



ELEMENT
SUSTAINABILITY

CAMPFIELDS, MANCHESTER

BREEAM REFURBISHMENT AND FIT- OUT 2014 PRE-ASSESSMENT REPORT

DECEMBER 2022

REF: 2022.282



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Executive Summary

Element Sustainability have been appointed by Allied London Limited to complete an assessment of the proposed development under the Building Research Establishment Environmental Assessment Methodology (BREEAM). This pre-assessment review report gives an indication of the expected BREEAM score and rating for the refurbishment that may be achieved when the final assessment is submitted to the Building Research Establishment (BRE), based on the information provided at this pre-assessment stage.

The proposed scheme comprises the refurbishment of two existing market hall buildings (referred to as Buildings 1 & 3) at Campfield Yard, Manchester which will provide diverse spaces and activity for the media, digital and creative industries including workspaces, production spaces and studio spaces.

BREEAM Methodology

The BREEAM UK Refurbishment and Fit Out 2014 scheme can be used to provide an environmental performance standard against which non-domestic refurbishment and fit-out projects in the UK can be assessed and achieve a BREEAM Refurbishment and Fit-out rating.

A BREEAM pre-assessment report has been prepared by a qualified and licensed BREEAM Assessor to demonstrate the feasibility of achieving the desired BREEAM ratings for the scheme. The initial pre-assessment report details the possible strategies to be employed.

The BREEAM assessment methodology applicable to this development is as follows:

- BREEAM UK 2014 Refurbishment and Fit Out (Commercial: Offices, Retail, Other building – Parts 2-4).
 - ✗ Part 1 - Fabric
 - ✓ Part 2 – Core Services
 - ✓ Part 3 – Local Services
 - ✓ Part 4 – Interior Design

Design Stage Review

Design specifications are assessed for each building, before construction begins. A rating is determined, and (subject to quality assurance) a Design Stage or Interim Certificate is awarded for each building. Registered assessors can apply for assessment of a site, compile and submit a design report for assessment and monitor the assessment status online.

Post Construction Stage Review

The Post Construction Stage (PCS) assessment confirms that buildings have either been built to the Design Stage specifications or to (documented) variations from the Design Stage. Variations must be reassessed so that new scores and BREEAM levels can be calculated for each affected building. Where a Design Stage assessment has been undertaken, it is used to inform the PCS assessment.

BREEAM Rating

A review of the current development proposals has been carried out against the BREEAM UK 2014 Refurbishment and Fit Out assessment methodology. It is anticipated that the scheme's design has the potential to score **60.48%** (minimum score level for BREEAM 'Very Good' rating is 55%), see Table 1.2 below.

The rating obtained by using this BREEAM Pre-Assessment is for guidance only. The predicted ratings may differ from those obtained through a formal assessment, which will be carried out by an appropriately licensed BREEAM assessor. Advice should be sought from a licensed assessor at an early stage in a project to ensure the estimated rating will be obtained.

Minimum Standards

The minimum standards for the BREEAM 'Very Good' rating are provided within Table 1.1 of this report and highlighted within Table 1.2. To achieve a particular level of performance the majority of BREEAM credits can be traded, i.e. non-compliance in one area can be off set through compliance in another to achieve the target BREEAM rating.

To ensure that performance against fundamental environmental issues is not overlooked in pursuit of a particular rating, BREEAM sets minimum standards of performance in key areas.

Table 1.1 - Minimum Standards

BREEAM ISSUE	MINIMUM STANDARDS FOR 'VERY GOOD' RATING
Ene 2: Energy Monitoring	First submetering credit
Wat 1: Water Consumption	One Credit
Wat 2: Water Monitoring	Water meter to be installed on the mains water supply to the building
Mat 3: Responsible Sourcing	All timber is sourced in accordance with the UK Government's Timber Procurement Policy.

RIBA Sensitive Credits

There are a number of BREEAM credits that need to be addressed at particular RIBA Stage. These credits have been highlighted within Table 1.2 below.

Key

	Min. Standards
	Potential credits
	Early Design Input

Table 1.2 – Pre-Assessment Review

Issue	Available Credits	Targeted Credits	Potential Credits	Weighting Per credit (%)	RIBA Stage	Responsibility	BREEAM Criteria and Comments
Management							
Man 1 – Project Brief and Design							
Man 1a Stakeholder Consultation (Project Delivery)	1	1		0.98	Concept Design	Client /Design Team	BREEAM Criteria: A clear sustainability brief is developed prior to Concept Design which sets out: a) Client requirements e.g. internal environmental conditions required b) Sustainability objectives and targets including target BREEAM rating, business objectives etc. c) Timescales and budget d) List of consultees and professional appointments that may be required e.g. Suitably Qualified Acoustician etc. e) Constraints for the project e.g. technical, legal, physical, environmental. Prior to completion of the Concept Design (RIBA Stage 2 or equivalent), the project delivery stakeholders (see Relevant definitions) have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery. In defining the roles and responsibilities for each key phase of the project, the following must be considered: a. End user requirements b. Aims of the design and design strategy c. Particular installation and construction requirements/limitations d. Design and construction risk assessments e. Legislative requirements f. Procurement and supply chain g. Identifying and measuring project success in line with project brief objectives h. Occupiers' budget and technical expertise in maintaining any proposed systems i. Maintainability and adaptability of the proposals j. Requirements for the production of project and end user documentation k. Requirements for commissioning, training and aftercare support. The project team demonstrate how the project delivery stakeholder contributions and the outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design.

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Issue	Available Credits	Targeted Credits	Potential Credits	Weighting Per credit (%)	RIBA Stage	Responsibility	BREEAM Criteria and Comments
Man 1b Stakeholder Consultation (Third Party)	1	1		0.77	Concept Design	Client /Design Team	BREEAM Criteria: Prior to completion of the Concept Design, the design team consult with all interested parties (for example actual or intended building users, representative consultation group from the existing community, existing partnerships and networks that have knowledge of existing buildings of the same type, potential users of shared facilities) on matters that cover the minimum consultation content. <u>Minimum Consultation Content:</u> 1. Functionality, build quality and impact (including aesthetics). 2. Provision of appropriate internal and external facilities (for future building occupants and visitors or users). 3. Management and operational implications. 4. Maintenance resources implications. 5. Impacts on the local community, e.g. local traffic or transportation impact. 6. Opportunities for shared use of facilities and infrastructure with the community or appropriate stakeholders. 7. Compliance with statutory (national or local) consultation requirements. 8. Energy use and sustainability measures. 9. Implementing principles and processes that deliver an inclusive and accessible design.
Man 1c Sustainability Champion (Design)	1	0		0.77	Concept Design	BREEAM AP	Credit Not Targeted BREEAM Criteria: A Sustainability Champion has been appointed to facilitate the setting and achievement of BREEAM performance targets for the project. The design stage Sustainability Champion is appointed to perform this role during the feasibility stage (Stage 1, Preparation and Brief stage, as defined by the RIBA Plan of Work2013 or equivalent). The defined BREEAM performance target(s) has been formally agreed (see Relevant definitions) between the client and design/project team no later than the Concept Design stage (RIBA Stage 2 or equivalent). To achieve this credit at the interim design stage assessment, the agreed BREEAM performance target(s) must be demonstrably achieved by the project design. This must be demonstrated via the BREEAM assessor's design stage assessment report.

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Man 1d Sustainability Champion (monitoring progress)	1	0		0.77	Concept Design / Developed Design	BREEAM AP	Credit Not Targeted BREEAM Criteria: The Sustainability Champion criteria above has been achieved. A Sustainability Champion is appointed to monitor progress against the agreed BREEAM performance target(s) throughout the design process and formally report progress to the client and design team.
Man 2 - Life Cycle Cost and Service Life Planning							
Man 2a Elemental LCC	2	0		0.77	Concept Design	Cost Consultant / Client	Credit Not Targeted BREEAM Criteria: An outline, entire asset elemental life cycle cost (LCC) plan has been carried out at Process Stage 2 (equivalent to Concept Design - RIBA Stage 2) together with any design option appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:20081.The Elemental LCC plan: a. An outline LCC plan has been undertaken for the project based on the building's basic structure and envelope, appraising a range of options and based on the life expectancy of the refurbished building, e.g. 20, 30, 50+ years. b. The servicing strategy for the project outlining services component over a 15 -year period, in the form of an 'elemental LCC Plan'. c. A fit-out strategy is developed outlining fit-out options over a 10-year period.
Man 2b Component LCC	1	0		0.77	Technical Design	Cost Consultant / Client	Credit Not Targeted BREEAM Criteria: A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to Technical Design – RIBA Stage 4) in line with PD 156865:2008. Demonstrate, using appropriate examples provided by the design team, how the component level LCC plan has been used to influence building and systems design/specification to minimise life cycle costs and maximise critical value.
Man 2c Capital Cost Reporting	1	1		0.77		Client or Project Manager	BREEAM criteria: The capital cost to be reported for the fit-out project £/m2.

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Man 3 - Responsible Construction Practices							
Man 3 (P) Timber Procurement	Pre-req	Pre-req	Pre-req	Pre-req		Main Contractor	BREEAM criteria: Main contractor to ensure that all timber is legally harvested and trade timber.
Man 3a Environmental Management	1	1		0.77		Main Contractor	BREEAM criteria: Main Contractor to operates ISO 14001; and, The principal contractor implements best practice pollution prevention policies and procedures on-site in accordance with Pollution Prevention Guidelines, Working at construction and demolition-sites: PPG6.
Man 3b Sustainability Champion	1	1		0.77		Element Sustainability BREEAM AP	BREEAM criteria: A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages.
Man 3c Considerate Construction	2	2		0.77		Main Contractor	BREEAM criteria: The Main Contractor to register with CCS and provided a compliance report and certificate. <u>1no. credit</u> = Score of 27 and 9 within each section <u>2no. credit</u> = Score of 35 and 11 within each section.
Man 3d Monitoring of Construction site impacts (Energy and Water)	1	1		0.77		Main Contractor	BREEAM criteria: Main Contractor sets targets, monitors and reports on energy and water consumption each month, based on site activities.

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Man 3e Monitoring of Construction Site Impacts (Transport)	1	1		0.77		Main Contractor	BREEAM criteria: Main Contractor monitors transport of materials from the factory gate to the building site, including any transport, intermediate storage and distribution; as well as Transport of construction waste from the construction gate to waste disposal processing/recovery centre gate.
Man 3 Exemplary Considerate Construction	1	0		1		Main Contractor	Credit Not Targeted BREEAM criteria: In addition to meeting the criteria for two credits for considerate construction, the contractor achieves compliance with the criteria of the compliant scheme to an exemplary level of practice = Score of 39 and 13 within each section.
Man 4 - Commissioning and Handover							
Man 4a Commissioning and testing schedule and responsibilities	1	1		0.77		Client/ M&E	BREEAM criteria: There is a schedule of commissioning and testing that identifies appropriate commissioning required for the scope of works that includes a suitable timescale for commissioning and re-commissioning of all relevant works carried out. Commissioning should be carried out where changes are being made to the following: a. Building services (including both complex and non-complex systems) b. Building services control systems (including Building Management Systems) c. Changes to the building fabric that will affect thermal performance. The schedule will identify the appropriate standards that all commissioning activities will be conducted in accordance with, such as current Building Regulations, BSRIA and CIBSE guidelines and/or other appropriate standards, where applicable. Where a building management system (BMS) is specified, refer to compliance note CN8 on BMS commissioning procedures. An appropriate project team member(s) is appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of works, allowing for the required time to complete all commissioning and testing activities prior to handover.

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Man 4b Commissioning building services	1	1		0.77		M&E	BREEAM criteria: Where work is being undertaken to upgrade, renovate or install new building services and systems. b. For simple building services, this role can be carried out by an appropriate project team member (see criterion 3), provided they are not involved in the general installation works for the building services system(s). Additional Notes: Where the fit-out includes equipment such as display lighting and display chillers/freezers, then these will need to be commissioned in accordance with the manufacturers' requirements. For Part 4 assessments the commissioning manager's role can be carried out by a member of the project team - see criterion 6b. Where there is no equipment within the scope of fit-out works, this issue is filtered out from the assessment.
Man 4c Handover	1	1		0.77		Main Contractor	BREEAM criteria: A Building User Guide is developed or (where present) an existing Building User Guide is updated, prior to handover for distribution to the building occupiers and premises managers (see Man 04 Commissioning and handover), with a draft copy developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. A training schedule is prepared for building occupiers/premises managers, timed appropriately around handover and proposed occupation plans.
Man 5 - Aftercare							
Man 5a Aftercare Support	1	1		n/a		n/a	Credit Not Applicable
Man 5b Seasonal Commissioning	1	1		n/a		n/a	Credit Not Applicable
Man 5c Post Occupancy Evaluation	1	1		n/a		n/a	Credit Not Applicable

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Man 5d Exemplary level criteria	1	1		n/a		n/a	Credit Not Applicable
Health and Wellbeing							
HEA 1 - Visual Comfort							
Hea 1a Glare Control	1	1		0.92		Architect/ Main Contractor	BREEAM criteria: The potential for disabling glare has been designed out of all relevant building areas using a glare control strategy, either through building form and layout and/or building design measures. The glare control strategy avoids increasing lighting energy consumption, by ensuring that: The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The system should not inhibit daylight from entering the space under cloudy conditions, or when sunlight is not on the façade: AND The use or location of shading does not conflict with the operation of lighting control systems. Compliance for Blinds: Occupant controlled devices such as blinds (where transmittance value is < 0.1 (10%))
Hea 1b Daylighting	3	0		0.92		Daylight Consultant	Credits Not Sought BREEAM criteria: Daylight calculation report to be completed to determine if credits can be awarded. BREEAM criteria: <u>One credit</u> - 40% of the relevant floor plate is to comply with the average daylight factor of 2%. <u>Two credits</u> - 60% of the relevant floor plate is to comply with the average daylight factor of 2%. <u>Three credits</u> - 80% of the relevant floor plate is to comply with the average daylight factor of 2%. Plus Table 13 uniformity daylighting criteria. BREEAM Assessor Notes: Calculations to be prepared to confirm – Third Party Input
Hea 1c View Out	2	0		0.92		Architect	Credits Not Sought BREEAM criteria: One credit - Where the 80% of the floor area in the relevant building area is within 7m of a wall which has a window or permanent opening that provides an adequate view out. The window opening must be ≤20% of the surrounding wall area. Where the room depth is greater than 7m, compliance is only possible where the percentage of the window opening is the same or greater than, the values in Table 1.0 BS8206. Second credit - Where the 95% of the floor area in the relevant building area is within 7m of a wall which has a window or permanent opening that provides an adequate view out. The window opening

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							must be ≤20% of the surrounding wall area. Where the room depth is greater than 7m, compliance is only possible where the percentage of the window opening is the same or greater than, the values in Table 1.0 BS8206.
Hea 1d Internal and External Lighting	1	1		0.92		M&E	BREEAM Criteria: All fluorescent and compact fluorescent lamps are fitted with high freq. ballasts. Internal lighting in all relevant areas of the building is designed to provide an illuminance (lux) level appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. This can be demonstrated through a lighting design strategy that provides illuminance levels in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 2 sections 3.3, 4.6, 4.7, 4.8 and 4.9. This gives recommendations highlighting: - Limits to the luminance of the luminaires to avoid screen reflections. (Manufacturers' data for the luminaires should be sought to confirm this.) - For 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. - Recommendations for direct lighting, ceiling illuminance, and average wall illuminance. Zoning and occupant control Internal lighting is zoned to allow for occupant control in accordance with the criteria below for relevant areas present within the building: - In office areas, zones of no more than four workplaces - Workstations adjacent to windows/atria and other building areas separately zoned and controlled - Seminar and lecture rooms: zoned for presentation and audience areas - Library spaces: separate zoning of stacks, reading and counter areas - Teaching space or demonstration area - Whiteboard or display screen - Auditoria: zoning of seating areas, circulation space and lectern area - Dining, restaurant, café areas: separate zoning of servery and seating/dining areas Areas used for teaching, seminar or lecture purposes have lighting controls provided in accordance with CIBSE Lighting Guide 5.

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Hea 2 Indoor Air Quality							
Hea 2a Indoor Air Quality Plan	1	1		0.92		Design Team/Main Contractor/ Indoor Air Quality Specialist	BREEAM Criteria: An indoor air quality plan to be produced and implemented, with the objective of facilitating a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during the design, construction and occupation of the building. The indoor air quality plan must consider the following: • Removal of contaminant sources • Dilution and control of contaminant sources • Procedures for pre-occupancy flush out • Protection of Heating Ventilation and Air Conditioning (HVAC) systems from sources of pollution during refurbishment/fit-out works e.g. dust • Procedures for protecting the indoor air quality of areas outside of the refurbishment or fit-out zone that may be affected by the refurbishment/fit-out works • Procedures for identifying and implementing third party testing and analysis required to ascertain that the contaminant sources have been removed effectively before occupancy Commitments for maintaining indoor air quality in-use, e.g. maintenance and cleaning of the HVAC system, ductwork and filters.
Hea 2b Ventilation	1	0		0.92		M&E	Credit Not Targeted BREEAM Criteria: Refurbishment and fit-out works include measures to minimise the concentration and recirculation of pollutants in the building as follows: Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation. Design ventilation pathways to minimise the build-up of air pollutants in the building, as follows: In air conditioned and mixed mode buildings/spaces: - The building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution; OR - The location of the building's air intakes and exhausts, in relation to each other and external sources of pollution, is designed in accordance with BS EN 13779:20071 Annex A2. Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779:2007 Annex A3. Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO2) or air quality sensors specified and:

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							a. In mechanical ventilated buildings/spaces: sensor(s) are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space. b. In naturally ventilated buildings/spaces: sensors either have the ability to alert the building owner or manager when CO2 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/roof vents.
Hea 2c Volatile Organic Compounds (VOCs)	1	1		0.92		Design Team and Main Contractor	BREEAM Criteria: All decorative paints and varnishes specified meet the criteria in Table 20 of the BREEAM Manual. At least five of the seven remaining product categories listed in Table 20 of the BREEAM technical manual meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions.
Hea 2d Volatile organic compound (VOC) emission levels (post construction)	1	1		0.92		Main Contractor	BREEAM Criteria: The formaldehyde concentration level is measured post construction (but pre-occupancy) and is found to be less than or equal to 100µg/m³ averaged over 30 minutes (WHO guidelines for indoor air quality: Selected pollutants, 2010). The total volatile organic compound (TVOC) concentration level is measured post construction (but pre-occupancy) and found to be less than 300µg/m³ over 8 hours, in line with the Building Regulation requirements. Where VOC and formaldehyde levels are found to exceed the limits defined in the above criteria, the project team confirms the measures that have, or will be taken, in accordance with the IAQ plan, to reduce the levels to within these limits, including re-measurement. The testing and measurement of the above pollutants are in accordance with the following standards where relevant: a. BS ISO 16000-4: 2011 Diffusive sampling of formaldehyde in air b. BS ISO 16000-6: 2011 VOCs in air by active sampling c. BS EN ISO 16017-2: 2003 VOCs - Indoor, ambient and workplace air by diffusive sampling d. BS ISO 16000-3: 20117 Formaldehyde and other carbonyls in air by active sampling.
Hea 2d Potential for Natural Ventilation	1	0		0.92		Architect/M&E	Credit Not Targeted BREEAM Criteria: The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios. This can be demonstrated as follows:

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							a. Occupied spaces of the building are designed to be capable of providing fresh air entirely via a natural ventilation strategy. The following are methods deemed to satisfy this criterion dependent upon the complexity of the proposed system: i. Room depths are designed in accordance with CIBSE AM10 (section 2.4) to ensure effectiveness of any natural ventilation system. The openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate; OR ii. The design demonstrates that the natural ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates. This is demonstrated using ventilation design tool types that meet the requirements of CIBSE AM107 (or for education buildings by using the ClassVent tool). b. For fit-out projects (Part 3 assessments), local services are designed to provide fresh air via a natural ventilation strategy and are appropriately designed according to the room depth in accordance with CIBSE AM10. The natural ventilation strategy is capable of providing at least two levels of user-control on the supply of fresh air to the occupied space.
Hea 4 Thermal Comfort							
Hea 4a Thermal modelling	1	1		0.92		Thermal Modeller/ M&E	BREEAM criteria: Thermal modelling has been carried out using software in accordance with CIBSE 11 Building Energy and Environmental Modelling. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11). The modelling demonstrates that: 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/level for the building type). b. For naturally ventilated/free running buildings: i. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type). ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings.

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							Where undertaking a Part 4 assessment a competent person (e.g. chartered building services engineer) must assess the suitability of existing building services and controls to identify any changes that may be required as a result of fit-out works (e.g. as a result of changes to internal layout, occupant density, additional equipment that may increase cooling loads etc.). 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.
Hea 4b	1	1		0.92		Thermal Modeller/ M&E	BREEAM Criteria: The thermal modelling demonstrates that the relevant requirements set out in criterion 3 are achieved for a projected climate change environment. Where thermal comfort criteria are not met for the projected climate change environment, the project team demonstrates how the building has been adapted, or designed to be easily adapted in the future using passive design solutions in order to subsequently meet the requirements under criterion 7. For air conditioned buildings, the PMV and PPD indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.
Hea 4c Thermal zoning and controls	1	1		0.92		Thermal Modeller/ M&E	BREEAM Criteria: The thermal modelling analysis has informed the temperature control strategy for the building and its users. The strategy for proposed heating/cooling system(s) demonstrates that it has addressed the following: - 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. - Where specified, any new local cooling or heating services (or changes to existing services) are designed to ensure they do not conflict with core services (e.g. conflicts between two separate cooling systems, conflicts between core heating and locally provided cooling systems). - The degree of occupant control required for these zones, based on discussions with the end user (or alternatively building type or use specific design guidance, case studies, feedback) considers: - User knowledge of building services - Occupancy type, patterns and room functions (and therefore appropriate level of control required) - How the user is likely to operate or interact with the system(s), e.g. are they likely to open windows, access thermostatic radiator valves (TRV) on radiators, change air-conditioning settings etc.

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							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). d. 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. The need or otherwise for an accessible building user actuated manual override for any automatic systems.
Hea 5 - Acoustic Performance							
Hea 5a Acoustic Performance	3	3		0.92		Acoustician	BREEAM Criteria: The building meets the appropriate acoustic performance standards and testing requirements defined in the checklists and tables section which defines criteria for the acoustic principles (table of requirements provided separately) of: • Sound insulation • Indoor ambient noise level • Reverberation times. Where undertaking a partial refurbishment or fit-out, the performance standards and testing requirements defined in the checklist and tables section for the following principles are applicable to each assessment part: Part 2: criteria for indoor ambient noise levels only Part 3: criteria for sound insulation and indoor ambient noise levels Part 4: sound insulation and reverberation control Part 2 and 3 assessment - Compliance note 3: Two credits are available for indoor ambient noise and sound insulation, as relevant to the building type and function: Where an SQA confirms that it is not possible to meet the indoor ambient noise and sound insulation criteria in accordance with the relevant tables in full due to the scope of works, in order to demonstrate compliance; measurement and assessment by an SQA are required to demonstrate that the local services either: • Do not change the indoor ambient noise levels where noise break-in through the building envelope is dominant and maintain sound insulation between noise-sensitive spaces; or • Reduce the indoor ambient noise levels and maintain sound insulation between noise-sensitive spaces. Part 4 assessment – Compliance Note 4 - Two credits are available for the sound insulation and reverberation control criteria as relevant to building type and function, in accordance with the relevant tables.

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Hea 6 - Safety and Security							
Hea 6a Consultation with ALO	1	1		0.92	Concept Design (or see CN6)	Architect/ALO	BREEAM Criteria: 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), see CN9 where the refurbishment or fit-out zone comprises part of a larger building. The SQSS develops a set of recommendations or solutions during or prior to Concept Design. These recommendations or solutions aim to ensure that the design of building, are planned, designed and specified to address the issues identified in the preceding SNA. The recommendations or solutions proposed by the SQSS are implemented. Any deviation from those recommendations or solutions will need to be justified, documented and agreed in advance with a suitably qualified security specialist. CN9: <i>Where refurbishing or fitting-out a space that is part of a larger building, with access controls and security features already in situ, compliance can be demonstrated where the suitability of existing security is reviewed and any adaptations that may be required implemented. The review should be conducted by a SSQS which could be an independent specialist or someone within the occupying organisation or advice from a company approved by the NSI (National Security Inspectorate).</i>
Energy							
Ene 1 - Reduction of CO2 Emissions							
Ene 1 Reduction of CO ₂ Emissions	15	6		0.77		Design Team	BREEAM Criteria: Option 1 or Option 2 Approach to be used to assess this issue.
Ene 2 - Energy Monitoring							
Ene 2a Energy Use Min. Standard	1	1		0.77		M&E	BREEAM Criteria: Sub-metering of major energy consuming systems Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. The energy consuming systems in buildings with a total useful floor area greater than 1,000m² are metered using an appropriate energy monitoring and management system. The systems in smaller buildings are metered either with an energy monitoring and management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system.

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							The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs. Where applicable: - Space heating - Domestic hot water heating - Humidification - Cooling - Ventilation, i.e. fans (major) - Pumps - Lighting - Small power - Renewable or low carbon systems (separately) - Controls Other major energy consuming systems/plant, where appropriate.
Ene 2b By Building Area	1	1		0.77		M&E	BREEAM Criteria: Sub-metering of high energy load and tenancy areas An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant function areas or departments within the building/unit.
Ene 3 – External Lighting							
Ene 3 External Lighting	1	1		0.77		M&E	BREEAM Criteria: The building has been designed to operate without the need for external lighting (which includes on the building, signs and at entrances). OR alternatively, where the building does have external lighting, one credit can be awarded as follows: The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. All external light fittings are automatically controlled to prevent operation during daylight hours and have presence detection in areas of intermittent pedestrian traffic.

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Ene 4 - Low Carbon Design							
Ene 4a Passive Design Analysis	1	0		0.77	Concept Design	M&E	Credit Not Targeted BREEAM Criteria: Achieve the first credit Hea 04 Thermal comfort: One credit - Thermal modelling to demonstrate that the building design delivers appropriate thermal comfort levels in occupied spaces. The project team analyses the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures/ The building uses passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis and the analysis demonstrates a meaningful reduction in the total energy demand as a result. BREEAM Assessor Notes: Applicable to consider local services that utilise passive design.
Ene 4b	1	1		0.77	Concept Design	M&E	BREEAM Criteria: A feasibility study has been carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent) by an energy specialist (see Relevant definitions) to establish the most appropriate recognised local (on-site or near-site) low and zero carbon (LZC) energy source(s) for the building/development. A local LZC technology/technologies has/have been specified for the building/development in line with the recommendations of this feasibility study and this method of supply results in a meaningful reduction in regulated carbon dioxide (CO₂) emissions
Ene 6 – Energy Efficient Transportation Systems							
Ene 6 Energy Efficient Transportation Systems	3	3		0.77		Lift Consultant	BREEAM Criteria: <u>Energy Consumption -</u> Where new lifts, escalators and/or moving walks (transportation types) are specified within refurbishment works: a. An analysis of the transportation demand and usage patterns for the building has been carried out to determine the optimum number and size of lifts, escalators and/or moving walks. b. The energy consumption has been estimated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks, Part 2: Energy calculation and classification for lifts (elevators) and/or Part 3 - Energy calculation and classification of escalators and moving walks, for one of the following: i. At least two types of system (for each transportation type required); OR ii. An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less lift (MRL)); OR

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							iii. A system strategy which is 'fit for purpose'. c. The use of regenerative drives should be considered, d. The transportation system with the lowest energy consumption is specified <u>Energy Efficient Features –</u> For each newly specified lift, the following three energy efficient features are specified and for existing lifts within the project scope of influence, at least two of the following energy efficient features are specified: a. The lifts operate in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b. The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. c. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. 4. Where the use of regenerative drives is demonstrated to save energy, they are specified
Ene 8 - Energy Efficient Equipment							
Ene 8 Energy Efficient Equipment	2	0		0.77		M&E/client	Credit Not Sought BREEAM criteria: Identify the building's unregulated energy consuming loads and estimate their contribution to the total annual unregulated energy consumption of the building, assuming a typical/standard specification. Identify the systems and/or processes that use a significant proportion of the total annual unregulated energy consumption of the development and its operation. Demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building. KBCN0325: BREEAM does not currently recognise the reuse of electrical equipment as the most energy efficient option for compliance with this issue. If it can be demonstrated that such existing electrical appliances meet the criteria for inclusion in the relevant national or international energy efficient equipment schemes, these can be considered compliant. If new equipment is procured in addition to the re-use of the old equipment, the existing equipment may be excluded from this assessment. In these situations the assessor must be satisfied that the new equipment would make a meaningful reduction to overall unregulated energy consumption.

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Transport							
<i>Tra 1 - Sustainable Transport Solutions</i>							
Tra 1 Accessibility Index	3	2		0.9		Element Sustainability	Completed by BREEAM Assessor - Initial review of the accessible transportation nodes 2 credits targeted.
<i>Tra 2 - Proximity to Amenities</i>							
Tra 2 Proximity to Amenities	1	1		0.9		Element Sustainability	Completed by BREEAM Assessor – central location, local amenities within close proximity.
<i>Tra 3 - Cyclist Facilities</i>							
Tra 3a Cycle Storage	1	1		0.9		Design Team/Building Owner	BREEAM Assessor Notes: BREEAM Assessed building – Cycle storage provision to be checked for the building and the provision for the 6th floors. Existing cycle facilities can be used for this credit. Offices: 1 space for every 10 building users
Tra 3b Cycle Facilities	1	1		0.9		Design Team/Building Owner	BREEAM Assessor Notes: Lockers, showers and drying space facilities BREEAM Criteria: Lockers – The number of lockers is at least equal to the number of cycle spaces required Drying Space - A compliant drying space is defined as a space that is specifically designed and designated with adequate heating/ventilation for the drying of wet clothes. A plant room, for example, is not a compliant drying space. Showers - Provision of one shower for every 10 cycle storage spaces, subject to a minimum provision of one shower. Any building providing eight showers or more will comply regardless of the number of cycle storage spaces provided. Both male and female users must be catered for, i.e. either separate showers within shared gender-specific facilities (required provision split 50-50) or single shower cubicles and changing space for mixed use.

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Tra 5 - Travel Plan							
Tra 5 Travel Plan	1	1		0.9	Feasibility and Design Stages	Client / Transport Consultant	BREEAM Criteria: A travel plan has been developed as part of the feasibility and design stages. A site-specific travel assessment/statement has been undertaken to ensure the travel plan is structured to meet the needs of the particular site and covers the following (as a minimum): - Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. - Travel patterns and transport impact of future building users. - Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children). - Disabled access (accounting for varying levels of disability and visual impairment). - Public transport links serving the site. - Current facilities for cyclists. The travel plan includes a package of measures to encourage the use of sustainable modes of transport and movement of people and goods during the building's operation and use.
Water							
Wat 1 - Water Consumption							
Wat 1 Water Consumption	5	3		0.9		Architect/ M&E	BREEAM Assessor Notes: 3no. credits targeted which requires a 25% improvement over the BRE's baseline performance. Flow rate examples can be provided to meet this requirement. BREEAM Criteria: An assessment of the efficiency of newly specified domestic water-consuming components. The efficiency of the following 'domestic scale' water-consuming components must be included in the assessment: - WCs - Urinals - Taps (wash hand basins and where specified kitchen taps and waste disposal unit) - Showers - Baths - Dishwashers (domestic and commercial sized) - Washing machine (domestic and commercial or industrial sized)

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Wat 2 - Water Monitoring							
Wat 2 Water Monitoring Min. Standard	1	1		0.9		M&E	BREEAM Criteria: The specification of a water meter on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source. Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area. If the refurbishment or fit-out zone is within a building that is leasehold, the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the incoming water supply for water using equipment in tenanted areas (see compliance note)
Wat 3 Leak Detection	1	0		0.9		M&E	Credit Not Sought BREEAM Criteria: A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed. The leak detection system must be: a.A permanent automated water leak detection system that alerts the building occupants to the leak OR an inbuilt automated diagnostic procedure for detecting leaks is installed. b.Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time. c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods. d. Programmable to suit the owner/occupiers' water consumption criteria. e.Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.
Wat 2 Leak Prevention	1	1		0.9		M&E	BREEAM Criteria: Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fitting networks).

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Materials							
Mat 1 Life Cycle Impacts							
Mat 1 Life Cycle Impacts	6	3	3	1.66		Architect	3no. credits currently sought – The use of an LCA impact compliant tool would enable 6no. credits to be awarded BREEAM Criteria: Robust environmental performance information has been collected for newly specified materials or where materials. 3no credits targeted. Assessment of internal partitions and floor finishes to be completed. The Green Guide to Specification can be used towards option 1 as a type of LCA tool for the assessment of new elements including external walls, external windows, internal floor finishes, upper floors, internal walls and partitions and roofs.
Mat 3 - Responsible Sourcing of Materials							
Mat 3a (P) Timber Procurement Min. Standard	Pre-Req	Pre-Req	Pre-Req	Pre-Req	Pre-Req	Main Contractor	BREEAM Criteria: All timber used on site will be sourced in accordance with the UK Government's Timber Procurement Policy.
Mat 3b Sustainable Procurement Plan	1	1		1.66		Main Contractor	BREEAM Criteria: The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan. will cover the following as a minimum: 1.Risks and opportunities are identified against a broad range of social, environmental and economic issues. BS ISO 20400:2017 Sustainable procurement or BS 8903:2010 Principles and framework for procuring sustainably - Specification can be used as a guide to identify these issues. 2.Aims, objectives and targets to guide sustainable procurement activities. 3.The strategic assessment of sustainably sourced materials available locally and nationally. There should be a policy to procure materials locally where possible. 4.Procedures are in place to check and verify that the sustainable procurement plan is being implemented/adhered to on individual projects. These could include setting out measurement criteria, methodology and performance indicators to assess progress and demonstrate success.
Mat 3c Major Building Elements	1	1				Main Contractor	Key building materials are responsibly sourced to reduce environmental and socio-economic impacts. There will be a materials procurement workshop such that the Main Contractor achieves at least one of three available credits in this area.

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Mat 4 – Insulation							
Mat 4a Embodied Impact of Insulation	1	1		1.66		Architect/Main Contractor/M&E	Any new insulation specified for use within the following building elements must be assessed: - Building services - Fabric The Insulation Index for the building fabric and services insulation is the same as or greater than 2.5.
Mat 5 - Designing for Robustness							
Mat 5 Designing for Robustness	1	1		1.66		Architect	BREEAM Criteria: The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This must include, but is not necessarily limited to: a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. Suitable durability and protection measures to vulnerable parts of the building can include: - Corridor walls specified to Severe Duty (SD) as per BS 5234-2 - Protection rails to walls of corridors - Kick plates/impact protection (from trolleys etc.) on doors - Hard-wearing and easily washable floor finishes in heavily used circulation areas (i.e. main entrance, corridors, public areas etc.) - Designing out the risk without the need for additional materials specification to protect vulnerable areas.
Mat 6 – Material Efficiency							
Mat 6 Material Efficiency	1	0		1.66		Prep. and Brief Concept Design Developed Design Technical Design Construction	Credit currently not targeted BREEAM Criteria: Opportunities have been identified, and appropriate measures investigated and implemented within the scope of refurbishment or fit-out works, to optimise the use of materials through building design, procurement, refurbishment, maintenance and end of life. The above is carried out by the design/construction team in consultation with the relevant parties at each of the following RIBA stages: a. Preparation and Brief b. Concept Design c. Developed Design d. Technical Design e. Construction

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Waste							
Wst 1 - Construction Waste Management							
Pre-refurbishment Audit	1	1		1.08	Concept Design	Developer / Client	BREEAM Criteria: The client shall ensure that a pre-refurbishment audit of all existing buildings, structures or hard surfaces within the scope of the refurbishment or fit-out zone is completed. The requirements for carrying out an appropriate pre-refurbishment audit are a. The audit should be carried out at the Concept Design Stage (equivalent to RIBA stage 2) prior to strip-out or demolition works in order to use the audit results to guide the design, consideration of materials that can be reused, and to set targets for waste management and ensure all contractors are engaged in the process of maximising high grade reuse and recycling opportunities. b. The audit should be carried out by a competent person (see Relevant Definitions) who has appropriate knowledge of buildings, waste and options for the reuse and recycling of different waste streams. c. Actual waste arisings and waste management routes used should be compared with those forecast from the audit and barriers to achieving targets should be investigated. The audit must be referenced in the Resource Management Plan (RMP) and cover: d. Identification and quantification of the key materials where present on the project e. Potential applications and any related issues for the reuse and recycling of the key materials in accordance with the waste hierarchy. f. Identification of local reproprocessors or recyclers for recycling of materials g. Identification of overall recycling rate for all key materials h. Identification of reuse targets where appropriate. i. Identification of overall landfill diversion rate for all key materials.
Wst 1a Reuse and direct recycling of materials	2	0		1.08		Main Contractor	Credit currently not targeted BREEAM Criteria: Where waste material types detailed in Table 64 of the BREEAM guidance are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling One credit is achieved where 50% of the total available points for the waste material types detailed in Table 64, that are present on the project have been achieved. Two credits are achieved where 75% of the total available points for the waste material types detailed in Table 64, that are present on the project have been achieved.
Wst 1b Construction Resource Efficiency	3	2		1.08		Main Contractor	Resource Efficiency (up to three credits available) – Targeted 2 credits Targets will be set within the Site Waste Management Plan, and procedures put in place, to ensure that less than 4.5 m3 / 1.2T per 100 m2 (gross floor area) of non-hazardous construction waste will be produced on site.

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Wst 1c Diversion of waste from Landfill	1	1		1.08		Main Contractor	Diversion from landfill – Targeted 1 credit Targets and procedures will be put in place to ensure that over 85% by volume / 90% by weight of construction waste generated is diverted from landfill and that materials will be sorted into key waste groups.
Wst 3 - Recyclable Waste Storage							
Wst 3 Recyclable Waste Storage	1	1		1.08		Architect/ Landlord	BREEAM Criteria: Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be: a. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams b. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities and occupancy rates.
Wst 4 – Speculative Finishes							
Wst 4 Speculative Finishes	1	1		1.08		Architect / Occupant	BREEAM Criteria: In a building being refurbished or fitted out for a specific occupant, that occupant has selected (or agreed to) the specified interior finishes.
Wst 6 – Functional Adaptability							
Wst 6 Functional Adaptability	1	1		1.08	Concept Design	Architect	BREEAM Criteria: A building-specific functional adaptation strategy study has been undertaken by the client and design team by Concept Design (RIBA Stage 2 or equivalent), which includes recommendations for measures to be incorporated to facilitate future adaptation. This should consider: - The potential for major refurbishment, including replacing the façade. - Design aspects that facilitate the replacement of all major plant within the life of the building, e.g. panels in floors/walls that can be removed without affecting the structure, providing lifting beams and hoists. - The degree of adaptability of the internal environment to accommodate changes in working practices. - The degree of adaptability of the internal physical space and external shell to accommodate change in-use. The extent of accessibility to local services, such as local power, data infrastructure etc.

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Pollution							
Pol 1 Impact of Refrigerants							
Pol 1 Impact of Refrigerants	3	1		1.33		M&E	BREEAM Criteria: Where the building does not require the use of refrigerants in existing and new systems within its installed plant/systems. OR Where the building uses refrigerants, in existing or new installed systems and plant: <u>Pre-requisite</u> All systems (with electric compressors) must comply with the requirements of EN 378:2016 and EN 378-2:20161 and where refrigeration systems containing ammonia are installed, the Institute of refrigeration Ammonia Refrigeration Systems Code of Practice <u>Two credits - Impact of refrigerant</u> Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELCO2e) of ≤ 100 kgCO2e/kW cooling/heating capacity. To calculate the DELCO2e please refer to the Relevant definitions in the Additional information section and the Methodology section. OR Where air-conditioning or refrigeration systems are installed the refrigerants used have a Global Warming Potential (GWP) ≤ 10. OR <u>One credit - Impact of refrigerant</u> Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELCO2e) of ≤ 1000 kgCO2e/kW cooling/heating capacity. <u>One credit - Leak detection</u> Where systems using refrigerants have a permanent automated refrigerant leak detection system installed; OR where an inbuilt automated diagnostic procedure for detecting leakage is installed. In all instances a robust and tested refrigerant leak detection system must be installed and must be capable of continuously monitoring for leaks. The system must be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident

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Pol 2 NOx Emissions							
Pol 2 NOx Emissions	3	0		1.33		M&E	BREEAM Criteria: Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a NOx emission level (measured on a dry basis at 0% excessO ₂) ≤ 100 mg/kWh – 1no. credit ≤ 70 mg/kWh – 2no. credits ≤ 40 mg/kWh – 3no credits
Pol 3 Surface Water Run-Off							
Pol 3 Flood Risk	2	2		1.33		Flood Risk Specialist	BREEAM Criteria: Flood Risk Assessment downloaded from the planning portal for the building (originally completed for planning) Flood Risk Zone 1.
Pol 4 Reduction of Night time Light Pollution							
Pol 4 Reduction of Night time Light Pollution	1	1		33		M&E	BREEAM Criteria: Where external lighting pollution has been eliminated through effective design that removes the need for external lighting without adversely affecting the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows: he external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 2011 All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes. Illuminated advertisements, where specified, must be designed in compliance with ILP PLG 05 – The Brightness of Illuminated Advertisements
Pol 5 – Noise Attenuation							
Pol 5 Noise Attenuation	1	1		1.33		Acoustician/ M&E	BREEAM Criteria: where the building does have noise-sensitive areas or buildings within 800m radius of the site, one credit can be awarded as follows: Where a noise impact assessment in compliance with BS 7445 has been carried out and the following noise levels measured/determined:

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							Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar. The rating noise level resulting from the new noise source. The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body (see Relevant definitions in the Additional information section). The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level. Where the noise source(s) from the proposed site/building is greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with criterion 4.