	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	Key responsibility
Management										
Man 01 Project brief and design	**Project delivery planning** **1** Prior to completion of the **Concept Design**, the project delivery stakeholders meet to identify and define for each key phase of project delivery: 1.a: Roles 1.b: Responsibilities 1.c: Contributions. **2** Consider each one of the following items when defining roles, responsibilities and contributions for each key phase of the project: 2.a: End user requirements 2.b: Aims of the design and design strategy 2.c: Particular installation and construction requirements or limitations 2.d: Occupiers' budget and technical expertise in maintaining any proposed systems 2.e: Maintainability and adaptability of the proposals 2.f: Operational energy (see Ene 01 Reduction of energy use and carbon emissions) 2.g: Requirements for the production of project and end user documentation 2.h: Requirements for commissioning, training and aftercare support. Where the building occupants are not known, the list of considerations above still applies. The appropriate project delivery stakeholder considers each item, based on likely scenarios of building occupancy. **3** The project team demonstrates how the project delivery stakeholders' contributions and the consultation process outcomes influence the following: 3.a: Initial Project Brief 3.b: Project Execution Plan 3.c: Communication Strategy 3.d: Concept Design.	1	1			1	1			G&T / GPE / AHMM
	Stakeholder consultation (interested parties) **4** Prior to completion of the **Concept Design**, the design team consult with all interested parties on matters that cover the minimum consultation content. **5** Demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design. **6** Prior to completion of the detailed design (**RIBA Stage 4**, Technical Design or equivalent), all interested parties give and receive consultation feedback. *Additionally for Education, Healthcare, Law courts and Major transportation hub building types only:* **7** An independent party carries out the consultation exercise. The Design Quality Indicator (DQI) and the Achieving Excellence Design Evaluation Toolkit (AEDET) could be used as methods to assess the design quality of buildings.	1	1			1	1			DP9 / AHMM / Four Communications
	Prerequisite for BREEAM AP (Concept and Developed Design) **8** The project team, including the client, formally agree strategic performance targets early in the design process (with the support of the BREEAM AP where appointed).	-	-	-	-	-	-	-	-	CBDSP/GPE/G&T
	BREEAM AP (Concept Design) **9** Involve a BREEAM AP in the project at an appropriate time and level to: 9.a: Work with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM, from their appointment and throughout Concept Design. 9.b: Monitor progress against the performance targets agreed under criterion 8 throughout all stages after their appointment where decisions critically impact BREEAM performance. 9.c: Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8. 9.d: Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 9.e: Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.	1	1			1	1			
	BREEAM AP (Developed Design) **10** Criteria 8 and 9 are achieved. **11** Involve the BREEAM AP in the project at an appropriate time and level to: 11.a: Work with the project team, including the client, to consider the links between BREEAM issues and to assist them in maximising the project's overall performance against BREEAM throughout Developed Design. 11.b: Monitor progress against the performance targets agreed under criterion 8 throughout all stages where decisions critically impact the specification and tendering process and the BREEAM performance. 11.c: Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8. 11.d: Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 11.e: Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.	1	1			1	1			

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
Man 02 Life cycle cost and service life planning	**Elemental LCC** **1** A competent person carries out an outline, entire asset LCC plan at Process Stage 2 (**equivalent to Concept Design - RIBA Stage 2**) together with any design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865: 2008. **2** The elemental LCC plan: 2.a: Provides an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years); 2.b: Includes service life, maintenance and operation cost estimates. The study period should ideally be agreed by the client, in line with the design life expectancy of the building. However, where the life expectancy of the building is not yet formally agreed (due to being at very early design stages), the default design life of 60 years should be used for modelling purposes (in line with the UK default). **3** Demonstrate, using appropriate examples provided by the design team, how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.	2	2			2	2			Alinea / All
	Component level LCC options appraisal **4** A competent person develops a component level LCC options appraisal by the end of **Process Stage 4 (equivalent to Technical Design – RIBA Stage 4)** in line with PD 156865: 2008. The component level LCC includes (where present): 4.a: Envelope, e.g. cladding, windows, or roofing 4.b: Services, e.g. heat source, cooling source, or controls 4.c: Finishes, e.g. walls, floors or ceilings 4.d: External spaces, e.g. alternative hard landscaping, boundary protection. The Component level LCC option appraisal should review all of the above component types (where present). However, you do not need to consider every single example cited under each component; only a selection of those most likely to draw valued comparisons. This is to ensure that a wide range of options are considered and help focus the analysis on components which would benefit the most from appraisal. **5** Demonstrate, using appropriate examples provided by the design team, how the component level LCC options appraisal has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value.	1	1			1	1			Alinea / All
	Capital cost reporting **6** Report the capital cost for the building in pounds per square metre of gross internal floor area (£k/ m^2) as part of the submission to BRE.	1	1			1	1			GPE / Alinea
ction practices	**Prerequisite - Legally harvested and traded timber** **1** All timber and timber-based products used during the construction process of the project are 'legally harvested and traded timber'	-	-		-	-	-		-	Contractor
	Prerequisite - For Healthcare NHS buildings only: **2** To award any of the available credits for this issue, any party who at any stage manages the construction site (e.g. the principal contractor, the demolition contractor) operates an Environmental Management System (EMS) (see requirements of criterion 3).	-	-		-	-	-		-	
	Environmental management **3** All parties who at any stage manage the construction site (e.g. the principal contractor, the demolition contractor) operate an EMS covering their main operations. The EMS must: 3.a: Be third party certified, to ISO 14001: 2015, EMAS (EU Eco-Management and Audit Scheme) or equivalent standard; OR 3.b: In compliance with BS 8555: 2016 have: 3.b.i Appropriate structure 3.b.ii Reached implementation stage phase four 'implementation and operation of the environmental management system' 3.b.iii Completed defined phase audits one to four. **4** All parties who at any point manage the construction site (e.g. the principal contractor, the demolition contractor) implement best practice pollution prevention policies and procedures on site in accordance with Working at construction and demolition sites: PPG6, Pollution Prevention Guidelines.	1	1			1	1			Contractor
	Prerequisite for the BREEAM AP credit **5** The client and the contractor formally agree performance targets.	-	-		-	-	-		-	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
Man 03 Responsible constru	**BREEAM AP (site)** **6** Involve a BREEAM AP in the project at an appropriate time and level to: 6.a: Work with the project team, including the client, to consider the links between BREEAM issues and assist them in achieving and if possible going beyond the design intent, to maximise the project's performance against the agreed performance targets throughout the Construction, Handover and Close Out stages. 6.b: Monitor construction progress against the performance targets agreed under criterion 5 throughout all stages where decisions critically impact BREEAM performance. 6.c: Proactively identify risks and opportunities related to the procurement and construction process and the achievement of the targets agreed under criterion 5. 6.d: Provide feedback to the constructors and the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 6.e: Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team and the provision to the assessor.	1	1			1	1			CBDSP / GPE / Contractor
	Responsible construction management **One credit** **7** Achieve items listed as "required for one credit" in table 4.1 in the BREEAM manual. **Two credits** **8** Achieve criterion 7. **9** Achieve six additional items in the table 4.1.	2	2			2	2			Contractor
	Monitoring of construction site impacts **10** Assign responsibility to an individual for monitoring, recording and reporting energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing) throughout the build programme. To ensure the robust collection of information, this individual must have the appropriate authority and responsibility to request and access the data required. Where appointed, the BREEAM AP could perform this role. **First monitoring credit - Utility consumption** *Energy consumption* **11** Achieve criterion 10. **12** Set targets for the site energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation. **13** Monitor and record data for the energy consumption described in criterion 12. **14** Report the total carbon dioxide emissions (total $kgCO_2$/project value) from the construction process via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking). *Water consumption* **15** Achieve criterion 10. **16** Set targets for the potable water consumption (m^3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation. **17** Monitor and record data for the potable water consumption described in criterion 16. **18** Use the collated data to report the total net water consumption (m^3), i.e. consumption minus any recycled water use from the construction process via BREEAM Projects **Second monitoring credit - transportation of construction materials and waste** **19** Achieve criterion 10. **20** Set targets for transportation movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum cover: 20.a: transportation of materials from the point of supply to the building site, including any transport, intermediate storage and point of supply. Monitor as a minimum: 20.a.i Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01). 20.a.ii Ground works and landscaping materials. 20.b: transportation of construction waste from the construction gate to waste disposal processing or recovery centre gate. This monitoring must cover the construction waste groups outlined in the project's resource management plan. **21** Monitor and record data for the transportation movements as described in criterion 20. **22** Using the collated data, report separately for materials and waste, the total transport-related carbon dioxide emissions (kgCO2-eq), plus total distance travelled (km) via BREEAM Projects	2	2			2	2			Contractor
d handover	**Commissioning - testing schedule and responsibilities** **1** Prepare a schedule of commissioning and testing. The schedule identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. **2** The schedule identifies the appropriate standards for all commissioning activities to be conducted, where applicable, in accordance with: 2.a: Current Building Regulations 2.b: BSRIA guidelines 2.c: CIBSE guidelines 2.d: Other appropriate standards Exclude from the assessment any process or manufacture-related equipment specified as part of the project. However, include such equipment in cases where they form an integral part of the building HVAC services, such as some heat recovery systems. **3** Where a building management system (BMS) is specified: 3.a: Carry out commissioning of air and water systems when all control devices are installed, wired and functional 3.b: Include physical measurements of room temperatures, off-coil temperatures and other key parameters, as appropriate, in commissioning results 3.c: The BMS or controls installation should be running in auto with satisfactory internal conditions prior to handover 3.d: All BMS schematics and graphics (if BMS is present) are fully installed and functional to user interface prior to handover 3.e: Fully train the occupier or facilities team in the operation of the system. **4** Appoint an appropriate project team member to monitor and programme pre-commissioning, commissioning and testing. Where necessary include re-commissioning activities on behalf of the client. **5** The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and the main programme of works. Allow the required time to complete all commissioning and testing activities prior to handover.	1	1			1	1			CBDSP /GPE/Contractor

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
Man 04 Commissioning and	**Commissioning - design and preparation** **6** Achieve criteria 1 to 5. **7** During the design stage, the client or the principal contractor appoints an appropriate project team member (see criterion 4), provided they are not involved in the general installation works for the building services systems, with responsibility for: 7.a: Undertaking design reviews and giving advice on suitability for ease of commissioning. 7.b: Providing commissioning management input to construction programming and during installation stages. 7.c: Management of commissioning, performance testing and handover or post-handover stages. For buildings with complex building services and systems, this role needs to be carried out by a specialist commissioning manager	1	1			1	1			CBDSP / Contractor
	Testing and inspecting building fabric **8** Achieve criteria 1 to 5. **9** Complete post-construction testing and inspection to quality-assure the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through airtightness testing and a thermographic survey). A suitably qualified professional undertakes the survey and testing in accordance with the appropriate standard. **10** Rectify any defects identified during post-construction testing and inspection prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building or element as defined at the design stage	1	1			1	1			GPE / Thermographic survey specialist /AHMM / Contractor
	Handover **11** Prior to handover, develop two building user guides (see Methodology) for the following users: 11.a: A non-technical user guide for distribution to the building occupiers. 11.b: A technical user guide for the premises facilities managers. A draft copy is developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. **12** Prepare two training schedules timed appropriately around handover and proposed occupation plans for the following users: 12.a: A non-technical training schedule for the building occupiers. 12.b: A technical training schedule for the premises facilities managers.	1	1			1	1			Contractor / GPE/AHMM/ CBDSP
Man 05 Aftercare	**Aftercare support** **1** Provide aftercare support to the building occupiers through having in place operational infrastructure and resources. This includes as a minimum: 1.a: A meeting between the aftercare support team or individual, and the building occupier or management team (prior to initial occupation, or as soon as possible thereafter) to: 1.a.i Introduce the aftercare support available, including the content of the building user guide (where it exists) and training schedule. 1.a.ii Present key information on the building including the design intent and how to use the building to ensure it operates as efficiently and effectively as possible. 1.b: On-site facilities management training including: 1.b.i a walkabout of the building AND 1.b.ii introduction to and familiarisation with the building systems, their controls and how to operate them in accordance with the design intent and operational demands. 1.c: Provide initial aftercare support for at least the first month of building occupation, e.g. weekly attendance on-site, to support building users and management (the level of frequency will depend on the complexity of the building and building operations). 1.d: Provide longer term aftercare support for occupiers for at least the first 12 months from occupation, e.g. a helpline, nominated individual or other appropriate system to support building users and management. **2** Establish operational infrastructure and resources to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is substantially occupied. This facilitates analysis of discrepancies between actual and predicted performance, with a view to adjusting systems and user behaviours accordingly.	N/A	N/A		N/A	N/A	N/A		N/A	
	Commissioning - implementation **3** Complete the following commissioning activities over a minimum 12-month period, once the building becomes substantially occupied: 3.a: Complex systems: The specialist commissioning manager will: 3.a.i Identify changes made by the owner or operator that might have caused impaired or improved performance. 3.a.ii Test all building services under full load conditions, i.e. heating equipment in mid-winter, cooling and ventilation equipment in mid-summer and under part load conditions (spring and autumn). 3.a.iii Where applicable, carry out testing during periods of extreme (high or low) occupancy. 3.a.iv Interview building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. 3.a.v Produce monthly reports comparing sub-metered energy performance to the predicted one (see Ene 01) 3.a.vi Identify inefficiencies and areas in need of improvement. 3.a.vii Re-commission systems (following any work needed to serve revised loads), and incorporate any revisions in operating procedures into the operations and maintenance (O&M) manuals. 3.b: Simple systems (naturally ventilated): The external consultant, aftercare team or facilities manager will: 3.b.i Review thermal comfort, ventilation, and lighting, at three, six and nine month intervals after initial occupation, either by measurement or occupant feedback. 3.b.ii Identify deficiencies and areas in need of improvement. 3.b.iii Re-commission systems and incorporate any relevant revisions in operating procedures into the O&M manuals.	1	1		N/A	1	1		N/A	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
	Post-occupancy evaluation (POE) **4** The client or building occupier commits to carry out a POE exercise one year after the building is substantially occupied. This gains comprehensive in-use performance feedback (see criterion 5.b.v) and identifies gaps between design intent and in-use performance. The aim is to highlight any improvements or interventions that need to be made and to inform operational processes. **5** An independent party carries out the POE covering: 5.a: A review of the design intent and construction process (review of design, procurement, construction and handover processes). 5.b: Feedback from a wide range of building users including facilities management on the design and environmental conditions of the building covering: 5.b.i Internal environmental conditions (light, noise, temperature, air quality) 5.b.ii Control, operation and maintenance 5.b.iii Facilities and amenities 5.b.iv Access and layout 5.b.v Energy and water consumption (see criterion 2 5.b.vi Other relevant issues, where appropriate **6** The independent party provides a report with lessons learned to the client and building occupiers. **7** The client or building occupier commits funds to pay for the POE in advance. This requires an independent party to be appointed to carry out the POE as described in criterion 5. Evidence of the appointment of the independent party and schedule of responsibilities which fulfils the BREEAM criteria are acceptable to demonstrate compliance.	N/A			N/A	N/A			N/A	
	Total - Management:	19	19	0	0	19	19	0	0	
	Credit value:	0.58%				0.58%				
	Health & Wellbeing									
Visual comfort	**Control of glare from sunlight** **1** Identify areas at risk of glare using a glare control assessment. The glare control assessment also justifies any areas deemed not at risk of glare. **2** A glare control strategy designs out potential glare in all relevant building areas where risk has been identified. This should be achieved through building form and layout or building design measures. **3** The glare control strategy does not increase energy consumption used for lighting. This is achieved by: 3.a: Maximising daylight levels in all weather, cloudy or sunny AND 3.b: Ensuring the use or location of shading does not conflict with the operation of lighting control systems.	N/A	N/A		N/A	N/A	N/A		N/A	
	Daylighting *Number of credits available and criteria dependent on building type* **4** Daylighting criteria have been met using either of the following options: 4.a: The relevant building areas meet good practice daylight factors and other criteria as outlined in Table 5.1 and Table 5.2 OR 4.b: The relevant building areas meet good practice average and minimum point daylight illuminance criteria as outlined in Table 5.3. Additional alternative route for healthcare building types only: 4.c: The relevant building areas meet the median daylight factors and minimum daylight factors in Table 5.4.	2			2	2			2	GPE/AHMM / GIA
	View out **5** 95% of the floor area in 95% of spaces for each relevant building area is within 8 m of an external wall. The external wall has a window or permanent opening that provides an adequate view out. **6** The window or opening must be ≥ 20% of the surrounding wall area. Where the room depth is greater than 8 m, compliance is only possible where the percentage of window or opening is the same as, or greater than, the values in Table 1.0 of BS 8206: part 2. **7** In addition, the building type criteria in Table 5.6 are applicable to view out criteria.	1	1			1	1			AHMM

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
Hea 01	**Internal and external lighting levels, zoning and control** **Internal lighting** **8** Internal lighting in all relevant areas of the building is designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard. Internal lighting should be appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. **9** For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 73 sections 2.4, 2.13 to 2.15, 2.20, and 6.10 to 6.20. This gives recommendations highlighting: 9.a: Limits to the luminance of the luminaires to avoid screen reflections. 9.b: Any area where a surface is used to reflect light in to a space, such as uplighting, the recommendations refer to the luminance of the lit ceiling rather than the luminaire; a design team calculation is usually required to demonstrate this. 9.c: Recommendations for direct lighting, ceiling illuminance, and average wall illuminance. **External lighting** **10** All external lighting located within the construction zone is specified in accordance with BS 5489-1:2013 Code for the practice for the design of road lighting. 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. External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. **11** Where no external light fittings are specified (either separate from or mounted on the external building façade or roof), the criteria relating to external lighting do not apply and the credit can be awarded on the basis of compliance with criteria 8–9.c. **Zoning and occupant control** **12** Internal lighting is zoned to allow for occupant control. Zoning is in accordance with the criteria below for relevant areas present within the building: 12.a: In office areas, zones of no more than four workplaces 12.b: Workstations adjacent to windows or atria and other building areas separately zoned and controlled 12.c: Seminar and lecture rooms: zoned for presentation and audience areas 12.d: Library spaces: separate zoning of stacks, reading and counter areas 12.e: Teaching space or demonstration area 12.f: Whiteboard or display screen 12.g: Auditoria: zoning of seating areas, circulation space and lectern area 12.h: Dining, restaurant, café areas: separate zoning of servery and seating or dining areas 12.i: Retail: separate zoning of display and counter areas 12.j: Bar areas: separate zoning of bar and seating areas 12.k: Wards or bedded areas: zoned lighting control for individual bed spaces and control for staff over groups of bed spaces 12.l: Treatment areas, dayrooms, waiting areas: zoning of seating and activity areas and circulation space with controls accessible to staff. **13** Areas used for teaching, seminar or lecture purposes have lighting controls provided in accordance with CIBSE Lighting Guide 56 **14** In addition, the building type criteria in Table 5.7 (where relevant).	1	1			1	1			Lighting designer
Hea 02 Indoor air quality	**Prerequisite - Indoor air quality (IAQ) plan** **1** A site-specific indoor air quality plan has been produced and implemented in accordance with the guidance in Guidance Note GN06. The plan must be produced no later than the end of **Concept Design**. The objective of the plan is to facilitate a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during occupation of the building. The indoor air quality plan must consider the following: 1.a: Removal of contaminant sources 1.b: Dilution and control of contaminant sources: 1.b.i Where present, consideration is given to the air quality requirements of specialist areas such as laboratories 1.c: Procedures for pre-occupancy flush out 1.d: Third party testing and analysis 1.e: Maintaining good indoor air quality in-use.	-	-		-	-	-		-	Contractor / Indoor air quality specialist
	Ventilation **2** The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building as follows: 2.a: Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation 2.b: Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building 2.c: Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779:2007 Annex A3. The specified filters should achieve a minimum Indoor Air Quality of IDA2 2.d: Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO_2) or air quality sensors specified and: 2.d.i In mechanically ventilated buildings or spaces: sensors are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space 2.d.ii In naturally ventilated buildings or spaces: sensors either have the ability to alert the building owner or manager when CO_2 levels exceed the recommended set point, or are linked to controls with the ability to adjust the quantity of fresh air, i.e. automatic opening windows or roof vents 2.e: For naturally ventilated or mixed mode buildings, the design demonstrates that the ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates in accordance with CIBSE AM10.	1			1	1			1	CBDSP/ AHMM
	Emissions from construction products **One credit** **3** Three out of the five product types meet the emission limits, testing requirements and any additional requirements listed in Table 5.11. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum. **Two Credits** **4** All of the product types listed meet the emission limits, testing requirements and any additional requirements listed in Table 5.11.	N/A	N/A		N/A	N/A	N/A		N/A	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
	Post-construction indoor air quality measurement **5** The formaldehyde concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 100 Qg/ m^3 averaged over 30 minutes (World Health Organization guidelines for indoor air quality: Selected pollutants, 2010). **6** The formaldehyde sampling and analysis is performed in accordance with ISO 16000-214 and ISO 16000-3. **7** The total volatile organic compound (TVOC) concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 500 Qg/ m^3over 8 hours. **8** The TVOC sampling and analysis is performed in accordance with ISO 16000-5 and ISO 16000-6 or ISO 16017-1. **9** Where levels are found to exceed these limits, the project team confirms the measures that have, or will be, undertaken in accordance with the IAQ plan, to reduce the TVOC and formaldehyde levels to within the above limits. **10** The measured concentration levels of formaldehyde (Qg/ m^3) and TVOC (Qg/ m^3) are reported, via the BREEAM Scoring and Reporting Tool.	N/A	N/A		N/A	N/A	N/A		N/A	
Hea 04 Thermal comfort	**Thermal modelling** **1** Thermal modelling has been carried out using software in accordance with CIBSE AM11 Building Energy and Performance Modelling. **2** The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11). **3** The modelling demonstrates that: 3.a: For air-conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement or level for the building type) 3.b: For naturally ventilated buildings: 3.b.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 or level for the building type) 3.b.ii The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in either of the following standards as appropriate; CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings or CIBSE TM59: Design methodology for the assessment of overheating risk in homes **4** 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.	1	1			1	1			CBDSP /AHMM
	Design for future thermal comfort **5** Criteria 1 to 4 are achieved. **6** The thermal modelling demonstrates that the relevant requirements set out in criterion 3 are achieved for a projected climate change environment **7** Where criterion 6 is not met, 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 **8** For air-conditioned buildings, the PMV and PPD indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.	1	1			1	1			CBDSP /AHMM
	Thermal zoning and controls **9** Criteria 1 to 4 are achieved. **10** The thermal modelling analysis (criteria1 to 4) has informed the temperature control strategy for the building and its users. **11** The strategy for proposed heating or cooling systems demonstrates that it has addressed the following: 11.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. 11.b: The degree of occupant control required for these zones. This is based on discussions with the end user (or alternatively building type or use specific design guidance, case studies, feedback) and considers: 11.b.i User knowledge of building services 11.b.ii Occupancy type, patterns and room functions (and therefore appropriate level of control required) 11.b.iii How the user is likely to operate or interact with the systems, e.g. are they likely to open windows, access thermostatic radiator valves (TRV) on radiators, change air-conditioning settings etc. 11.b.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 draughts) 11.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 11.d: The need or otherwise for an accessible building user actuated manual override for any automatic systems.	N/A	N/A		N/A	N/A	N/A		N/A	
Hea 05 - Acoustic Performance	**Sound insulation** The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant table Insert project specific requirements!!!	N/A	N/A		N/A	N/A	N/A		N/A	
	Indoor ambient noise level The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant table Insert project specific requirements!!!	1	1			1	1			Acoustic consultant/AHMM
	Room acoustics The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant table Insert project specific requirements!!!	N/A	N/A		N/A	N/A	N/A		N/A	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	Key responsibility
Hea 06 Security	**Security of site and building** **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)**. The purpose of the SNA will be to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development . **2** The SQSS develops a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA. **3** The controls and recommendations shall be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	1	1			1	1			AHMM / Toren
Hea 07 Safe and healthy surroundings	**Safe access** Where external site areas form part of the assessed development the following apply: **1** Dedicated and safe cycle paths are provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable. **2** Dedicated and safe footpaths are provided on and around the site providing suitable links for the following: 2.a: The site entrance to the building entrance, 2.b: Car parks (where present) to the building entrance 2.c: The building to outdoor space 2.d: Connecting to off-site paths where applicable. **3** Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths. Where vehicle delivery access and drop-off areas form part of the assessed development, the following apply: **4** Delivery areas are not accessed through general parking areas and do not cross or share the following: 4.a: pedestrian and cyclist paths 4.b: outside amenity areas accessible to building users and general public. **5** There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. **6** 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.	1	1			1	1			AHMM / Landscape Architect /TPP
	Outside space **7** There is an outside space providing building users with an external amenity area.	1	1			1	1			AHMM
	Total - Health & Wellbeing:	11	8	0	3	11	8	0	3	
	Credit value:	0.73%				0.73%				
	Energy									
energy use and carbon emissions	**Energy performance** **1** Calculate an Energy Performance Ratio for New Construction (EPR NC). Compare the EPR NC achieved with the benchmarks in Table 6.1 of the manual and award the corresponding number of BREEAM credits. - This is done by using data from the BRUKL documents.	9	8		1	9	8		1	CBDSP/ AHMM
	Prerequisite - Prediction of operational energy consumption **2** Prior to completion of the **Concept Design**, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance.	-	-		-	-	-		-	CBDSP

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
Ene 01 Reduction of	**Prediction of operational energy consumption** **3** Undertake additional energy modelling during the design and post-construction stage to generate predicted operational energy consumption figures. **4** Report predicted energy consumption targets by end use, design assumptions and input data (with justifications). **5** Carry out a risk assessment to highlight any significant design, technical, and process risks that should be monitored and managed throughout the construction and commissioning process.	4	4			4	4			GPE/G&T
Ene 02 Energy monitoring	**Sub-metering of end-use categories** **1** Install energy metering systems so that at least 90% of the estimated annual energy consumption of each fuel is assigned to the end-use categories **2** Meter the energy consumption in buildings according to the total useful floor area: 2.a: If the area is greater than 1,000 m^2, by end-use category with an appropriate energy monitoring and management system. 2.b: If the area is less than 1,000 m^2, use either: 2.b.i an energy monitoring and management system or 2.b.ii separate accessible energy sub-meters with pulsed or other open protocol communication outputs, for future connection to an energy monitoring and management system **3** Building users can identify the energy consuming end uses, for example through labelling or data outputs.	1	1			1	1			CBDSP
	Sub-metering of high energy load and tenancy areas **4** Monitor a significant majority of the energy supply with: 4.a: An accessible energy monitoring and management system for: 4.a.i tenanted areas or 4.a.ii relevant function areas or departments in single occupancy buildings. OR 4.b: Separate accessible energy sub-meters with pulsed or other open protocol communication outputs for future connection to an energy monitoring and management system for: 4.b.i tenanted areas or 4.b.ii relevant function areas or departments in single occupancy buildings. **5** Sub-meter per floor plate in large single occupancy or single-tenancy buildings with one homogeneous function, for example hotel bedrooms, offices.	1	1			1	1			CBDSP
Ene 03 External lighting	**External lighting** **1** No external lighting (which includes lighting on the building, at entrances and signs). OR **2** External light fittings within the construction zone with: 2.a: Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt 2.b: Automatic control to prevent operation during daylight hours 2.c: Presence detection in areas of intermittent pedestrian traffic.	1	1			1	1			Lighting designer
Ene 04 Low carbon design	**Passive design analysis** **1** Achieve the first credit Hea 04 to demonstrate that the building design delivers appropriate thermal comfort levels in occupied spaces. **2** The project team analyses the proposed building design and development during **Concept Design** to identify opportunities for the implementation of passive design measures **3** Implement passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption in line with the passive design analysis findings. **4** Quantify the reduced total energy demand and carbon dioxide (CO_2) emissions resulting from the passive design measures.	1	1			1	1			CBDSP
	Free cooling **5** Achieve the **passive design analysis credit.** **6** Include a free cooling analysis in the passive design analysis carried out under criterion 2. **7** Identify opportunities for the implementation of free cooling solutions. **8** The building is naturally ventilated or uses any combination of the free cooling strategies listed in Free cooling analysis.	1			1	1			1	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
E	**Low and zero carbon technologies** **9** An energy specialist completes a feasibility study **by the end of Concept Design**. **10** Establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy sources for the building or development, based on the feasibility study. **11** Specify local LZC technologies for the building or development in line with the feasibility study recommendations. **12** Quantify the reduced regulated carbon dioxide (CO_2) emissions resulting from the feasibility study.	1	1			1	1			CBDSP
Ene 05 Energy efficient cold storage	**Refrigeration energy consumption** **1** Design, install and commission the refrigeration system: 1.a: In accordance with the Code of Conduct for carbon reduction in the refrigeration retail sector1 and BS EN 378-2:2016. 1.b: Using robust and tested refrigeration systems or components included on the Enhanced Capital Allowance (ECA) Energy Technology Product List (ETPL) or an equivalent list **2** Commission the refrigeration plant in compliance with the commissioning criteria in BREEAM issue Man 04	N/A	N/A		N/A	N/A	N/A		N/A	
	Indirect greenhouse gas emissions **3** Achieve criteria 1 and 2. **4** Demonstrate a saving in indirect greenhouse gas emissions (CO2-eq) from the installed refrigeration system over the course of its operational life.	N/A	N/A		N/A	N/A	N/A		N/A	
Ene 06 Energy efficient transportation systems	**Energy consumption** **1** For specified lifts, escalators or moving walks (transportation types): 1.a: Analyse the transportation demand and usage patterns for the building to determine the optimum number and size of lifts, escalators or moving walks 1.b: Calculate the energy consumption in accordance with BS EN ISO 25745 Part 21 or Part 32 for one of the following: 1.b.i At least two types of system for each transportation type required OR 1.b.ii An arrangement of systems, for example for lift systems, hydraulic, traction, machine room-less lift (MRL) OR 1.b.iii A system strategy that is 'fit for purpose' 1.c: Consider the use of regenerative drives, subject to the requirements in Regenerative drives 1.d: Specify the transportation system with the lowest energy consumption.	1	1			1	1			CBDSP
	Energy efficient features **2** Achieve criterion 1. **One credit - Lifts** **3** Specify the following three energy efficient features for each lift: 3.a: A standby condition for off-peak periods 3.b: The lift car lighting and display lighting provides an average luminous efficacy across all fittings in the car of > 70 luminaire lumens per circuit Watt 3.c: Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. **4** Specify regenerative drives where their use is demonstrated to save energy. **One credit - Escalators or moving walks** **5** Specify at least one of the following for each escalator or moving walk: 5.a: A load-sensing device that synchronises motor output to passenger demand through a variable speed drive OR 5.b: A passenger-sensing device for automated operation (auto walk), so the escalator operates in auto start mode when there is no passenger demand.	2	2			1	1			CBDSP
ficient laboratory systems	**Design specification** **1** Engage with the client during the preparation of the initial project brief to determine occupant requirements and define laboratory performance criteria. Performance criteria will include, but not be limited to: 1.a: Description of purpose 1.b: Occupant or process activities 1.c: Containment requirements and standards 1.d: Interaction between systems 1.e: Flexibility and adaptability of laboratory facilities. 1.f: Any other specific requirements (for example, requirements relevant to ventilation, heating or cooling). **2** Size the services system equipment (including ventilation supply and extract) correctly **3** Demonstrate the minimised energy demand of the laboratory facilities resulting from the achievement of the defined design performance criteria. *Laboratory containment devices and containment areas (criteria only applicable to buildings containing these facilities)* **4** For ducted fume cupboards specified: 4.a: Demonstrate that the average design air flow rate is no greater than 0.16 m^3/s per linear metre (internal width) of fume cupboard workspace 4.b: Measure the volume flow rate in the exhaust duct (at the boundary of the laboratory) to take account of reductions in (inward) volume flow rate from fume cupboard leakage 4.c: Demonstrate that a reduction in air flow does not compromise the defined performance criteria and does not increase the health and safety risk to future building occupants.	N/A	N/A		N/A	N/A	N/A		N/A	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	Key responsibility
Ene 07 Energy ef	**Best practice energy efficient measures** If the laboratory area accounts for at least 10% of the total building floor area: **5** Achieve criteria 1 to 4 (or criteria 1 to 3 where there are no ducted fume cupboards). **6** Design, specify and install laboratory plant and systems to promote energy efficiency. Demonstrate compliance with items in Table 6.4. 6.a: Up to 2 credits: laboratory areas (see Definitions) account for at least 10% (but less than 25%) of the total building floor area OR 6.b: Up to 4 credits: laboratory areas account for 25% or more of the total building floor area. **7** Demonstrate by calculations or modelling that the chosen measures have a reasonably significant effect on the total energy consumption of the laboratory, i.e. 2% reduction or greater. **8** Demonstrate that the energy efficient measures specified do not compromise the defined performance criteria, and do not increase the health and safety risk to future building occupants.	N/A	N/A		N/A	N/A	N/A		N/A	
Ene 08 Energy efficient equipment	**Energy efficient equipment** **1** Identify the building's unregulated energy consuming loads. Estimate their contribution to the total annual unregulated energy consumption of the building, assuming a typical or standard specification. **2** Identify the systems or processes that use a significant proportion of the total annual unregulated energy consumption of the building. **3** Demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building. Table 6.5 lists some examples of significant contributors to unregulated energy consumption, and the associated criteria. If additional significant contributors, not listed in the table, will be specified, the design team should justify how a meaningful reduction will be achieved for these contributors.	N/A	N/A		N/A	N/A	N/A		N/A	
	Total - Energy:	22	20	0	2	21	19	0	2	
	Credit value:	0.64%				0.67%				
	Transport									
Tra 01 Transport assessment and travel plan	**Travel plan** **1** During the feasibility and design stages, develop a travel plan based on a site-specific travel assessment or statement. **2** The site-specific travel assessment or statement covers as a minimum: 2.a: Existing travel patterns and opinions of existing building or site users towards cycling and walking, identifying constraints and opportunities, if relevant 2.b: Travel patterns and transport impact of future building users 2.c: Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children) 2.d: Reporting of the number and type of existing accessible amenities, see Table 7.1, within 500m of the site 2.e: Disabled access (accounting for varying levels of disability and visual impairment) 2.f: Calculation of the existing public transport Accessibility Index (AI), see Methodology 2.g: Current facilities for cyclists **3** The travel plan includes proposals to increase or improve sustainable modes of transport and movement of people and goods during the building's operation and use, see Methodology. **4** If the occupier is known, involve them in the development of the travel plan. **5** Demonstrate that the travel plan will be implemented post construction and be supported by the building's management in operation.	2	2			2	2			TPP
Tra 02 Sustainable transport measures	**Prerequisite** **1** Achieve the Tra 01 Transport assessment and travel plan credits.	-	-		-	-	-		-	TPP
	Transport options implementation **2** Identify the sustainable transport measures, see Table 7.4 and award credits accordingly	10	10			10	10			TPP
	Total - Transport:	12	12	0	0	12	12	0	0	
	Credit value:	0.96%				0.96%				
	Water									

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
Wat 01 Water consumption	**Water consumption** **1** Use the BREEAM Wat 01 calculator to assess the efficiency of the domestic water-consuming components. **2** Use the standard Wat 01 method to compare the water consumption (litres/person/day) for the assessed building against a baseline performance. Award BREEAM credits based upon Table 8.1. Where it is not possible to use the standard method, complete the assessment using the alternative Wat 01 method. **3** If a greywater or rainwater system (see Definitions) is specified, use its yield in L/person/day to offset potable water demand from components. **4** If a greywater or rainwater system is specified and installed: 4.a: Greywater systems in compliance with BS 8525-1:2010 Greywater systems - Part 1 Code of Practice3. 4.b: Rainwater systems in compliance with BS 8515:2009+A1:2013 Rainwater harvesting systems - Code of practice4.	5	5			5	5			AHMM / GPE
Wat 02 Water monitoring	**Water monitoring** **1** Specify 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. **2** For water-consuming plant or building areas consuming 10% or more of the building's total water demand: 2.a: Fit easily accessible sub-meters OR 2.b: Install water monitoring equipment integral to the plant or area. **3** For each meter (main and sub): 3.a: Install a pulsed or other open protocol communication output AND 3.b: Connect it to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption. If there is no BMS system in operation at Post-Construction stage, award credits provided that the system used enables connection when the BMS becomes operational. **4** In buildings with swimming pools, or large water tanks and aquariums, fit separate sub-meters on the water supply of the above and any associated changing facilities (toilets, showers etc.) irrespective of their water consumption levels. **5** In buildings containing laboratories, fit a separate water meter on the water supply to any process or cooling loop for 'plumbed-in' laboratory process equipment, irrespective of their water consumption levels. Additionally for those pursuing a post occupancy stage certification: **6** The water monitoring strategy used enables the identification of all water consumption for sanitary uses as assessed under Wat 01 (litres/person/day), if a post occupancy stage certification is sought.	1	1			1	1			CBDSP
Wat 03 Water leak detection	**Leak detection system** **1** Install a leak detection system capable of detecting a major water leak: 1.a: On the utilities water supply within the buildings, to detect any major leaks within the buildings AND 1.b: Between the buildings and the utilities water supply, to detect any major leaks between the utilities supply and the buildings under assessment. **2** The leak detection system is: 2.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 2.b: Activated when the flow of water passing through the water meter or data logger is at a flow rate above a pre-set maximum for a pre-set period of time. This usually involves installing a system which detects higher than normal flow rates at meters or sub-meters. It does not necessarily require a system that directly detects water leakage along part or the whole length of the water supply system 2.c: Able to identify different flow and therefore leakage rates, e.g. continuous, high or low level, over set time periods. Although high and low level leakage rates are not specified, the leak detection equipment installed must have the flexibility to distinguish between different flow rates to enable it to be programmed to suit the building type and owner's or occupier's usage patterns. 2.d: Programmable to suit the owner's or occupier's water consumption criteria 2.e: Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers. Where there is physically no space for a leak detection system between the utilities water meter and the building, alternative solutions can be used, provided that a major leak can still be detected.	1	1			1	1			CBDSP
	Flow control devices **3** Install flow control devices that regulate the water supply to each WC area or sanitary facility according to demand, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework.	1	1			1	1			CBDSP
Wat 04 Water efficient equipment	**Water efficient equipment** **1** Identify all water demands from uses other than those listed underWat 01 Water consumption: Table 8.1 that could be realistically mitigated or reduced. Where there is no water demand from uses other than domestic-scale, sanitary use components in the building, this issue is not applicable. **2** Identify systems or processes to reduce the relevant water demand (criterion 1), and establish, through either good practice design or specification, a demonstrable reduction in the total water demand of the building.	1	1			1	1			MRG Studio / CBDSP
	Total - Water:	9	9	0	0	9	9	0	0	
	Credit value:	0.78%				0.78%				
Materials										

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	Key responsibility
Mat 01 Building life cycle assessment (LCA)	**Superstructure** *Comparison with the BREEAM benchmark during Concept Design (offices, industrial and retail buildings only)* Superstructure (offices, industrial and retail buildings) **1** During the **Concept Design**, demonstrate the environmental performance of the building as follows: 1.a: Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology (see Methodology). 1.b: Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications).									AHMM/ AKT/ eTool
	Superstructure *Comparison with the BREEAM benchmark during Technical Design (offices, industrial and retail buildings only)* **2** During Technical Design, demonstrate the environmental performance of the building as follows: 2.a: As criterion 1.a 2.b: Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design.									AHMM/ AKT/ eTool
	Superstructure *Option appraisal during Concept Design (all building types)* **3** For offices, industrial and retail building types, achieve criterion 1 (except where Notes 1.0, 1.1 and 1.2 apply). **4** During **Concept Design**, identify opportunities for reducing environmental impacts as follows: 4.a: Carry out building LCA options appraisal of 2 to 4 significantly different superstructure design options (applicable to the Concept Design stage, see Methodology). 4.b: Use a building LCA tool that is recognised by BREEAM (as suitable for assessing superstructure during Concept Design) according to the methodology (see Methodology). 4.c: For each design option, fulfil the same functional requirements specified by the client and all statutory requirements (to ensure functional equivalency). 4.d: Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. 4.e: Record the following in the Mat 01/02 Results Submission Tool: The differences between the design options; the design option selected by the client to be progressed beyond Concept Design; the reasons for selecting it and the reasons for not selecting the other design options. 4.f: Submit the Mat 01/02 Results Submission Tool to BRE at the end of Concept Design, and before planning permission is applied for (that includes external material or product specifications). If the building LCA tool recognised by BREEAM and used for criteria 3 to 5 (and 6 to 9, if pursued) is not an IMPACT Compliant LCA tool and criteria 1 to 2 are applicable, then the BREEAM Simplified Building LCA tool (or an IMPACT Compliant LCA tool) shall be used for criteria 1 to 2.	6	6			6	6			AHMM/ AKT/ eTool
	Superstructure *Options appraisal during Technical Design (all building types)* **5** During Technical Design identify opportunities for reducing environmental impacts as follows: 5.a: Carry out building LCA options appraisal of 2 to 3 significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage, see Methodology). 5.b: Use a building LCA tool that is recognised by BREEAM (as suitable for assessing superstructure during Technical Design) according to the methodology (see Methodology). 5.c: As criteria 4.c to 4.e. Where an options appraisal summary document was produced during Concept Design, update it to include the Technical Design options. 5.d: Submit the Mat 01/02 Results Submission Tool to BRE at the end of Technical Design. Where a project has not achieved criteria 3 and 4, criterion 5 may still be achieved.									AHMM/ AKT/ eTool
	Substructure and hard landscaping options appraisal during Concept Design **6** Criteria 3 and 4 are achieved. **7** During **Concept Design** identify opportunities for reducing environmental impacts as follows: 7.a: Carry out building LCA options appraisal of a combined total of at least six significantly different substructure or hard landscaping design options (at least two shall be substructure and at least two shall be hard landscaping). 7.b: Using a building LCA tool that is recognised by BREEAM (as suitable for assessing substructure and hard landscaping during Concept Design) according to the methodology (see Methodology). 7.c: As criteria 4.c to 4.f.	1	1			1	1			MRG Studio/ AHMM/ AKT/ eTool
Mat 02 Environmental Product Declarations (EPD)	**Specification of products with a recognised environmental product declaration (EPD)** **1** Specify construction products with EPD that achieve a total EPD points score of at least 20, according to the Methodology below. **2** Enter the details of each EPD into the Mat 01/02 Results Submission Tool, including the material category classification. The Mat 01/02 Results Submission Tool will verify the EPD points score and credit award.	1	1			1	1			Contractor/ AHMM
g of materials	**Prerequisite** **1** All timber and timber-based products used on the project are legally harvested and traded timber as per the UK Government's Timber Procurement Policy (TPP) (see Definitions). Compliance with criterion 1 is a minimum requirement for achieving any BREEAM rating. There are no prerequisite requirements for other materials.	-	-		-	-	-		-	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
Mat 03 - Responsible sourcing	**Enabling sustainable procurement** **2** A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products. The plan must: 2.a: Be in place **before Concept Design.** 2.b: Include sustainability aims, objectives and strategic targets to guide procurement activities. Note: targets do not need to be achieved for the credit to be awarded but justification must be provided for targets that are not achieved. 2.c: Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. 2.d: Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. In addition, if the plan is applied to several sites or adopted at an organisational level it must: 2.e: Identify the risks and opportunities of procurement against a broad range of social, environmental and economic issues following the process set out in BS ISO 20400:2017	1	1			1	1			GPE/ Contractor/AHM M / CBDSP / AKT II
	Measuring responsible sourcing **3** Use the Mat 03 calculator tool and methodology to determine the number of credits achieved for the construction products specified or procured. Credits are awarded in proportion to the scope of the assessment and the number of points achieved, as set out in Table 9.10.	3	2		1	3	2		1	Contractor/AHM M / CBDSP / AKT II

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
Mat 05 Designing for durability and resilience	**Designing for durability and resilience** *Protecting vulnerable parts of the building from damage* **1** Protection measures are incorporated into the building's design and construction to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring. These measures must provide protection against: 1.a: Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). 1.b: Damage from any vehicle or trolley movements within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. 1.c: External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building façade and where delivery areas or routes are within 2 metres of the façade, i.e. specifying bollards or protection rails. 1.d: Potential malicious damage to building materials and finishes, in public and common areas where appropriate. *Protecting exposed parts of the building from material degradation* **2** Key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through one of the following: 2.a: The element or product achieving an appropriate quality or durability standard or design guide, see Table 9.14. If none are available, use BS 7543:20151 as the default appropriate standard OR 2.b: A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. **3** Include convenient access to the roof and façade for cost-effective cleaning, replacement and repair in the building's design. **4** Design the roof and façade to prevent water damage, ingress and detrimental ponding.	1	1			1	1			AHMM/AKT II
Mat 06 Material efficiency	**Material efficiency** **1** At the **Preparation and Brief and Concept Design stages**, set targets and report on opportunities and methods to optimise the use of materials. These must be done for each of the following stages. See Table 9.15: 1.a: Preparation and Brief 1.b: Concept Design 1.c: Developed Design 1.d: Technical Design 1.e: Construction **2** Develop and record the implementation of material efficiency, see Table 9.15, during: 2.a: Developed Design 2.b: Technical Design 2.c: Construction **3** Report the targets and actual material efficiencies achieved.	1			1	1			1	AHMM/ All
	Total - Materials:	14	12	0	2	14	12	0	2	
	Credit value:	1.25%				1.25%				
	Waste									
Wst 01 Construction waste management	**Pre-demolition audit** **1** Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. The audit must cover the content of Pre-demolition audit scope and: 1.a: Be carried out at Concept Design stage (**RIBA Stage 2)** by a competent person prior to strip-out or demolition works 1.b: Guide the design, consider materials for reuse and set targets for waste management 1.c: Engage all contractors in the process of maximising high grade reuse and recycling opportunities 1.d: Compare actual waste arisings and waste management routes used with those forecast and investigate significant deviations from planned targets. **2** Make reference to the audit in the resource management plan (RMP)	1	1			1	1			GPE/ G&T
	Construction resource efficiency **3** Prepare a compliant Resource Management Plan (RMP) covering: 3.a: Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication, including demolition and excavation waste 3.b: Accurate data records on waste arisings and waste management routes. **4** Meet or improve upon the benchmarks in Table 10.1 for non-hazardous construction waste, excluding demolition and excavation waste. **One credit**: <13.3 m3/100m2 GIFA or <11.1 tonnes/100m2 GIFA **Two credits**: <7.5 m3/100m2 GIFA or <6.5 tonnes/100m2 GIFA **Three credits**: <3.4 m3/100m2 GIFA or <3.2 tonnes/100m2 GIFA	3	2		1	3	2		1	Contractor/AHMM/AKT II
	Diversion of resources from landfill **5** Meet, where applicable, the diversion from landfill benchmarks in Table 10.2 for non-hazardous construction waste and demolition and excavation waste generated. **One credit:** Non-Demolition: 70% by Volume (80% by tonnage) Demolition: 80% by Volume (90% by tonnage) **6** Sort waste materials into separate key waste groups, either on-site or through a licensed contractor for recovery.	1	1			1	1			
d and regates	**Prerequisite** **1** If demolition occurs on site, to encourage the reuse of site-won material on site, complete a pre-demolition audit of any existing buildings, structures or hard surfaces in accordance with Wst 01 Construction waste management: Criterion 1 and Wst 01 Construction waste management: Criterion 2 .	-	-		-	-	-		-	

		1				2				
		Office Assessment				Retail Assessment				
		Shell and Core				Shell and Core				
	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	Key responsibility
Wst 02 Use of recycled/ sustainably sourced aggregates	**Project Sustainable Aggregate Points** **2** Identify all aggregate uses and types on the project **3** Determine the quantity in tonnes for each identified use and aggregate type. **4** Identify the region in which the aggregate source is located. **5** Calculate the distance in kilometres travelled by all aggregates by transport type. **6** Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points. The corresponding number of BREEAM credits will be awarded	1			1	1			1	AKT II/AHMM/ Contractor

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core: Credits available	Targeted	Awarded	Not targeted	Key responsibility
Wst 03 Operational waste	**Operational waste** **1** Provide a dedicated space for the segregation and storage of operational recyclable waste generated. The space is: 1.a: Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams 1.b: Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors 1.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 or weekly operational activities and occupancy rates. **2** For consistent and large amounts of operational waste generated, provide: 2.a: Static waste compactors or balers; situated in a service area or dedicated waste management space 2.b: Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility 2.c: A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. *Additionally for healthcare buildings only* **3** The specified or installed operational waste facilities are compliant with the relevant NHS guidelines for that part of the UK. *Additionally for multi-residential buildings with self-contained dwellings or bedsits only* **4** Provide three internal storage containers for each dwelling or bedsit with: 4.a: A minimum total capacity of 30 litres 4.b: No individual container smaller than 7 litres 4.c: All containers in a dedicated non-obstructive position 4.d: Storage containers for recycling in addition to non-recyclable waste storage. **5** Provide home composting facilities and a home composting information leaflet within the kitchen area or communal space for each self-contained dwelling or bedsit. *Additionally for multi-residential buildings with individual bedrooms and communal facilities only* **6** Meet criteria 4.a and 4.b for self-contained dwellings or bedsits for every six bedrooms. **7** Locate recyclable storage in a dedicated, unobstructive position in communal kitchens or other appropriate communal space. **8** Provide home composting facilities and a home composting information leaflet within the kitchen area or communal space. **9** Provide a minimum of 10 litres of internal storage for compostable waste.	1	1			1	1			AKT II/AHMM/ Contractor
Wst 04 Speculative finishes (Offices only)	**Speculative floor and ceiling finishes** *Office building types only* **1** For tenanted areas, where the future occupant is not known and carpets or other floor or ceiling finishes are installed, these must be limited to a show area only. **2** Only install floor and ceiling finishes selected by the known occupant of a development. Alternatively, where only ceiling finishes and no carpets are installed, the building owner confirms that the first tenants will not be permitted to make substantial alterations to the ceiling finishes.	1	1			N/A	N/A		N/A	AHMM/ GPE
Wst 05 Adaptation to climate change	**Resilience of structure, fabric, building services and renewables installation** **1** Conduct a climate change adaptation strategy appraisal using: 1.a: A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes : 1.a.i Hazard identification 1.a.ii Hazard assessment 1.a.iii Risk estimation 1.a.iv Risk evaluation 1.a.v Risk management. **2** Develop recommendations or solutions based on the climate change adaptation strategy appraisal, **before or during Concept Design**, that aim to mitigate the identified impact. **3** Provide an update during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor.	1	1			1	1			AHMM /AKT II/CBDSP
Wst 06 Design for disassembly and adaptability	**Design for disassembly and functional adaptability - recommendations** **1** Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios (see Methodology) by the end of Concept Design. **2** Develop recommendations or solutions (see Methodology) based on the study (criterion 1), **during or prior to Concept Design**, that aim to enable and facilitate disassembly and functional adaptation.	1	1			1	1			AHMM /AKT II/CBDSP
	Disassembly and functional adaptability – implementation **3** Achieve criteria 1 and 2 **4** Provide an update, during Technical Design, on: 4.a: How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. 4.b: Changes to the recommendations and solutions during the development of the Technical Design. **5** Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	1	1			1	1			AHMM /AKT II/CBDSP
	Total - Waste:	11	9	0	2	10	8	0	2	
	Credit value:	0.64%				0.70%				

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
	Land use and ecology									
LE 01 Site selection	**Previously occupied land** **1** At least 75% of the proposed development's footprint is on an area of land which has previously been occupied	1	1			1	1			AHMM / GPE
	Contaminated land 2 A contaminated land professional's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. The site investigation, risk assessment and appraisal have identified: 2.a: The degree of contamination 2.b: The contaminant sources or types 2.c: The options for remediating sources of contamination which present an unacceptable risk. **3** The client or principal contractor confirms that remediation of the site will be carried out in accordance with the remediation strategy and its implementation plan as recommended by the contaminated land professional	1			1	1			1	
Le 02 - Ecological value of the site	**Prerequisite - Assessment route selection** **1** An assessment route for the project has been determined using BREEAM Guidance Note GN34 BREEAM Ecological Risk Evaluation Checklist. **2** The client or contractor confirms compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	-	-		-	-	-		-	Ecologist / MRG Studio / GPE
	Survey and evaluation **Route 1** **3** Completion of the BREEAM Ecological Risk Evaluation Checklist indicates Assessment route 1 can be used as the assessment **Route 2** **4** An appropriate individual is appointed at a project stage that ensures early involvement in site configuration and, where necessary, can influence strategic planning decisions. **5** Prior to the **completion of the preparation and brief**, an appropriate level of survey and evaluation (see Assessment route 2: For sites where complex ecological systems are likely to be present) has been carried out to determine the ecological baseline of the site, taking account of the zone of influence to establish: 5.a: Current and potential ecological value and condition of the site, and related areas within the zone of influence. 5.b: Direct and indirect risks to current ecological value 5.c: Capacity and feasibility for enhancement of the ecological value of the site and, where relevant, areas within the zone of influence. **6** Data are collated and shared with project team to inform the site preparation, design or construction works.	1	1			1	1			Ecologist / MRG Studio / GPE
	Determining the ecological outcomes for the site (Routes 1 and 2) **7** Survey and evaluation criteria (criteria 3–6) relevant to the chosen route have been achieved. **8** During **Concept Design**, the project team liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the sites (appropriate to the scale and type of development) for the project. **9** When determining the ecological outcome for the site, this must involve the identification, appraisal and selection of specific solutions and measures sufficiently early to influence key project planning decisions. This must be done in accordance with the following hierarchy of action: 9.a: avoidance 9.b: protection 9.c: reduction or limitation of negative impacts 9.d: on site compensation and, 9.e: enhancement, considering the capacity and feasibility within the site, or where viable, off-site. **10** Following this the optimal ecological outcome for the site is selected after liaising with representative stakeholders and the project team.	1	1			1	1			Ecologist / MRG Studio / GPE
	Prerequisite – Identification and understanding the risks and opportunities for the site **1** LE 02 has been achieved. **2** The client or contractor has confirmed that compliance is monitored against all relevant UK, and EU or International legislation relating to the ecology of the site	-	-		-	-	-		-	Ecologist / MRG Studio / GPE

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
LE 03 Managing negative impacts on ecology	**Planning, liaison, implementation and data** **3** Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief. **4** Site preparation and construction works have been planned for and are implemented at an early project stage to optimise benefits and outputs. **5** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions, and measures have been selected (see LE 02 Identifying and understanding the risks and opportunities for the project), during site preparation and construction works.	1	1			1	1			Ecologist / MRG Studio / GPE
	Managing negative impacts of the project **Route 1 (one credit)** **6** Negative impacts from site preparation and construction works have been managed according to the hierarchy and no net impact has resulted. **Route 2 (up to two credits)** **7** Negative impacts from site preparation and construction works have been managed according to the hierarchy (see Assessment route 2: For sites where complex ecological systems are likely to be present) and either: 7.a: No overall loss of ecological value has occurred (2 credits) OR 7.b: The loss of ecological value has been limited as far as possible (1 credit)	2	2			2	2			Ecologist / MRG Studio / GPE
site ecology	**Prerequisite - Identifying and understanding the risks and opportunities for the project** **1** LE 03 has been achieved. Including the following, specific to the aims of this issue: 1.a: Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes 1.b: Site preparation and construction works have been planned for and implemented at a stage that is sufficiently early in the project to optimise benefits and outputs. **2** The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	-	-		-	-	-		-	
	Enhancement of ecology **Route 1** **3** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site. **4** Data collated is provided to the local environmental records centres nearest to, or relevant for, the site.	-	-		-	-	-		-	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	1 Office Assessment Shell and Core Targeted	1 Office Assessment Shell and Core Awarded	1 Office Assessment Shell and Core Not targeted	2 Retail Assessment Shell and Core Credits available	2 Retail Assessment Shell and Core Targeted	2 Retail Assessment Shell and Core Awarded	2 Retail Assessment Shell and Core Not targeted	Key responsibility
Le 04 - Enhancing	**Liaison, implementation and data collation** **Route 2** **5** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented the solutions and measures selected in a way that enhances ecological value in the following order: 5.a: On site, and where this is not feasible, 5.b: Off site within the zone of influence.	1	1			1	1			Ecologist / MRG Studio / GPE
	Enhancement of ecology **Route 2** **6** Credits are awarded on a scale of 1 to 3, based on the calculation of the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in either GN 35 - BREEAM, CEEQUAL, HQM Ecology Assessment Issues – Route 1 or GN 36 - BREEAM, CEEQUAL, HQM Ecology Assessment Issues – Route 2 (whichever is applicable to the project).	3	3			3	3			Ecologist / MRG Studio / GPE
Le 05 - Long term impact on biodiversity	**Prerequisite - Roles and responsibilities, implementation, statutory obligations** **1** The client or contractor has confirmed that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. **2** Where pursued, LE 04 has been achieved, including the following specific aims of this issue: 2.a: Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes. 2.b: Site preparation and construction works have been planned for and implemented at a stage that is sufficiently early in the project to optimise benefits and outputs.	-	-	-	-	-	-	-	-	
	Planning, liaison, data, monitoring and review management and maintenance **3** The project team liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, on solutions and measures implemented to: 3.a: monitor and review implementation and the effectiveness 3.b: develop and review management and maintenance solutions, actions or measures. **4** In support of the above and to help ensure their continued relevance over the period of the project the following should be considered: 4.a: Monitoring and reporting of on the ecological outcomes for site implemented at the design and construction stage 4.b: Monitoring and reporting of outcomes and successes from the project 4.c: Arrangements for the ongoing management of landscape and habitat connected to the project (on and, where relevant, off site) 4.d: Maintaining the ecological value of the site and its relationship or connection to its zone of influence 4.e: Maintaining the site in line with the any sustainability linked activities, e.g. ecosystems benefits (LE 02). 4.f: Remedial or other management actions are carried out which relate to those identified in LE 02, LE 03 and LE 04. **5** As part of the tenant or building owner information supplied, include a section on Ecology and Biodiversity to inform the owner or occupant of local ecological features, value and biodiversity on or near the site.	1	1			1	1			Ecologist / MRG Studio / GPE
	Landscape and ecology management plan (or similar) development **6** Landscape and ecology management plan, or similar, is developed in accordance with BS 42020:20131 covering as a minimum the first five years after project completion and includes: 6.a: Actions and responsibilities, prior to handover, to give to relevant individuals 6.b: The ecological value and condition of the site over the development life. 6.c: Identification of opportunities for ongoing alignment with activities external to the development project and which supports the aims of BREEAM's Strategic Ecology Framework 6.d: Identification and guidance s to trigger appropriate remedial actions to address previously unforeseen impacts 6.e: Clearly defined and allocated roles and responsibilities. **7** The landscape and management plan or similar is updated as appropriate to support maintenance of the ecological value of the site.	1	1			1	1			Ecologist / MRG Studio / GPE
	Total - Land Use & Ecology:	13	12	0	1	13	12	0	1	
	Credit value:	1.15%				1.15%				
Pollution										

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	2 Retail Assessment Shell and Core Credits available	Targeted	Awarded	Not targeted	Key responsibility
Pol 01 - Impact of refrigerants	**No refrigerant use** **1** No refrigerant use within the installed plant or systems. OR alternatively, where the building does use refrigerants, the three credits can be awarded as follows:	-	-		-	-	-		-	
	Refrigerant pre-requisite **2** All systems with electric compressors comply with the requirements of BS EN 378:20161 (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice2.	-	-		-	-	-		-	
	Impact of refrigerants **Two credits** **3** The direct effect life cycle CO_2 equivalent emissions (DELC) of ≤ 100 CO_2-eq/kW. For systems which provide cooling and heating, the worst performing output based on the lower of kW cooling output and kW heating output is used to complete the calculation. To calculate the DELC, refer to the relevant definitions in Methodology and Additional information. **OR** **4** All refrigerants used have a global warming potential (GWP) ≤ 10.	1			1	1			1	
	Impact of refrigerants **One credit** **5** Systems using refrigerants have a DELC of ≤ 1000 kgCO_2-eq/kW cooling and heating capacity.	1	1			1	1			CBDSP
	Leak detection **6** All systems are hermetically sealed or only use environmentally benign refrigerants (see Leak detection and Hermetically sealed systems). OR **7** Where the systems are not hermetically sealed: 7.a: Systems have: 7.a.i A permanent automated refrigerant leak detection system, that is robust and tested, and capable of continuously monitoring for leaks. OR 7.a.ii An inbuilt automated diagnostic procedure for detecting leakage is enabled. 7.b: In the event of a leak, the system must be capable of automatically responding and managing the remaining refrigerant charge to limit loss of refrigerant (see Automatic isolation and containment of refrigerant).	1	1			1	1			CBDSP
Pol 02 Local air quality	**Local air quality** **1** All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity. OR alternatively; **2** Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in Table 12.4 and Table 12.5. The measurements must be provided by manufacturers, following the labelling requirements of the European directive 2009/125/EC. No credits can be awarded for Pol 02 if any of the combustion appliances are not covered in Table 12.4 and Table 12.5. **3** Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in Table 1.21 and Table 1.22.	2			2	2			2	

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
Pol 03 Flood and surface water management	**Pre-requisite** **1** An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.	-	-		-	-	-		-	
	Flood Resilience **Two credits - Low flood risk** **2** A site-specific flood risk assessment (FRA) confirms the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA takes all current and future sources of flooding into consideration **One credit - Medium or high flood risk** **3** A site-specific FRA confirms the development is in a flood zone that is defined as having a medium or high annual probability of flooding and is not in a functional floodplain. The FRA must take all current and future sources of flooding into consideration. For smaller sites refer to Level of detail required in the FRA for smaller sites, which overrides criterion 2. **4** To increase the resilience and resistance of the development to flooding, one of the following must be achieved: 4.a: The ground level of the building and access to both the building and the site, are designed (or zoned) so they are at least 600 mm above the design flood level of the site's flood zone (see 600 mm threshold). 4.b: The final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlined in section 5 of BS 8533:2017.	2	2			2	2			AKT II
	Pre-requisite for surface water run-off credits **5** Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed in the Methodology must be followed, with justification given by the appropriate consultant where water is allowed to leave the site.	-	-		-	-	-		-	AKT II
	Surface Water Run-Off - Rate **6** Drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. **7** Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. **8** Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance	1	1			1	1			AKT II
	Surface Water Run-Off - Volume **9** 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 **10** Drainage design measures are specified so 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. This must be for the 100-year 6-hour event, including an allowance for climate change **11** Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques. OR (only where criteria 10 and 11 cannot be achieved): **12** 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. **13** Drainage design measures are specified so 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: 13.a: The pre-development one-year peak flow rate 13.b: The mean annual flow rate (Qbar) 13.c: 2L/s/ha. For the one-year peak flow rate, the one-year return period event criterion applies. 14 Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. 15 For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance.	1	1			1	1			AKT II
	Minimising watercourse pollution **16** There is no discharge from the developed site for rainfall up to 5 mm (confirmed by the appropriate consultant). **17** Areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. **18** Areas with a high risk of contamination or spillage of substances, such as petrol and oil, have separators (or an equivalent system) are installed in surface water drainage systems. **19** Chemical or liquid gas storage areas have a means of containment fitted to the site drainage system (i.e. shut-off valves). This is to prevent the escape of chemicals to natural watercourses in the event of a spillage or bunding failure. **20** All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as the SuDS manual2 and other relevant industry best practice. They must be bespoke solutions taking account of the specific site requirements and natural or man-made environment of and surrounding the site. **21** A comprehensive and up to date drainage plan of the site will be made available for the building or site occupiers. **22** Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place. **23** All external storage and delivery areas are designed and detailed in accordance with the current best practice planning guidance.	1			1	1			1	AKT II

	Credit Criteria Red - Minimum standards Green Highlight - Early stage credits	1 Office Assessment Shell and Core				2 Retail Assessment Shell and Core				Key responsibility
		Credits available	Targeted	Awarded	Not targeted	Credits available	Targeted	Awarded	Not targeted	
Pol 04 Reduction of night time light pollution	**Reduction of night time light pollution** **1** External lighting pollution has been eliminated through effective design that removes the need for external lighting. This does not adversely affect 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: **2** The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011. **3** All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. **4** 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 guidance notes. **5** Illuminated advertisements are designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements.	1	1			1	1			Lighting designer
Pol 05 Reduction of noise pollution	**Reduction of noise pollution** **1** There are no noise-sensitive areas within the assessed building or within 800 m radius of the assessed site. OR **2** Where there are noise-sensitive areas within the assessed building or noise-sensitive areas within 800 m radius of the assessed site, a noise impact assessment compliant with BS 4142:20141 is commissioned. Noise levels must be measured or determined for: 2.a: Existing background noise levels: 2.a.i at the nearest or most exposed noise-sensitive development to the proposed assessed site 2.a.ii including existing plant on a building, where the assessed development is an extension to the building 2.b: Noise rating level from the assessed building. **3** The noise impact assessment must be carried out by a suitably qualified acoustic consultant. **4** The noise level from the assessed building, as measured in the locality of the nearest or most exposed noise-sensitive development, must be at least 5dB lower than the background noise throughout the day and night. **5** If the noise sources from the assessed building are 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 the criterion.	1	1			1	1			Acoustic consultant/ CBDSP
	Total - Pollution:	12	8	0	4	12	8	0	4	
	Credit value:	0.75%				0.75%				
Innovation										
Man 03	Responsible Construction Practices	1	1			1	1			Contractor
Man 05	Aftercare	1			1	1			1	GPE
Hea 01	Visual Comfort	1			1	1			1	AHMM/ GIA
Hea 02	Indoor air quality	N/A	N/A		N/A	2			2	
Ene 01	Reduction of energy use and carbon emissions	5			5	5			5	CBDSP
Wat 01	Water consumption	1			1	1			1	GPE/ CBDSP/ AHMM
Mat 01	Life cycle impacts	1			1	3			3	Contractor/AHMM / CBDSP / AKT II
Mat 03	Responsible sourcing of materials	1			1	1			1	Contractor/AHMM
Wst 01	Construction waste management	1			1	1			1	Contractor/AHMM
Wst 02	Recycled aggregates	1			1	1			1	AKT II/AHMM/ Contractor
Wst 05	Adaptation to climate change	N/A	N/A		N/A	1			1	
AI	Approved Innovation	1			1	1			1	
	Total - Innovation:	10	1	0	9	10	1	0	9	
	Credit value:	1.00%				1.00%				
Total Target Score										
			89.6%				89.4%			
			Outstanding				Outstanding			