

# BREAM UK NEW CONSTRUCTION 2018 PRE-ASSESSMENT

**Date**

10/11/2020

**Project Number:**

P1863

**Project Name:**

5-17 Haverstock Hill

**Document Reference:**

P1863-BREEAM-02

**% Score**

84.3%

**BREEAM Rating**

Excellent

**Assessment Type**

Hotel

For a full credit breakdown refer to page 2.

Scope

The breakdown of the credits targeted and the overall score is shown in this section.

Please note the final BREEAM score is confirmed by the BRE, **not** Quinn Ross Consultants.

Scope of Assessment	
Project scope	Residential Institution
Building type	Hotel
Is the building designed to be untreated	N
Heating system type	Y
Cooling system type	Y
Are industrial-sized refrigeration and storage systems specified?	N
Are building user lifts present?	Y
Are building user escalators or moving walks present?	N
Are laboratories present?	N
Are there any water demands present other than those assessed in Wat 01?	N
Does the building have external areas within the boundary of the assessed development?	Y
Are there statutory requirements, or other issues outside of the control of the project, that impact the ability to provide outdoor space?	Y
Are systems specified that contribute to the unregulated energy load?	N
Are the post occupancy stage credits targeted in Ene 01?	N

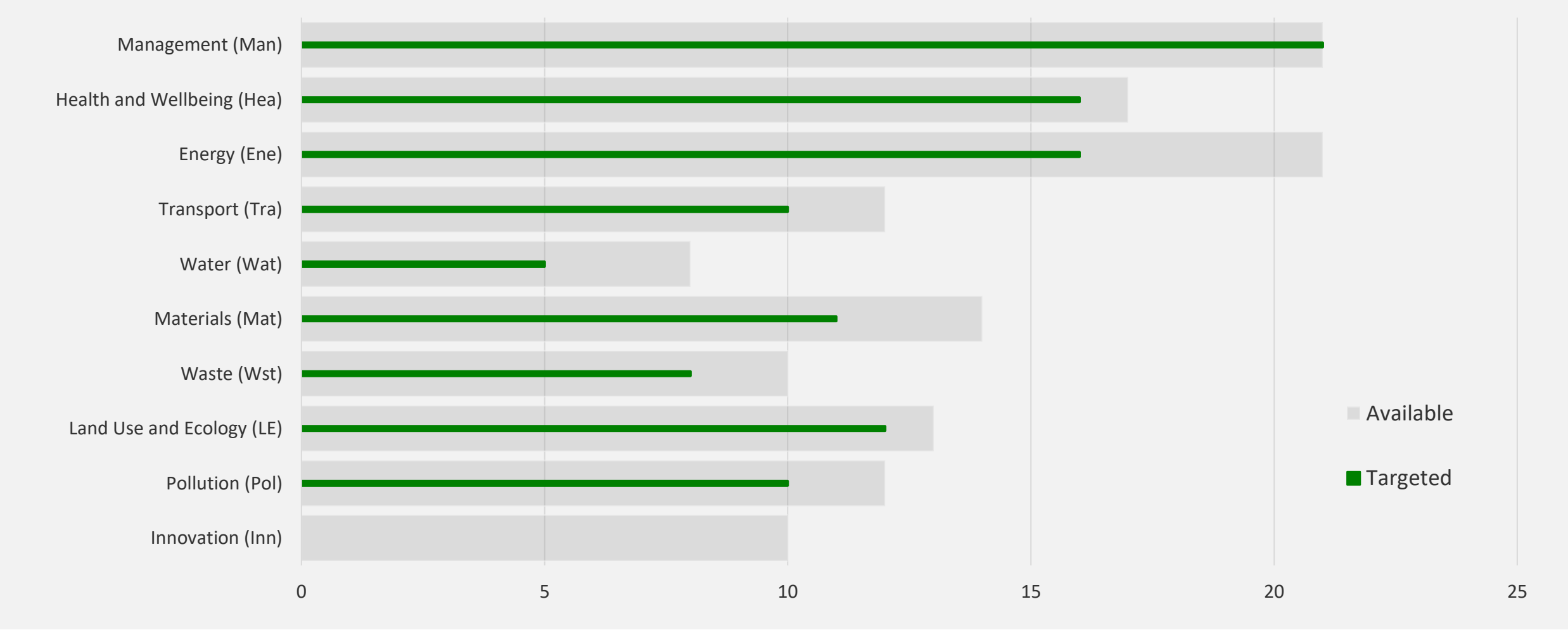
Sub-Section	Available Credits	Targeted Credits
Management (Man)	21	21
Health and Wellbeing (Hea)	17	16
Energy (Ene)	21	16
Transport (Tra)	12	10
Water (Wat)	8	5
Materials (Mat)	14	11
Waste (Wst)	10	8
Land Use and Ecology (LE)	13	12
Pollution (Pol)	12	10
Innovation (Inn)	10	0
Total Credits	138	109

BREEAM Rating	% Score
Pass	30%
Good	45%
Very good	55%
Excellent	70%
Outstanding	85%
Proposed Development	84%

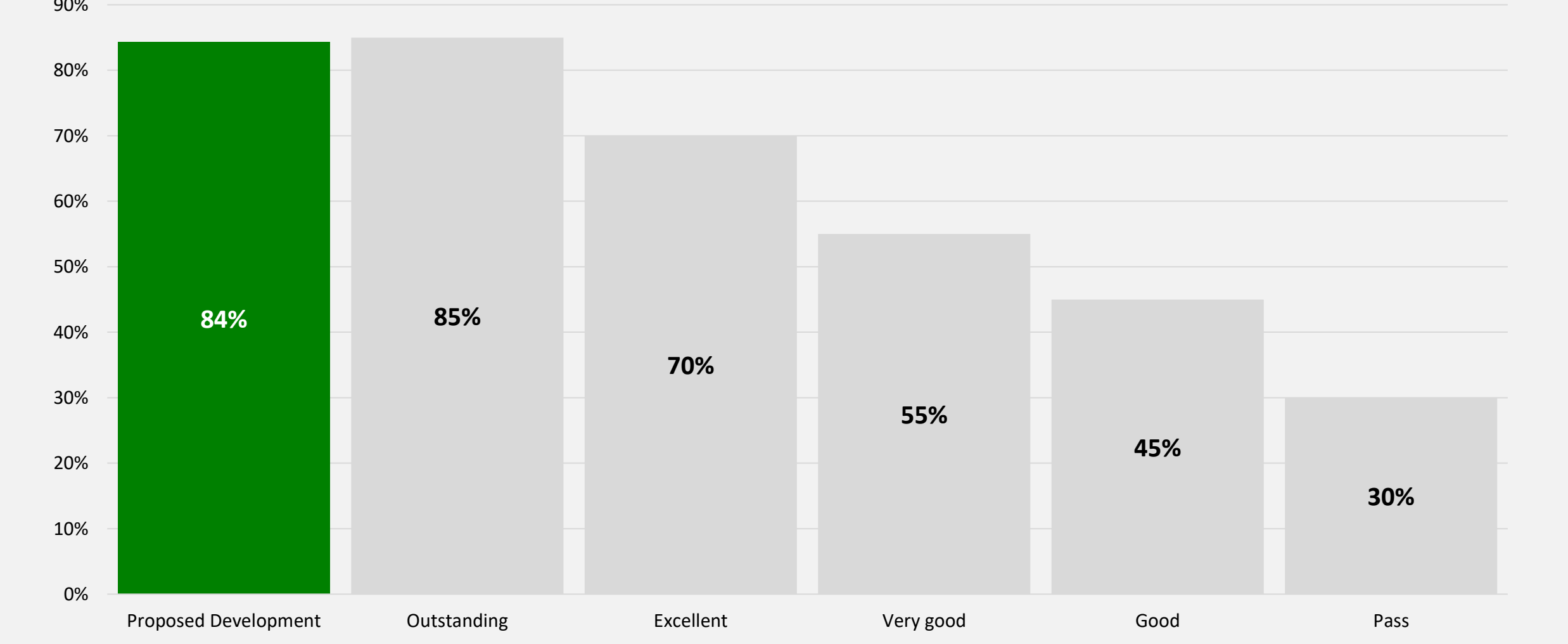
Credit Breakdown



Credits



Score



BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Management (Man)

Man 01: Project brief and design	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Stakeholder consultation - project delivery	1	1	Roles , responsibilities and contributions for each phase of the project delivery have been clearly defined and inputs have influenced early design options	Early meeting minutes detailing design considerations Project responsibility matrix Stage/options reports Construction programme	Project manager
Stakeholder consultation - third party	1	1	Third party stakeholders have been consulted and their contributions and outcomes are documented and shown if they have influenced design	Consultation plan List of consultees Documented design changes that were influenced by consultation exercise	Project manager
Sustainability Champion - design	1	1	BREEAM AP is appointed to define the BREEAM target for the project	BREEAM AP appointment/ agreed targets	Consultant
Sustainability Champion - monitoring progress	1	1	BREEAM AP is appointed to monitor and oversee BREEAM target through the design	BREEAM AP appointment/ stage reports	Consultant

Man 02: Life cycle cost and service life planning	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Elemental life cycle cost (LCC)	2	2	An elemental LCC analysis is carried out at RIBA stage 2. The LCC indicates future replacement costs and service life, maintenance and operation costs. It must show how it has influenced the design	LCC analysis	Consultant
Component level LLC Plan	1	1	A component level LCC plan is developed by the end of RIBA stage 4. It must show how it has influenced the design	LCC analysis	Consultant
Capital cost reporting	1	1	Capital cost for the building in pounds per square metre is reported	Confirmation letter showing £/m²	Project Manager

Man 03: Responsible construction practices	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
<b>MANDATORY</b> - Timber	0	0	All timber and timber-based products used on the project are to be legally harvested and traded timber	Contract clause/ written confirmation	Contractor
Environmental Management	1	1	Principal contractor operates a certified EMS (ISO14001) Principal contractor implements best practice pollution prevention policies on-site. (PPG6)	Copy of the ISO14001 certificate, ensure contractor is registered with UKAS Signed copy of the PPG6 checklist (QuinnRoss can provide this document for contractors to fill in and sign)	Contractor
Sustainability Champion - construction	1	1	BREEAM AP is appoint to monitor and oversee BREEAM target through construction and has an active presence on site	BREEAM AP appointment/ stage reports - AP will require at least 5 site visits during construction site	Consultant
Considerate construction	2	2	The site achieves a Considerate Constructors Scheme (CCS) score of at least 35 with at least a score of 7 in each of the 5 sections.	Written confirmation contractor is registered with CCS and copy of checklist to confirm score	Contractor
<b>MANDATORY</b> - Responsible construction management	2	2	Responsibility is assigned to an individual to monitor, record and report energy, water and transport data resulting from on-site construction processes. Energy consumption is monitored and records in kWh (and where relevant litres of fuel used) Water consumption is monitored and records in m³  Transport of materials to site is monitored (total distance (km), litres of fuel (l), material type)  Transport of waste from site is monitored (total distance (km), litres of fuel (l))	Written confirmation a single person has been assigned for monitoring purposes only  Amount of energy consumed by site activities in kWh Amount of potable water consumed by site activities in m³ Distance transport vehicles cover to deliver materials to site in km by material delivered Litres of fuel consumed by transport vehicles, based on the above Distance transport vehicles cover to remove/dump materials from site in km by material removed Litres of fuel consumed by transport vehicles, based on the above	Contractor

BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Management (Man) Continued

Man 04: Commissioning and handover	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
MANDATORY - Commissioning and testing schedule	1	1	A commissioning manager is appointed to monitor and programme commissioning in accordance with the relevant standards.	Commissioning schedule, outlining scope of commissioning works including timescales Project programme accounting for commissioning dates Schedule must outline conformity with relevant build regs, BSRIA and CIBSE guidelines	Contractor
Commissioning building services	1	1	For complex building services, a specialist commissioning manager is appointed	Commissioning schedule, outlining scope of commissioning works including timescales Project programme accounting for commissioning dates Schedule must outline conformity with relevant build regs, BSRIA and CIBSE guidelines	Contractor
Testing and inspecting building fabric	1	1	Perform a thermographic survey of the building and an air permeability test. Rectify any faults found from these tests prior	Thermographic survey results Air permeability test certificate	Contractor
MANDATORY - Handover	1	1	A building user guide is developed along with a training schedule prior to handover	Scope of building user guide & facilities management training schedule	Contractor

Man 05: Aftercare	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Aftercare support	1	1	Have a meeting and training session with future tenant. Introduce BUG, aftercare support available and how the building is to be used.	Training programme for initiation meeting	Project manager
			Provide initial aftercare support for at least the first month	Written confirmation from client outlining who is providing this	Project manager
			Provide long-term aftercare support for the first 12 months	Copy of letter of appointment and contract to aftercare support consultant	Project manager
			Collect and monitor energy and water consumption for the first 12 months	Copy of letter of confirmation from aftercare support consultant their responsibilities	Consultant
MANDATORY - Commissioning implementation	1	1	Perform commissioning activities for at least the first 12 months analysing plant usage, occupant interviews, review of internal temps and ventilation	Copy of letter of appointment and contract to aftercare support consultant	Consultant
Post occupancy evaluation (POE)	1	1	A POE consultant is appointed to monitor the building and its use one year after occupancy	Copy of letter of appointment and contract to aftercare support consultant	Consultant
			Consultant must be independent of the design of the building		

Table 01: Management (Man) credits

Health and Wellbeing (Hea)

Hea 01: Visual comfort	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Glare control	1	1	Identify areas vulnerable to glare and design anti-glare systems to mitigate	Glare modelling report	Consultant
Daylighting	1	1	Daylight modelling is required to demonstrate good practice daylight factors are achieved	Daylight modelling report	Consultant
View out	1	1	95% of the occupied rooms have a wall with a windows that provided a view out (window >20% of the surrounding wall area)	Marked up plans and elevations	Consultant
Internal and external lighting levels, zoning and control	1	1	Internal and external lighting is designed in accordance with the reference standards. The lighting is zoned and control in the relevant areas. - zones of no more than four workplaces	Specification/ M&E proforma confirming design standards	M&E
			Internal and external lighting is designed in accordance with the reference standards. The lighting is zoned and control in the relevant areas. - zones of no more than four workplaces - workstations adjacent to windows are separately zoned	Internal and External lighting drawings	



BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Health and Wellbeing (Hea) Continued

Hea 02: Indoor air quality	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Indoor air quality (IAQ) plan	0	0	An indoor air quality plan is developed for when the building is occupied	Copy of the indoor air quality plan	Consultant
Ventilation	1	0	Ensure the building has been designed to minimise pollutants internally	Drawings showing how building has been designed to minimise pollutants	M&E
				Drawings showing vent pathways have minimised air-pollutants	M&E
				Drawings showing HVAC systems have incorporated suitable filtration	M&E
				Install demand controlled ventilation	
Emissions from construction products	2	2	1 credit - 3 out of 5 products from table 5.11 meet the VOC's emissions criteria. 2 credits - <b>all</b> products from table 5.11 meet the VOC's emissions criteria	Manufacturer's testing certificates and results	Contractor
Post-construction indoor air quality measurement	1	1	The formaldehyde concentration in indoor air is measured post construction and does not exceed 100 µg/ m³ averaged over 30 minutes The total volatile organic compound (TVOC) concentration in indoor air is measured post construction and does not exceed 500 µg/ m³over 8 hours.	Consultant's report	Consultant
Hea 04: Thermal comfort	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Thermal modelling	1	1	Dynamic thermal modelling is carried out to demonstrate operative temperatures are in accordance with the requirements.	Thermal modelling report	Consultant
Adaptability - for a project climate change scenario	1	1	The thermal modelling analysis is run against a future weather scenario	Thermal modelling report	Consultant
Thermal zoning and Controls	1	1	The thermal modelling analysis has informed the temperature control strategy	Drawings showing the heating, cooling and ventilation strategy in accordance with the criteria.	Consultant
Hea 05: Acoustic Performance	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Acoustic performance	2	2	Sound insulation between rooms complies with Section 7 of BS 8233:2014	Acoustic statement/report confirming compliance	Consultant
	1	1	Indoor ambient noise levels comply with Section 7 of BS 8233:2015		
	1	1	Sound reverberation levels comply with Section 7 of BS 8233:2016		
Hea 06: Safety and Security	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Security of site and building	1	1	Security specialist conducts a security needs assessment (At concept design Stage)	Security specialist report/statement in accordance with	Consultant
			Security specialist develops a list of recommendations	Drawings/ specification detailing how recommendations have been incorporated	
			Recommendations are implemented in the design		
Hea 07: Safe and Healthy Surroundings	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Safe access	1	1	Criteria must be met for cycle paths, footpaths, drop-off areas, pedestrian crossings, signposting and access road lighting Criteria must be met for parking, waiting areas, turning areas and storage areas for delivery / goods vehicles	Design drawings (including a scaled site plan), AND/OR relevant sections of the specification highlighting all necessary compliant features and dimensions	Architect
Outside Space	0	0	There must be an "outside space" near to the site for building users to use	Drawings/site plan showing outside amenity	Architect

Table 02: Health and Wellbeing (Hea) credits

BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Energy (Ene)

Ene 01: Reduction of energy use and carbon emissions	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
MANDATORY - Energy performance	9	6	Calculate the Energy Performance Ratio (EPR). Compare the EPR achieved with the benchmarks in Table - 25 and award the corresponding number of BREEAM credits	Dynamic Simulation Modelling (DSM) output files	Consultant
Prediction of operational energy consumption	4	4	Hold a workshop focusing on operational energy and efficiency	Meeting minutes / workshop outcomes report	All team members
			Undertake energy modelling to predict building's energy consumption and highlight risks to monitor during construction and commissioning	Energy modelling report	Consultant
Ene 02: Energy monitoring	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
MANDATORY - Sub metering of major energy consuming systems	1	1	Install energy metering systems that can assign fuel to each end use	Spec's and drawings/schematics	M&E
Sub metering of high energy load and tenancy areas	1	1	Install separate accessible sub-meters to each unit that have open communication protocol to enable future connection to an energy monitoring & management system	Spec's and drawings/schematics	M&E
Ene 03: External lighting	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
External lighting	1	1	Average luminous efficacy is not less than 60 luminaire lumens per circuit Watt External lighting includes for a timeclock, daylight sensor and presence detection (where appropriate)	External lighting schedule/ specification/calculations	M&E
				External lighting drawings	
				External lighting datasheets	
Ene 04: Low carbon design	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Passive design	1	0	A passive design analysis is undertaken and the Hea 04 thermal comfort credit has been achieved	Energy report Evidence as required for Hea 04	Consultant
Free cooling	1	0	Implementation of free cooling solutions	Ventilation strategy confirming free cooling	M&E
Low and zero carbon technologies	1	1	A low and zero carbon feasibility study has been undertaken	LZC Energy strategy Specification/drawings showing renewable tech	Consultant
Ene 06: Energy efficient transportation systems	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Energy consumption	1	1	An analysis of the transportation demand and usage patterns for the building, to determine the optimum number and size of lifts	Usage pattern analysis	Consultant
			The energy consumption has been estimated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks, Part 2: Energy calculation and classification for lifts (elevators).	Energy Performance Certificate	
			Consider the use of regenerative drives, or justify why one is not beneficial (i.e. if the lift is not going to be high use/high speed).	Usage and energy consumption analysis and calculations	
Energy efficient features	1	1	Lift can operate in a standby condition	Confirmation from lift manufacturer	Consultant
			Lift display lighting is above 70 lm/W	Bulb tech details	
			Lift uses VVVF controls	Confirmation and product details from lift manufacturer	
			Use a regenerative drive, if its proven to save energy	Confirmation and product details OR calculations showing minimal energy will be saved	

Table 03: Energy (Ene) credits

BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Transport (Tra)

Tra 01: Transport assessment and travel plan	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Travel plan	2	2	Develop a travel plan based on a site-specific travel assessment	Copy of travel plan	Consultant

Tra 02: Proximity to amenities	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Transport options implementation	10	Y	AI is > 4.0	AI calculation	Consultant
		N	Increase AI through negotiation with local bus, train and tram services with dedicated services for this building	Confirmation from local authority	-
		Y	Provide a dedicated transport information system for inhabitants	Photograph of system on site	Project manager
		N	10% of all car park spaces have electric vehicle charging stations	drawings and photographs of units on site	Architect
		N	Set up car sharing group, promote with marketing provide priority parking spaces for car sharing vehicles	Confirmation from car share group and copies of marketing material	Project manager
		Y	Consult with local authorities on cycling and pedestrian routes. Agree how to improve it and implement on site	Proof of consultation with local authority, drawings and photos showing measures on site	Project manager
		Y	1 cycle space per 10 staff members	Drawings and photos showing spaces on site	Architect
		Y	Achieve cycle spaces outlined above, and at least two of the following: showers, changing facilities, lockers, drying spaces	Drawings and photos showing facilities on site	Architect
		Y	At least three existing accessible amenities are present, see Table 7.6 on page 191	Map and photos showing amenities	Consultant
		Y	Ensure one or more new amenities are available	Drawings and photos showing amenities	Architect
		N	Implement a transport improvement measure not outlined above	Robust evidence showing measure on site	TBC

Table 04: Transport (Tra) credits

Water (Wat)

Wat 01: Water consumption	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
<b>MANDATORY</b> - Water consumption	5	2	An assessment of the building's predicted water using components is undertaken using the Wat 01 calculator in line with Table 8.3	Component data sheet confirming inputs	M&E
				Wat 01 Calculator	

Wat 02: Water monitoring	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
<b>MANDATORY</b> - Water monitoring & metering	1	1	Specification of a mains water meter on each supply, easily accessible meters and pulsed connection to a BMS	Water metering schematic/drawing	M&E
				Water meter datasheet	

Wat 03: Water leak detection and prevention	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Leak detection system	1	1	A mains water leak detection system is installed	Specification/drawings	M&E
Flow control devices	1	1	Install flow control devices to all sanitary fittings	Specification/drawings/product data sheets	M&E

Table 05: Water (Wat) credits

BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Materials (Mat)

Mat 01: Environmental impacts from construction products - Building life cycle assessment (LCA)	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Superstructure	6	3	Carry out an LCA on the superstructure at concept stage	Mat 01 tool	Consultant
			Carry out an LCA on the superstructure at design stage		
			Optimise materials use at concept stage	4 no. Mat 01 tool options	
			Optimise materials use at design stage	3 no. Mat 01 tool options	
Substructure and hard landscaping options	1	1	Substructure and hard landscaping material use optimisation at concept stage	6 no. Mat 01 tool options	
Mat 02: Environmental impacts from construction products - Environmental Product Declarations (EPD)	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Specification of products with a recognised EPD	1	1	Only specify building material products that achieve EPD points	EPD's from material manufacturers	Contractor
				Mat 02 tool	
Mat 03: responsible sourcing of construction materials	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
MANDATORY - Timber	0	0	All timber and timber-based products used on the project is to be legally harvested and traded timber	Contract clause/ written confirmation	Contractor
Enabling sustainable procurement plan	1	1	Materials are sourced in accordance with a site specific sustainable procurement plan	Copy of the site specific sustainable procurement plan	Contractor
Measuring responsible sourcing	3	3	>10% (1 credit), >20% (2 credits), >30% (3 credit) of the responsible sourcing materials points have been achieved, through the specification of responsibly sourced materials.	Mat 03 proforma - confirming quantities and suppliers of the major building materials	Contractor
				Mat 03 tool	
Mat 05: Designing for durability and resilience	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Protecting vulnerable parts of the building from damage	1	1	Specification of suitable external and internal protection measures	Drawings/specification confirming measures included to protect the building e.g. Kick plates, corner protection, external kerbs and bollards etc.	Architect
Protecting exposed parts from material degradation			Specification of measures to limit material degradation due to environmental factors	Drawings/specification confirming the inclusion of measures to limit material degradation effects (corrosion, swelling, fading, rotting melting abrasion etc.).	
Mat 06: Material efficiency	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Material efficiency (Criteria 1-2)	1	1	Opportunities have been identified, investigated and documented to optimise the use of materials throughout the building design, procurement and refurbishment.	Documented investigation at each RIBA stage	Architect

Table 06: Materials (Mat) credits



BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Waste (Wst)

Wst 01: Construction waste management	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Pre-demolition audit	1	1	Complete a pre-demolition audit which outlines which materials from the demolition process can be re-used or recycled	Copy of pre-demolition audit	Contractor
Construction resource efficiency	3	1	Resource Management Plan (RMP) has been developed Construction waste m³ or tonnes meets or is lower than targets set out in table 51	RMP Waste volume calculations & confirmation	Contractor
Diversion of resources from landfill	1	1	Where over 70% (volume) of non-demolition and 80% of demolition waste (tonnage) is diverted from landfill	Waste volume calculations & confirmation	Contractor
Wst 02: Recycled aggregates	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Recycled aggregates	1	1	A high percentage of aggregate is recycled or secondary aggregate	Calculations demonstrating the use of recycled aggregates with percentages	Contractor
Wst 03: Operational waste	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
MANDATORY - Operational waste	1	1	Provision of a dedicated spaces for the segregation and storage of operational recyclable waste	Drawing indicating the location of the bin store provision Confirmation they are suitably sized and will have the necessary labelling in place Drawings indicating the location of storage and manufacturers literature detailing capacity	Architect
Wst 04: Speculative finishes	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Speculative floor and ceiling finishes	0	0	Only install floor and ceiling finishes in a show area, OR Only install floor and ceiling finishes in line with the tenants requirements, OR Only install ceiling finishes, not floors, and ensure the tenant will not alter the ceilings OR Don't install floor or ceiling finishes	Drawings and photo of show area Internal finishes' drawings, meeting minutes with tenant, signed contract showing finishes' will not be changed Internal finishes drawings, signed contract showing altering ceiling finishes' is not allowable Photos showing no finishes	Project manager & architect
Wst 05: Adaptation to climate change	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Adaption to climate change - structural and fabric resilience	1	1	A climate change adaptation strategy appraisal for the structural and fabric resilience is undertaken	Climate change strategy appraisal	Architect
Wst 06: Design for disassembly and adaptability	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Recommendations	1	1	Conduct a study to explore the ease of disassembly and adaptation of different design scenarios	Marked up plans detailing adaptable measures	Architect
Implementation	1	1	Achieve criteria 1-2 above	See above	
			Outline how recommendations have been adapted into the design	Marked up plans detailing adaptable measures	
			Produce a building adaptability and disassembly guide	Copy of building adaptability and disassembly guide	

Table 07: Waste (Wst) credits

BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Land Use and Ecology (LE)

LE 01: Site selection	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Previously occupied land	1	1	At least 75% of the footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings	Site layout drawings detailing existing and proposed buildings	Consultant
Contaminated land	1	0	Site investigation confirms land is contaminated, remediation is in line with contaminated land specialist's report	Report from contaminated land specialist and confirmation from client that report has been adhered to	Consultant
LE 02: Identifying and understanding the risks and opportunities for the project	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Determining the ecological outcomes of the site	2	2	Ecologist surveys and evaluates site and raises recommendations in a site report	Copy of ecologist's report	Consultant
LE 03: Managing negative impact on ecology	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Identifying and understanding the risks and opportunities for the project	0	0	Achieve LE 02	See above	Consultant
Planning, liaison, implementation and data	1	1	Roles and responsibilities are defined, site prep and works have been planned and project team and stakeholders have implemented solutions and measures	Generic evidence	Project manager
Managing negative impacts of the project	2	2	Ecologist report outlines how construction can have no impact on ecology of site	Copy of ecologist's report confirming mitigating measures are installed on site	Consultant
LE 04: Change and enhancement of site ecology	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Identifying and understanding the risks and opportunities for the project	0	0	Achieve LE 03	See above	Consultant
Liaison, implementation and data collection	1	1	Using data gathered, solutions and measures selected enhance ecological value	Copy of ecologist's report	Consultant
Enhancement of ecology	3	3	Ecologist report outlines how ecology has been enhanced in line GN.36	Copy of ecologist's report	Consultant
LE 05: Long term ecology management and maintenance	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Roles and responsibilities, implementation, statutory obligations	0	0	Achieve LE 04	See above	Consultant
Planning, liaison, data, monitoring and review management and maintenance	1	1	The project team liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, on solutions and measures implemented	Generic evidence	Consultant
Landscape and ecology management plan (or similar) development	1	1	Ecologist produces a landscape and ecology management plan to be handed over to facilities management	Copy of landscape management plan	Consultant

Table 08: Land Use and Ecology (LE) credits

BREEAM PRE-ASSESSMENT

The explanation and outline of how to achieve each credit is found below in the following sections:



Pollution (Pol)

Pol 01: Impact of refrigerants	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Prerequisite	0	0	All systems comply with BS EN 378:2016	Confirmation from manufacturer	M&E
Impact of refrigerants	2	2	The direct effect life cycle CO <sub>2</sub> equivalent emissions (DEL <sub>C</sub> ) of ≤ 100 CO <sub>2</sub> -eq/Kw	Air Conditioning schedule	
				Datasheet for the AC system	
				Pol 01 calculator	
Leak detection system	1	1	A permanent automated refrigerant leak detection system is installed of continuously monitoring for leaks.	Schematics	M&E
				Manufacturer's literature	
				Photo of it installed on site	
Pol 02: Local Air Quality	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Plant NOx emissions	2	0	NOx emissions for the heating and hot water are limited to <100mg/kWh	Heating schedule	M&E
				datasheet	
Pol 03: Surface water run-off	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Flood resilience	2	2	A qualified consultant performs a site specific Flood Risk Assessment (FRA) to confirm the probability of flooding is low	copy of FRA	Consultant
Surface water run-off	2	2	Calculations to demonstrate the run-off rates for the site meet the BREEAM criteria/ for one credit if there is no increase in impermeable area	Marked up site plan	Consultant
				Pol 03 Proforma	Assessor
Minimising watercourse pollution	1	1	No discharge from the site for rainfall up to 5mm and the provision of pollution interceptors were appropriate	Surface water run-off report	Consultant
				Pol 03 Proforma	Assessor
				Drainage drawing	Consultant
Pol 04: Reduction of night time light pollution	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
External lighting	1	1	External lighting strategy complies with the necessary standards and the circuit has a timeclock	External lighting drawing	M&E
				Specification/ confirmation of necessary standards	
Pol 05: Reduction of noise pollution	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Noise pollution	1	1	A noise impact assessment is carried out in compliance with BS 7445 and noise pollution levels are restricted.	Noise impact assessment	Consultant
				Commitment to under post completion but pre-occupancy testing	

Table 09: Pollution (Pol) credits

Innovation (Inn)

Inn 01: Innovation	Available Credits	Targeted Credits	Credit Requirements	Evidence Requirements	Responsibility
Innovation	10	0	Having exemplary performance in existing BREEAM credits and having an innovative credit applied to the project, approved by BRE	Refer to each scheme for exemplary performance indicator	Credit Dependant

Table 10: Innovation (Inn) credits