	1				An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with the following criteria:	
	<b>POL 03-05</b>	<b>Civil / Structural</b>							
	<b>POL 03-06</b>	<b>Civil / Structural</b>							
	<b>POL 03-07</b>	<b>Civil / Structural</b>							

Pollution											
Will the site meet the criteria for surface water run-off volume, attenuation and/or limiting discharge?	POL 03-08	Civil / Structural	1							Where flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND EITHER: Drainage design measures are specified to ensure that the post development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development for the 100-year 6-hour event, including an allowance for climate change (see criterion 14). Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other Sustainable Drainage System (SuDS) techniques. OR (only where criteria 9 and 10 for this credit cannot be achieved): Justification from the Appropriate Consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. Drainage design measures are specified to ensure that the post development peak rate of run-off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: a.The pre-development 1-year peak flow rate; OR b.The mean annual flow rate Qbar; OR c.2L/s/ha. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance.	Credits have been awarded on the assumption that the site has a low flood risk, and assuming that a full FRA will be instructed.
	POL 03-09	Civil / Structural									
	POL 03-10	Civil / Structural									
	POL 03-11	Civil / Structural									
	POL 03-12	Civil / Structural									
	POL 03-13	Civil / Structural									
	POL 03-14	Civil / Structural									
	Will the site be designed to minimise watercourse pollution in accordance with the BREEM criteria?	POL 03-15	Civil / Structural	1							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. Where there is a high risk of contamination or spillage of substances such as petrol and oil (see Compliance notes for a list of areas), separators (or an equivalent system) are installed in surface water drainage systems. Where the building has chemical/liquid gas storage areas, a means of containment is fitted to the site drainage system (i.e. shut-off valves) to prevent the escape of chemicals to natural watercourses (in the event of a spillage or bunding failure). All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as Pollution Prevention Guideline 3 (PPG 3) and/or where applicable the SuDS manual. For areas where vehicle washing will be taking place, pollution prevention systems must be in accordance with Pollution Prevention Guidelines 13. A comprehensive and up to date drainage plan of the site will be made available for the building/site occupiers. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place. Where present, all external storage and delivery areas designed and detailed in accordance with the current best practice planning guidance.
		POL 03-16	Civil / Structural								
		POL 03-17	Civil / Structural								
		POL 03-18	Civil / Structural								
		POL 03-19	Civil / Structural								
		POL 03-20	Civil / Structural								
		POL 03-21	Civil / Structural								
POL 03-22	Civil / Structural										
Will exemplary criteria be achieved?											
<b>Pol04 Reduction of Night Time Light Pollution</b>		<b>Owner</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Criteria requirements</b>	<b>Assessor's comments</b>
Will the external lighting specification be designed to reduce light pollution?	POL 04-01	M&E Engineer	1	1						Where external lighting pollution has been eliminated through effective design that removes the need for external lighting without adversely affecting the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows: 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. All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes. Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements.	Credit Anticipated
	POL 04-02	M&E Engineer									
	POL 04-03	M&E Engineer									
	POL 04-04	M&E Engineer									
	POL 04-05	M&E Engineer									
<b>Pol05 Reduction of Noise Pollution</b>		<b>Owner</b>	<b>1</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>Criteria requirements</b>	<b>Assessor's comments</b>	
Will there be noise-sensitive areas/buildings within 800m radius of the development?	POL 05-01	Project Manager	1	1					Where there are, or will be, no noise-sensitive areas or buildings within 800m radius of the assessed site: 1 credit . OR Alternatively, where the building does have noise-sensitive areas or buildings within 800m radius of the site, one credit can be awarded as follows: Where a noise impact assessment in compliance with BS 7445 has been carried out and the following noise levels measured/determined: i.Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar. ii.The rating noise level resulting from the new noise source (see CN4). The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level. Where the noise source(s) from the proposed site/building is greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with criterion 4.	The credit has been awarded assuming that post development acoustic levels will not exceed current levels, and that the Acoustician will review plant proposals and advise on required attenuation measures.	
Will a noise impact assessment be carried out and, if applicable, noise attenuation measures specified?	POL 05-02	Acoustician									
	POL 05-03	Acoustician									
	POL 05-04	Acoustician									
	POL 05-05	Acoustician									
Section %			13.0	5.0	0.0	5.0	3.0				
10.00%			0.769%	3.846%	0.000%	3.846%	2.308%				