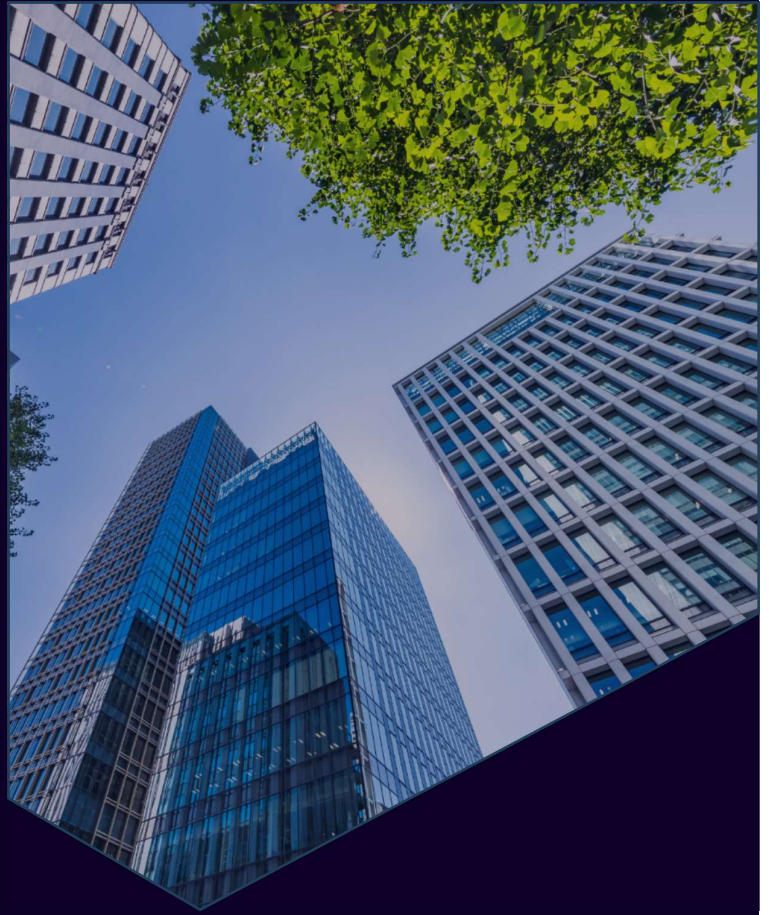




PROPOSED NURSERY DEVELOPMENT

LAND TO THE REAR OF 88 KNIGHTS WAY

EMMER GREEN

RG4 8RH

BREEAM FEASIBILITY STUDY

Project no. 22429





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REVISION	DATE	PREPARED BY	REVIEWED BY	COMMENTS
0	28/07/25	HH	enevo	For Comment

The current report provides a brief overview of the potential BREEAM performance of the proposed development. As such data and information should only be treated as **INDICATIVE** at this stage of the process. Further investigation can be undertaken when more accurate and detailed information is required on specific measures.

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1.0 Introduction

1.1 About enevo

Enevo are independent Sustainability and Energy Consultants providing carbon reduction solutions to help the UK achieve its carbon emission reduction target of 100% by 2050.

Our range of affordable but comprehensive solutions for the construction industry are broken down into two sectors; i) Building Compliance and ii) Consultancy.

Building Compliance:

Our Building Compliance services include; Code for Sustainable Homes Assessments, SAP Calculations, On Construction Energy Performance Certificates, Water Efficiency Calculations, SBEM Calculations, Commercial EPCs, BREEAM assessments and Air Tightness Testing.

Consultancy:

Our experience and exposure to building compliance combined with previous experience and IEMA accredited training means we have built up a vast amount of knowledge which enables us to provide our clients with invaluable advice. Our Consultancy services include; Renewable Energy Feasibility Reports, Energy Statements for planning, Sustainability Statements and Building Compliance Advisory Reports.

1.2 Introduction to Developments

A new Nursery building is proposed, along with a shed, replacement fences and gates plus ancillary outdoor space. The new building will be used as a Day Nursery, complementing the existing provision to the North. It would allow for an additional 30 children (under threes) who fall into the Government's new Early Years Funding entitlements

The purpose of this study is to ascertain the feasibility of achieving the BREEAM Very Good grade in line with policy CC2 of the Reading Local Plan.



1.3 Methodology

As part of the BREEAM feasibility study, this report will analyse the following issues;

- Perceived performance of the proposed development against the BREEAM criteria, as well as identification of the credits which could feasibly scored, and which couldn't be achieved.
- Outline of the sustainable characteristics of the proposed development, and how the relevant design characteristics score against all BREEAM criteria.



2.0 Criteria Performance

The building would be assessed as a 'Fully-Fitted' New Construction V6 assessment.

A BREEAM pre-assessment has been produced following discussions with the design team. Achieving an Excellent rating was discussed and it was concluded that due to the time, location, site and operator constraints, the only remaining credits that could be targeted to achieve a Very Good rating are those that attract significant additional cost.

Therefore, the target of Excellent is deemed unachievable for the proposed development. A copy of the latest pre-assessment is included in appendix A.

Issues with time constraints, site and location constraints, operator and financial viability are discussed in the following sections. The following section of the report will break down the potential performance of the development against each BREEAM issue.

Management

The following credits will not be achievable due to the time constraints with beginning the BREEAM pre-assessment post-planning submission or RIBA Stage 3:

- i) Man 01 Project Brief and Design: Stakeholder Consultation, Project Delivery stakeholder consultation not undertaken at RIBA Stage 1/ 2.
- ii) Man 02 Elemental Life Cycle Cost (LCC): Not undertaken at RIBA Stage 2.

The following credits will not be achievable due to the site or building constraints, or design constraints associated with retail units:

- i) Man 03 Responsible Construction: The Principal Contractor may not have EMS accreditation.

The following credits will not be financially viable to achieve as they will attract additional consultancy costs and potentially additional design implications:

- i) Man 02 Component Level Life Cycle Cost (LCC): Additional cost to undertake a compliant report, and may incur additional costs based upon the report recommendations.
- ii) Man 05 POE: Additional cost to undertake a compliant report 12 months after occupation.

**Health and Wellbeing**

The following credits will not be achievable due to the time constraints with beginning the BREEAM pre-assessment post-planning submission or RIBA Stage 3:

- i) Hea 06 Security: A Security Needs Assessment was not undertaken at RIBA Stage 2.

The following credits will not be achievable due to the site or building constraints, or design constraints associated with retail units.

- i) Hea 01 Glare Controls, Daylighting and View Out: The BREEAM criteria for visual comfort do not lend themselves to layouts commonly seen with retail stores of this size. The requirements would be prohibitive to the operational layout as they would require amended placement of checkout areas and office areas closer openable windows, which would cause security issues.
- ii) Hea 02 Ventilation, VOC Emissions: Limitations on VOC from adhesives & finishes are not possible to achieve based on the required hard wearing and durable finishes that are required for a busy retail store.
- iii) Hea 07 Safe Access: Access for separate delivery and parking area does not allow this credit to be awarded.
- iv) Hea 07 Outside Space: There is not sufficient external space to provide a quiet, private outside space.

The following credits will not be financially viable to achieve as they will attract additional consultancy costs and potentially additional design implications:

- i) Hea 02 Post-Construction Air Quality: Additional cost to undertake testing and compliance report and may incur additional costs for remediation.

Energy

The following credits will not be achievable due to the time constraints with beginning the BREEAM pre-assessment post-planning submission or RIBA Stage 3:

- i) Ene 01 Operational Energy Modelling: Due to the small nature of the development energy demand is extremely low, meaning there is no design benefits that could be given from completing this modelling.



The following credits will not be achievable due to the site or building constraints, or design constraints associated with retail units:

- i) Ene 01 Energy Performance: 8 credits is the typical number that can be awarded based upon a representative energy strategy including a substantial solar PV array, which represents a circa 75% reduction in CO2 emissions over building regulations Part L.
- ii) Ene 04 Free Cooling: A free cooling strategy cannot be implemented in the development due to constraints with the building form and it's ability to provide cross ventilation.

Transport

The following credits will not be financially viable due to the site or building constraints:

- i) Tra 02 Sustainable Transport Measures: The scheme will not be able to increase public transport provision to site, and no car parking spaces will be allocated for car-sharing of staff. Furthermore, the limited space on site means the provision of EV charging spaces cannot be increased.

Water

The following credits will not be achievable due to the site or building constraints, or design constraints associated with retail units:

- i) Wat 01 Water Consumption: Rain or Grey-water harvesting will not be incorporated, due to roof space being taken up by proposed solar photovoltaic panels, meaning rainwater harvesting systems are not feasible, limiting the number of credits available to 3 out of 5.

Materials

The following credits will not be achievable due to the time constraints with beginning the BREEAM pre-assessment post-planning submission or RIBA Stage 3:

- i) Mat 03 Sustainable Procurement: Suppliers that are part of Lidl's Approved Supplier list limit the number of credits available in this section to 2 out of 4.
- ii) Mat 01 Life Cycle Impacts: Based on being a steel frame construction, which commonly has a high level of embodied carbon, the maximum amount of credits that could feasibly be achieved in this section is 3 out of 7.

**Waste**

The following credits will not be achievable due to the time constraints with beginning the BREEAM pre-assessment post-planning submission or RIBA Stage 3:

- i) Wst 01 Pre-demolition audit: Not undertaken at RIBA Stage 2.

The following credits will not be financially viable to achieve as they will attract additional consultancy costs and potentially additional design implications:

- i) Wst 02 Recycled and Sustainably Sourced Aggregates: Additional cost to source compliant materials.

Land Use and Ecology

The following credits will not be achievable due to the site or building constraints, or design constraints associated with retail units.

- i) LE02 – 05 Ecology Credits: The number of achievable credits will be limited due to the greenfield nature of the site, meaning that a substantial
- ii) LE02 – 05 Ecology Credits: Based on the existing site layout, there is very little ecological value that has been identified, meaning that the level of protection is required, therefore limiting the number of credits available for the inclusion of protection measures.

Pollution

The following credits will not be achievable due to the site or building constraints, or design constraints associated with retail units.

- i) Pol 01 Impact of Refrigerants: Standard specifications for split VRF and Air Source Heat Pumps commonly use R410a refrigerant gas, which unfortunately does not achieve any credits. Only environmentally benign refrigerants such as ammonia & CO2 score credits in this issue, and systems using this gas would not meet the heating and cooling demands of the building.
- ii) Pol 03 Flood Risk & Surface Water: Credits awarded based upon flood risk location for the development, and proposed surface water calculations.

BREEAM Predicted Score & Grade

Based on the analysis provided above, and the designs of the proposed development, the maximum BREEAM score that could be achieved is 42.78%, equivalent to a Pass grade. Details of this can be seen in the below credit tracker from the pre-assessment produced for the site;

BREEAM NC V6.1 - Post-Construction Stage Credit Tracker Summary - Nursery Building							
Building Type	Fit Out	GIA (m ²)	NIA (m ²)	Credits Targeted	Credits Awarded	Registration No.	Target Rating
Retail	Fully Fitted			42.78%	0.00%		Pass

BREEAM Section	Credits Achieved	Credits Targeted	Credits Available	% of Credits Achieved	Category Weighting	% per Credit	Section Score
Management	0	11	21	0.00%	11.0%	0.52%	0.00%
Health & Wellbeing	0	5	18	0.00%	14.0%	0.78%	0.00%
Energy	0	11	19	0.00%	16.0%	0.84%	0.00%
Transport	0	4	12	0.00%	10.0%	0.83%	0.00%
Water	0	6	8	0.00%	7.0%	0.88%	0.00%
Material	0	3	14	0.00%	15.0%	1.07%	0.00%
Waste	0	4	10	0.00%	6.0%	0.60%	0.00%
Land Use & Ecology	0	5	13	0.00%	13.0%	1.00%	0.00%
Pollution	0	7	12	0.00%	8.0%	0.67%	0.00%
Innovation	0	0	10	0.00%	10%	1.00%	0.00%

Actual	0.00%
Target	42.78%

Whereas this is lower than the minimum requirement of Very Good which has been conditioned for the development, it should not be an indictment on the sustainable credentials of the proposed development. BREEAM certification on its own does not guarantee that a building is sustainable in a traditional sense; at it's most effective it can be used to inform the design of a building and lead developers to think about issues that may not originally have been at the forefront of their mind, however it can quite easily be treated as a tick box exercise that is only a means to an end for developer. A full version of the BREEAM credit tracker created for this site as part of this feasibility study can be seen in Appendix A of this report.



3.0 Sustainability Performance Metrics

Despite not being able to reach the required 55% of credits required to achieve the Very Good BREEAM grade, the development does perform extremely well when looking at a number of key sustainability metrics. Examples of this have been identified below;

Operational Energy Performance:

Based on the size of the development and the expected energy demand of the building use being so low, the associated carbon emissions relating to the operational energy usage will also be very low.

Water Usage:

The sanitaryware specification should be developed to ensure fantastic performance in comparison to the BREEAM performance criteria, as the building usage would have an expected low water usage. The expected performance would be a 55% reduction in operational water usage in comparison to the BREEAM baseline level, which represents a significant reduction.

Embodied Carbon:

Embodied carbon levels of the material specification could be measured through the completion of a Whole Life Carbon Analysis, to ensure designs and material specifications have been optimised to reduce embodied carbon levels and reduce carbon hotspots where possible. As this level of analysis categorically identifies the levels of embodied carbon emissions in all aspects of the construction, based on the timber construction and lack of high carbon intensity materials such as steelwork and concrete products that would lead to high embodied carbon levels

Biodiversity:

Bespoke landscaping designs are always produced in line with a suitably qualified Ecologist's input, to enhance biodiversity net gains for each site as much as possible. Due to the nature of the site, it will be difficult to incorporate extensive landscaping designs, however work should be done to improve the biodiversity where possible.



4.0 Conclusion

Based upon initial BREEAM feasibility studies as part of the pre-assessment process, the target BREEAM rating to meet Very Good as per policy CC2 of the target, is deemed unachievable. This is due to time constraints, site and location constraints, operator viability and financial viability of the remaining available credits.

Based upon the initial pre-assessment it is concluded that 57.22% of credits can be deemed unavailable. The reasons for this are due to site limitations, technical constraints with the building specification and type, cost increases or product supplier limitations.

As can be seen from Appendix A, which is the BREEAM pre-assessment which has been produced, all of the viable credits have been targeted, and a maximum grade of 'Pass' can be achieved.

As a qualified BREEAM Advisory Professions and sustainability consultant, it is of my opinion that targeting & achieving a Very Good BREEAM grade for the development will be onerous on the developers and will not boost the sustainable development of the site at this stage. As the vast majority of detailed design work is limited due to the scope of the development, there is no scope for the BREEAM criteria to inform the design process or improve any of the relevant sustainability metrics associated with the operation of the store.

The justification and identification of performance against the relevant sustainability metrics included in this report still provides the upmost of opportunities to develop an extremely sustainable building, whilst also developing a building that is complementary to the local residents and potential building users. It also will still 100% fulfil the council's overarching intentions of it's sustainable design and construction policy.

BREEAM NC V6.1 - Credit Tracker

		Credits Available	Credits Targeted	Credits Achieved	Credit Criteria	RIBA Stage	Evidence Required	Action
Management								
Man 01	Project Delivery Planning	1	0	0	Prior to Concept Design project delivery stakeholders define roles, responsibilities and consider: - End user requirements - Aims of the design and the design strategy - Particular installation and construction requirements - Occupiers' budget and technical expertise in maintaining any proposed systems - Maintainability and adaptability of the proposals - Operational energy - Requirements for the production of the project and end user documentation - Requirements for commissioning, training and aftercare support	2	List in a responsibility matrix (or equivalent), confirming who will be responsible for each role and specific responsibilities at each key assessment stage. Provide minutes of the key initial meetings to demonstrate roles were allocated and discussed. Report or summary document, with supporting evidence where required, to demonstrate how the project delivery stakeholders influenced the initial project brief, the project execution plan, communication strategy and the concept design.	Client / Architect
						6	Updated responsibility matrix confirming who was responsible for each role and their specific responsibilities at each stage. Assessor site inspection report to show how the early stage stakeholders input influenced the final design.	Client / Architect BREEAM Assessor
	Stakeholder Consultation	1	0	0	Prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content and demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design. Prior to completion of the detailed design all interest parties give and receive feedback.	2	List all interested parties consulted. Records of consultation, as per the minimum consultation content required. Evidence or summary report on how the stakeholder contributions influenced or changed the initial project brief and concept design.	Client / Consultation company
						6	Assessor site inspection report showing how the outcomes of the consultation has been implemented within the final design.	BREEAM Assessor
	AP (Concept Design)	1	0	0	BREEAM AP involvement - appointed prior to Stage 2	1 & 2	BREEAM AP Appointment & BREEAM AP reports or evidence.	BREEAM AP
	AP (Developed Design)	1	0	0	BREEAM AP involvement throughout Stages 3 & 4	3 & 4	BREEAM AP Appointment & BREEAM AP reports or evidence.	BREEAM AP
Man 02	Elemental Life Cycle Cost (LCC)	2	0	0	An outline, entire asset LCC plan at Process Stage 2 together with any design options appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865: 2008.	2	Elemental LCC Plan Confirmation from the design team as to how the LCC has influenced design / specification and drawings / specification to support this	LCC Consultant Design Team
						6	Assessor site inspection report showing how the outcomes of the LCC have been implemented.	BREEAM Assessor

	Component Level LCC	1	0	0	Component level LCC options appraisal by end of Stage 4 including envelope, services, finishes and external spaces.	4	Component level LCC Plan Conformation from the design team as to how the LCC has influenced design / specification and drawings / specification to support this	LCC Consultant Design Team
						6	Assessor site inspection report showing how the outcomes of the LCC have been implemented.	BREEAM Assessor
	Capital Cost Reporting	1	1	0	Capital cost for the building in pounds per square metre of gross internal floor area (£k/m ²).	6	Final capital cost.	Main Contractor
Man 03	Temporary Timber	P	P		All timber and timber based products during the construction process of the project are legal and sustainable timber.	6	Letter confirming all temporary site timber used and for what purpose. FSC certificates. Proof of purchase: delivery tickets / purchase orders / invoices etc.	Main Contractor
	Environmental Management	1	1	0	All parties who manage the construction site should operate an EMS that is third party certified to ISO 14001:2015 or equivalent.	6	Signed copy of the PPG6 checklist confirming how each section has been addressed and supporting evidence confirming the proposed measures and procedures against each section, such as CEMP, site records, photographs...	Main Contractor
	AP (Construction)	1	0	0	BREEAM AP involvement throughout Stages 5 & 6	5 & 6	Contract / Formal agreement showing the required BREEAM rating. Appointment of the BREEAM AP and supporting evidence of their role being carried out.	BREEAM AP
	Responsible Construction Management	2	2	0	Responsible construction methods via relevant scheme certificates and compliance reports.	6	Letter confirming the items achieved and supporting evidence such as site records, photographs, CCS certificate and monitor's final report...	Main Contractor
	Monitoring of Construction Site Impacts	2	2	0	Utility, water and transportation monitoring	6	Letter confirming who was appointed for monitoring, recording and reporting site data. Monitoring records.	Main Contractor
Man 04	Commissioning & Testing Schedule	1	1	0	Schedule of commissioning and testing in line with appropriate standards	5 & 6	Commissioning schedule, showing what has been commissioned and the standards followed and evidence verifying the commissioning was carried out in line with these. Commissioning certificates. Letter confirming who was appointed to manage the commissioning process. Main Contractor final programme and project budget showing commissioning allowances.	M&E Sub-Contractors Main Contractor
	Commissioning Design & Prep	1	1	0	Appointment of specialist commissioning manager who is not involved in the general installation of the building services systems	6	Copies of design reviews, commissioning records and reports.	Commissioning Manager
	Testing and Inspecting Building Fabric	1	0	0	Complete post-construction testing and inspection to quality-assure the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through airtightness testing and a thermographic survey).	6	Thermographic survey and air leakage report. Qualifications for suitably qualified professional. Conformation remedial works have been completed - if required.	Main Contractor
	Handover	1	1	0	Two building user guides for a non-technical and technical user including training schedule.	6	Technical training schedule and building user guide, non-technical training schedule and building user guide.	Main Contractor

Man 05	Aftercare Support	1	1	0	Provide aftercare support to the building occupiers through having in place operational infrastructure and resources. This includes as a minimum a meeting between the aftercare support team or individual, and the building occupier or management team and onsite facilities management training. 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). 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. 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.	6	Evidence to verify what aftercare has taken place so far, and a schedule to confirm what procedures are in place. All aftercare should be completed within 12 months of occupation. Where 13 months has passed since building occupation, aftercare data collection records should be submitted to the BRE.	Main Contractor
	Commissioning Implementation	1	1	0	Specialist commissioning activities over a minimum of 12 months.	6	In-use commissioning records/reports and records of occupant interviews. Evidence that the specialist commissioning manager meets the definition for this role. Where a 15 month period has not passed since occupation of the building, the following should be provided: – Evidence of the appointment of a commissioning manager – Schedule of commissioning responsibilities – Confirmation of proposed commissioning dates – Where some commissioning has taken place, but not all, these reports /certificates must be submitted.	Commissioning Team for Post-PC
	Post Occupancy Evaluation	1	0	0	The client or building occupier commits to carry out a POE exercise one year after the building is substantially occupied. An independent party carries out the POE and provides a report with lessons learned. The client or building occupier commits funds to pay for the POE in advance.	6	Evidence of appointment of the third party. Schedule of responsibilities. Where 15 months has passed since building occupation, a copy of the POE report.	Building Occupier / POE Company
Management Totals:		21	11	0				
Health & Wellbeing								
Hea 01	Control of Glare from Sunlight	1	1	0	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. Where risk has been identified within a relevant building area, a glare control strategy is used to design out the	4	Glare Control Assessment Report	Architect

					potential for glare. The glare control strategy does not increase energy consumption used for lighting.	6	Final / as-built drawings showing the areas affected by glare, and elevation drawings to show the glare control measures installed. Manufacturers literature (where required) Assessor site inspection report.	Architect BREEAM Assessor
	Daylighting	2	0	0	Daylighting criteria meet good practice daylight factors.	6	Daylight calculations. Final / as-built drawings of floor plans, showing where daylight reaches. Assessor site inspection report	Architect BREEAM Assessor
	View Out	1	0	0	95% of the floor area in 95% of spaces for each relevant building area provides an adequate view out. Where relevant building areas are within 8m of an external wall which has a window or permanent opening, and the window or opening is ≥20% of the surrounding wall area. Where the room depth is greater than 8m, the percentage of window or opening must instead be the same as, or greater than, the values in Table 1.0 BS8206: Part 2.	6	Final / as-built floor plan drawings confirming the areas meeting the view out criteria and elevations showing the wall to window ratio. Assessor site inspection report.	Architect BREEAM Assessor
	Internal and External Lighting Levels, Zoning and Control	1	1	0	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 areas3 and BS EN 12464-2:20144 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. 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. Internal lighting is zoned to allow for occupant control.	6	Final / as-built internal and external lighting drawings Letter confirming compliance with the specified standard. Assessor site inspection report	Electrical Sub-Contractor BREEAM Assessor
Hea 02	Indoor Air Quality Plan	P	P	0	A site-specific indoor air quality plan has been produced and implemented.	4	Indoor Air Quality Report	Mechanical Consultant
						6	Confirmation, including examples and supporting evidence, of how the indoor air quality plan was used to influence the design or construction works.	Main Contractor / Mechanical Sub-Contractor

	Ventilation	1	0	0	The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building as follows: a) Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation b) Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building c) Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 16798-3:2017. The specified filters should achieve supply air classification of at least SUP 2. d.i) Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO₂) or air quality sensors specified in accordance with Building Regulations ADF2 and: d.ii) In mechanically ventilated buildings or spaces: sensors are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space d.iii) The total number of sensors, and the net internal area of the relevant areas covered by the sensors, is reported. e) The ventilation strategy provides adequate ventilation rates throughout the year, including sufficient airflow rates in summer to prevent overheating and maintain required thermal comfort conditions in accordance with CIBSE AM 10 (for naturally ventilated buildings) and CIBSE AM13 (for mixed-mode buildings).	6	Final / as-built drawings of the ventilation strategy. Conformation the sensors are calibrated and mounted in line with guidance. For naturally ventilated buildings, a letter confirming the building has been built in line with the BREEAM criteria. For mechanically ventilated buildings, the commissioning managers performance testing report, confirming the required fresh air rates are achieved. Assessor site inspection report.	Mechanical Sub-Contractor Commissioning Manager BREEAM Assessor
	Emissions from Construction Products	2	0	0	All of the product types listed meet the emission limits, testing requirements and any additional requirements	6	Letter or schedule confirming installation of compliant materials. Copies of the manufacturers literature confirming testing standards and emissions achieved. Where applicable for paints and varnishes, evidence of protection against mould growth.	Main Contractor / Architect
	Post-Construction IAQ Measurement	1	0	0	The formaldehyde concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 100µg/m ³ averaged over 30 minutes. The formaldehyde sampling and analysis is performed in accordance with ISO 16000-2 and ISO 16000-3. The total volatile organic compound (TVOC) concentration in indoor air is measured post construction (but pre-occupancy) and does not exceed 500µg/m ³ over 8 hours. The TVOC sampling and analysis is performed in accordance with ISO 16000-5 and ISO 16000-6 or ISO 16017-1.	6	Results of the indoor air quality testing for formaldehyde and TVOCs. Where relevant, written confirmation of the remedial measures which have been undertaken.	Main Contractor
Hea 04	Thermal Modelling	1	1	0	Thermal modelling has been carried out using software in accordance with CIBSE AM11 Building Energy and Performance Modelling.	4	Thermal Comfort Report	Mechanical Consultant
						6	Letter confirming the thermal comfort report required no changes.	Mechanical Consultant

	Design for Future Thermal Comfort	1	1	0	The thermal modelling demonstrates that the relevant requirements are achieved for a projected climate change environment.	4	Thermal Comfort Report showing climate change results. Where the requirements are not met, provide evidence such as drawings or specifications to demonstrate how the building has been adapted or designed to be easily adapted using passive design solutions in order to comply.	Mechanical Consultant
						6	Final / as-built drawings / photographic evidence to confirm any required design adaptations or passive measures have been implemented.	Mechanical Sub-Contractor
	Thermal Zoning and Controls	1	1	0	The thermal modelling analysis has informed the temperature control strategy for the building and its users.	4	Thermal comfort strategy, highlighting the points that have been considered and decisions taken accordingly. Conformation of the proposed HVAC systems, zoning and controls which have been specified.	Mechanical Consultant / Mechanical Sub-Contractor
						6	Final / as-built drawings of the thermal zoning, confirming the thermal strategy has been implemented, and zoning and controls have been provided. Conformation of the proposed HVAC systems, zoning and controls which have been specified. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
Hea 05	Acoustic Performance	3	0	0	The building meets the appropriate acoustic performance standards and testing requirements for: - Indoor Ambient Noise Levels - Reverberation - Sound Insulation	4	Professional report or study and calculations from the acoustician confirming the bespoke acoustic performance standards and testing regime. Evidence to verify the acoustician meets the definition of a suitably qualified acoustician.	Acoustician
						6	Acoustic field test results to show acoustic performance standards have been achieved and evidence to support they were completed by a compliant test body.	Acoustician
Hea 06	Security of Site and building	1	0	0	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.	2	Compliant security needs assessment and recommendations from SQSS. Evidence to demonstrate the SQSS meets the definition of a suitably qualified security specialist.	Security Specialist
						6	Final / as-built drawings showing the measures have been implemented (e.g., CCTV). IF any have not been implemented, justification and agreement from the SQSS. Assessor site inspection report	Architect BREEAM Assessor
Hea 07	Safe Access	1	0	0	Dedicated and safe cycle paths, footpaths are provided from the site entrance to any cycle storage, and connect to off-site cycle paths where applicable. Delivery areas are not accessed through general parking areas and do not cross pedestrian/cycle routes. There is a dedicated parking or waiting area for goods vehicles with appropriate separation from the manoeuvring area and staff and visitor car parking. Parking and turning areas are designed for simple manoeuvring according to the type of delivery vehicle	6	Final / as-built site layout, highlighting safe pedestrian and cycle routes and other compliant features and dimensions. Assessor site inspection report	Architect BREEAM Assessor

					likely to access the site, thus avoiding the need for repeated shunting.			
	Outside Space	1	0	0	There is an outside space providing building users with an external amenity area. The space is of an appropriate size to provide enough amenity for the predicted number of building users during coffee or lunch breaks to gather, socialise, relax and connect with the natural environment. The space is predominantly intended for building staff, but can be used by other building users where relevant and beneficial to the building users.	6	Final / as-built site layout showing adequate external space and seating arrangement. Non-smoking sign & benches need to be installed. Assessor site inspection report.	Architect Main Contractor BREEAM Assessor
Health and Wellbeing Totals:		18	5	0				
Energy								
Ene 01	Reduction of Energy Use	9	8	0	Calculate an Energy Performance Ratio for New Construction (EPR NC) via Part L2a modelling and providing BRUKL.	6	As-Built BRUKL. Additional calculations where the EPR has been calculated based on averaging. Confirmation of the expertise and experience of the individual carrying out the modelling in compliance with the requirements of the local building regulations.	Mechanical Consultant
	Prediction of Operational Energy Use	4	0	0	Achieve criterion 2 in Ene 04: LZC design. Estimate the occupancy, energy use for unregulated energy loads and management practices. Undertake detailed energy modelling to predict the building energy consumption. Undertake sensitivity analysis to determine the factors which can significantly impact building energy consumption. Based on the results of the sensitivity analysis, and in discussion with the project team, the client and the prospective occupier devise scenarios to explore how high impact factors might influence the building energy consumption. Undertake scenario modelling and use these findings to inform improvements to design of the building and to operational, maintenance, and handover strategies. Determine an energy target	4	An energy modelling report which details: – The modelling software and weather files used. – How the predicted occupancy, unregulated energy loads, and management practices have been determined. – The factors considered for the sensitivity analysis. – The scenarios that have been modelled. – The results of the sensitivity analysis and scenario modelling. – The energy performance target set for the building. – Recommendations for improvements to the design of the building and to operational, maintenance, and handover strategies. Confirmation of the suitably qualified energy modeller's qualifications and experience.	Mechanical Consultant

					for the building based on the results of the scenario modelling. At the post-construction stage, the scenario modelling should be repeated to reflect the post construction building specification and, if necessary, adjust the energy target.		Where changes to design assumptions and input data have occurred at post-construction stage, the energy modelling should be re-run to consider those changes and the modelling report updated accordingly. Alternatively, conformation that assumptions and input data do not have not changed, and the model does not need to be re-run.	Mechanical Consultant
Ene 02	Sub-Metering of End-Use Categories	1	1	0	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	6	Final / as-built metering schedule or metering strategy document. Screenshots from the energy monitoring system showing data from the meters installed. Manufacturers product data.	Mechanical Sub-Contractor
	Sub-Metering of High Energy Load	1	1	0	Separate accessible energy sub-meters with pulsed or other open protocol communication outputs for future connection to an energy monitoring and management system	6	Assessor site inspection report.	BREEAM Assessor
Ene 03	External Lighting	1	1	0	External light fittings within the construction zone with: a) Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt b) Automatic control to prevent operation during daylight hours c) Presence detection in areas of intermittent pedestrian traffic.	6	Final / as-built external lighting drawings, including the location of the timeclock, photocell and prsence detectors. Manufacturers literature showing installed luminaires. Assessor site inspection report	Electrical Sub-Contractor BREEAM Assessor
Ene 04	Passive Design Analysis	1	0	0	Achieve Hea 04 thermal comfort model. The project team analyses the proposed building design and development during Concept Design to identify opportunities for the implementation of passive design measures. 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. Quantify the reduced total energy demand and carbon dioxide (CO ₂ -eq) emissions resulting from the passive design measures.	2	Passive Design Analysis and resulsrts from a dynamic simulation model demonstrating the reduced energy demand and CO ₂ -eq emissions from the specified passive design measures.	Mechanical Consultant
						6	Evidence of the recommendations being implemented - final / as-built drawings. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
	Passive Design Free Cooling	1	0	0	Include a free cooling analysis in the passive design analysis. Identify opportunities for the implementation of free cooling solutions. The building is naturally ventilated or uses any combination of the free cooling strategies.	2	Passive design analysis report including free cooling analysis with opportunities to implement free cooling solutions. Results from a dynamic simulation model and other used methods demonstrating that the free cooling strategy can meet the buildings cooling demand.	Mechanical Consultant
						6	Evidence of the recommendations being implemented - final / as-built drawings. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
	LZC Technologies	1	0	0	Establish the most appropriate recognised local (on-site or near-site) low and zero carbon (LZC) energy sources for the building or development, based on a feasibility study. Specify local LZC technologies for the	2	Low and zero carbon feasibility study and results from a dynamic simulation model demonstrating reductions in CO ₂ -eq emissions from the specified low and zero carbon technology.	Mechanical Consultant

					building or development in line with the feasibility study recommendations. Quantify the reduced regulated carbon dioxide (CO ₂ -eq) emissions resulting from the feasibility study.	6	Evidence of the recommendations being implemented - final / as-built drawings. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
Ene 05	Energy Efficient Cold Storage	0	0	0	Design, install and commission the refrigeration system in accordance with the Code of Conduct for carbon reduction in the refrigeration retail sector and BS EN 378-2:2016	4	A print out of the ETPL listing the specific product or evidence to show they are on equivalent list. Refrigeration plant commissioning record.	Refrigeration Contractor
Ene 06	Energy Efficient Transportation	0	0	0	Analyse the transportation demand and usage patterns for the building to determine the optimum number and size of lifts, escalators or moving walks. Calculate the energy consumption in accordance with BS EN ISO 25745 Part 2 or Part 3 for at least 2 options for each transportation type or two options considering different system arrangements. Consider use of regenerative drives and specify the system with lowest energy consumption.	4	Professional report or study of transportation analysis and calculations.	Lift Contractor
	Energy Efficient Features	0	0	0	Specify the following three energy efficient features for each lift: a) A standby condition for off-peak periods 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 c) Use of a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. & specify regenerative drives where their use is demonstrated to save energy.	6	Manufacturer's product details. Final / as-built drawings showingt the lift installed. Assessor site inspection report.	Main Contractor BREEAM Assessor
Ene 08	Energy Efficient Equipment	0	0	0	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. Identify the systems or processes that use a significant proportion of the total annual unregulated energy consumption of the building. Demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building.	4	Documentation identifying the energy using equipment that are included within the project specification and estimates of their contribution to the total annual unregulated energy consumption. Specification or correspondence confirming the significant contributors to unregulated energy consumption and compliance with Table 6.7. If other signification contributors not listed in Table 6.7 are specified, the design team must provide justification of how a meaningful reduction will be achieved. Where products are specified, supporting manufacturer's technical data or energy certificates.	Mechanical Consultant / Building User
						6	Schedule confirming the energy using equipment installed. Evidence of purchase - invoice / purchase order etc. Manufacturer technical data or energy certificates, identifying the energy using equipment and how it is compliant.	Mechanical Consultant / Building User BREEAM Assessor

							Assessor site inspection report	
Energy Totals:		19	11	0				
Transport								
Tra 01	Transport Assessment & Travel Plan	2	2	0	Site specific transport assessment and travel plan prior to stage 2. Agreement of recommendations with be implemented.	2	Transport Assessment or Statement. Justification of why a transport statement was chosen over a transport assessment; if applicable. Travel Plan Where the building occupier is known - letter confirming the building occupier's involvement in the Travel Plan. Where the building occupier is not known - letter confirming the Travel Plan will be handed over to the building user when on board.	Transport Consultant Developer
						6	Written agreementfrom the building owner to implement the Travel Plan to support the transport strategy. Handover documentation to ensure the Travel Plans implementation.	Building Owner
Tra 02	Sustainable Transport Measures	10	2	0	Option 1: The existing AI calcuated in Tra 01 meets the listed thresholds.	4	AI calculation with associated evidence of distance and timetables.	Transport Consultant
					Option 2: Demonstrate in increase of the AI through negotiation with local bus, train or tram companies. This can be via increasing the service, a diverted bus route or enhanced bus stop.	6	Final AI calculations confirming improvement. Updated evidence, including public transport services, timetables and maps	Project Manager / BREEAM Assessor
					Option 3: Install a public transport information system.	6	Documentatoin showing the system is operational and provides real time updates. Final / as-built drawing showing the location of the system. Assessor site inspection report	Main Contractor BREEAM Assessor
					Option 4: 10% of car parking spaces have EV stations.	6	Final / as-built drawing showing the location of EV charging spaces. Letter confirming the installation of the EV charging stations. Manufacturers literature. Assessor site inspection report	Electrical Sub-Contractor BREEAM Assessor
					Option 5: Provide priority spaces for car sharers for 5% of total car parking capacity. Locate these spaces nearest the development entrance. If the end user is known: Set up a car sharing group and raise awareness with marketing and communication materials.	6	Final / as-built drawings showing the priority spaces location and quantity. Final policy conformation, including car sharing scheme. If the end user is known - Car sharing group or policy evidence and marketing materials. Assessor site inspection report.	Architect BREEAM Assessor

					Option 6: During RIBA Stage 1, consult with the local authority to agree and implement improvements to the local cycling network and public accessible pedestrian routes.	4	Correspondance, meeting minutes or contractual agreements showing consultation with the local authority on cycling and pedestrian routes.	Design Team
					6	Final / as-built drawings of the improved local cycling network and public accessible pedestrian routes. Assessor site inspection report.	Architect BREEAM Assessor	
					Option 7: Install compliant cycle storage spaces.	5	Calculations used to determine the number of building users and cycle storage required.	BREEAM Assessor / AP
						6	Final / as-built drawings of the cycle storage installed. Assessor site inspection report.	Architect BREEAM Assessor
					Option 8: Provide 2 compliant cyclist facilities (showers / Changing Facilities / Lockers / Drying Spaces).	5	Calculations used to determine the number of building users and cyclist facilities required.	BREEAM Assessor / AP
						6	Final / as-built drawings of the location and layout of the cyclist facilities. Assessor site inspection report.	Architect BREEAM Assessor
					Option 9: At least 3 existing amenities are present.	6	Where amenities are under development still, evidence such as conformation on progress and timescale of the amenity being available. Updated and dated marked-up site plan or web-based navigation map viewer, highlighting the current location, type of amenity, distance, current route, and plan or map scale.	Developer BREEAM Assessor
					Option 10: Provide 1 or more new accessible amenity.	6	As above.	
					Option 11: Implement one site-specific improvement, not listed above.	5 & 6	Submitted proposal and conformation from BRE.	BREEAM Assessor / AP
Transport Totals:		12	4	0				
Water								
Wat 01	Water Consumption	5	4	0	Use the Wat 01 calculation to compare the water consumption (litres/person/day) for the assessed building against a baseline performance achieving at least a 40%	6	Schedule confirming the number, specification and water consumption of all water consuming components. Manufacturer literature confirming water consumption values. Technical details for blackwater, greywater or rainwater collection systems (if applicable). Final / as-built drawings showing the location of the sanitaryware fittings. Wat 01 calculator tool Assessor site inspection report	Mechanical Sub-Contractor BREEAM AP / Assessor
Wat 02	Water Monitoring	1	1	0	Specify a water meter on the mains water supply to each building. Main and sub meters should: a) Be a pulsed or other open protocol communication output AND b) Connect it to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption.	6	Final / as-built drawings / metering schematics showing the location of the internal and external water meter. Conformation of the meter installed (make and model). Calculations / justification relating to the selection of significant water demands. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor

Wat 03	Water Leak Detection	1	1	0	Install a leak detection system capable of detecting a major water leak on the utilities water supply within the buildings, to detect any major leaks within the buildings and between the buildings and the utilities water supply, to detect any major leaks between the utilities supply and the buildings under assessment. The leak detection system is: 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 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 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. d) Programmable to suit the owner's or occupier's water consumption criteria e) Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.	6	Final / as-built drawings showing the location and make of the leak detection system. Manufacturer product literature Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
	Flow Control Devices	1	0	0	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.	6	Final / as-built drawings showing the location of the flow control devices. Conformation of the make and model of the flow control devices. Manufacturer product literature Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
Wat 04	Water Efficient Equipment	0	0	0	Identify systems or processes to reduce the relevant water demand, and establish, through either good practice design or specification, a demonstrable reduction in the total water demand of the building eh. Drip line irrigation with moisture sensors.	4	Documentation detailing all water demands from uses other than domestic scale drinking and sanitary use components such as specifications, design drawings or schedules. Calculations and data sources used to demonstrate the estimates annual water consumption of systems and equipment. Manufacturer's product details for the system or equipment and for the specified product to show details of water consumption.	Mechanical Sub-Contractor

						6	Final calculations and data sources used to demonstrate the estimates annual water consumption of systems and equipment. Manufacturer's product details for the system or equipment and for the specified product to show details of water consumption. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
Water Totals:		8	6	0				
Materials								
Mat 01	Life Cycle Analysis	7	2	0	LCA carried out at RIBA Stage 2 and 4 with design options.	2	Options Appraisal Summary Document. Evidence the LCA options appraisal summary document has been received by the design team. Evidence of how the LCA design options have informed the design decision making process.	LCA Consultant / Design Team
						Mat 01/02 Results Submission Tool		BREEAM Assessor / AP
						4	Options Appraisal Summary Document. Evidence the LCA options appraisal summary document has been received by the design team. Evidence of how the LCA design options have informed the design decision making process.	LCA Consultant / Design Team
						Mat 01/02 Results Submission Tool		BREEAM Assessor / AP
Mat 02	Environmental Product Declarations	1	0	0	Specify construction products with EPD that achieve a total EPD points score of at least 20.	6	Schedule confirming materials or products which will have EPDs. Copies of EPD Certificates Proof of purchase of materials, e.g., delivery tickets / invoices / purchase orders / site photographs	Main Contractor
							The Mat 01/02 Results Submission Tool	
Mat 03	Timber	P	P		100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy	6	Signed and dated letter of commitment to meet the relevant criteria. FSC Certificates. Proof of purchase of materials, e.g., delivery tickets / invoices / purchase orders / site photographs	Main Contractor
	Sustainable Procurement Plan	1	1	0	A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products.	2	Sustainable Procurement Plan. Evidence of how the plan forms part of the construction contract. Letter confirming how the plan will be disseminated to all relevant internal and external personnel.	Client / Developer
						6	Evidence demonstrating the effective implementation of the SPP	Main Contractor
		Responsible Sourcing	3	0	0	Mat 03 calculator tool and methodology to determine the number of credits achieved for the construction products specified or procured.	6	Schedule confirming all materials within the project, those which will be responsbly sourced, and to what level Copies of the RSM certificates. Proof of purchase of materials, e.g., delivery tickets / invoices / purchase orders / site photographs
Mat 03 calculator tool.								BREEAM Assessor

Mat 05	Designing for Durability & Resilience	1	0	0	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. 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 the element or product achieving an appropriate quality or durability standard or design guide or a detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors.	4	Report confirming all environmental factors and material degratation effects considered relevant to the building and recommendations / measures to be put in place to limit these effects. Design drawings confirming the vulnerable areas or parts of the building & drawings to show where recommendations have been implemented into the design. Where relevant, manufacturer literature confirming the material degradation effect mitigated by the product. Roof and facade access strategy. Design drawings and specification showing measures to prevent water damage, ingress and ponding.	Architect
						6	Final / as-built drawings confirming the vulnerable areas or parts of the building & drawings to show where recommendations have been implemented into the design. Where relevant, manufacturer literature confirming the material degradation effect mitigated by the product. Roof and facade access strategy updated as required. Final / as-built drawings and specification showing measures to prevent water damage, ingress and ponding. Assessor site inspection report	Architect BREEAM Assessor
Mat 06	Material Efficiency	1	0	0	Record implementation of material efficiency against early design stage targets.	1	Report setting out a clear framework to guide material efficiency activities throughout the design and construction of the project.	Architect
						2	Minutes of workshops held / documentation showing how feedback from the workshop has been incorporated into the concept design.	Design Team / Architect
						3 & 4	Report on deviations from previous stages and additional actions to be taken. Documentation demonstrating the incorporation of the outcomes from RIBA stage 1, e.g., drawings.	Architect / Main Contractor
						5	Report on deviations from previous stage. Documented evidence of activity to identify efficiencies at this stage, e.g., meeting minutes, training events, waste reduction documentation.	Architect / Main Contractor
Material Totals:		14	3	0				
Waste								
Wst 01	Pre-demolition Audit	1	0	0	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.	2 & 3	Pre-Demolition Audit	Demolition Contractor
						5	Copy of the Pre-Demolition Audit updated to include actual waste results	Demolition Contractor
	Construction Resource Efficiency	3	2	0	RMP with target of ≤ 6.5 tonnes of waste created per 100 m².	6	Site Waste Management Plan including targets and actual construction waste produced and how this has been diverted from landfill, e.g., recycled / reused.	Main Contractor / Waste Contractor

	Diversion of Resources from Landfill	1	1	0	80% diversion from landfill.	6	Evidence of waste transfer station recycling rated. Demolition and construction waste data to be separated. Conformation of procedures in place for sorting construction waste into key waste groups. Waste contractor EA waste return forms or evidence to show they are a PAS 402:2013 compliant company.	
Wst 02	Recycled/Sustainably Sourced Aggregates	1	0	0	Identify all aggregate uses and types on the project, quantity and source location.	6	Post demolition waste records confirming aggregates reused on site. Schedule confirming the aggregate source, type, if they are recycled / secondary (if applicable), amount, distance travelled. Proof of purchase, such as invoices, purchase orders, delivery notes etc. Wst 02 calculator	Main Contractor BREEAM Assessor
Wst 03	Operational Waste	1	1	0	Provide a dedicated space for the segregation and storage of operational recyclable waste generated. Waste areas are to be labelled in line with KBCN1577	6	Final / as-built drawings showing facilities for the storage and segregation of recyclable waste, in addition to the general waste. Assessor site inspection report showing the facilities are adequately labelled	Architect BREEAM Assessor
Wst 04	Speculative Floor & Ceiling Finishes - Office Spaces Only	N/a	N/a	N/a				
Wst 05	Adaption to Climate Change	1	0	0	Conduct a climate change adaptation strategy appraisal and develop recommendations to mitigate impacts.	2	Climate change adaption strategy appraisal, including recommendations / solutions.	Architect
						6	Final / as-built drawings or documentation to show the specified mitigation measures have been implemented. Omissions must be justified in writing. Assessor site inspection report	Architect / BREEAM Assessor
Wst 06	Design for Disassembly and Adaptability Recommendations	1	0	0	Develop recommendations or solutions based on the study, during or prior to Stage 2, that aim to enable and facilitate disassembly and functional adaptation.	2	Disassembly and adaptability study.	Architect
						4	A copy of the design for disassembly and adaptability implementation plan report.	Architect
						6	Final / as-built drawings showing recommendations have been implemented.	Architect / BREEAM Assessor
	Design for Disassembly and Adaptability Implementation	1	0	0	Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	6	Disassembly and adaptability guide.	Architect
Waste Totals:		10	4	0				
Land Use & Ecology								
LE 01	Previously Occupied Land	1	0	0	At least 75% of the proposed development is on previously occupied land.	6	Final / as-built drawings, site photographs or report confirming the previous land use and identified percentage.	Architect

	Contaminated Land	1	0	0	A contaminated land professional undertakes a site investigation, risk assessment and appraisal, which deems that land within the development footprint to be affected by contamination	2 & 4	Contaminated land report, confirming the degree and type of contamination present and remediation strategy. Evidence to confirm the author meets the definition of a contaminated land professional. Site plans showing areas to be remediated. Summary details of the implementation plan for the remediation strategy.	Contaminated Land Professional
						6	Verification report / Records / Evidence to demonstrate the remediation strategy was implemented.	Main Contractor
LE 02	Risks & Opportunities	2	2	0	SQE carries out a survey and evaluation in RIBA Stage 1. The optimal ecological outcome for the site is agreed.	2	Conformation of all relevant legislation relating to the ecology of the site. Ecological survey / PEA Evidence the recommendations and outcomes of the survey have been shared with the design team. Evidence to verify how the report has been used to influence the project. Evidence to show liaison between the project team and relevant stakeholders has taken place - who was involved, when it took place and what was discussed. Evidence to confirm the optional outcomes of the site, e.g., specific targets and plans. Evidence to confirm what measures are agreed to achieve the optimal ecological outcome of the site. Conformation the ecologist meets the definition of an SQE. Completed GN34.	Ecologist Concept Stage Design Team
						6	Letter confirming all legislation has been complied with on site. Evidence to demonstrate all measures considered have been implemented (where relevant) and legislation has been adhered to. Updated GN32.	Ecologist Main Contractor
LE 03	Managing Impacts on Ecology	3	1	0	Negative impacts from site preparation and construction works have been managed according to the mitigation hierarchy, in line with the SQE's recommendations	2 & 3	Evidence of appropriate handover of optimal ecological outcome and measures to achieve it e.g. Tender documents incorporating ecological requirements. Evidence to demonstrate the mitigation measures and that they were identified prior to any site works (Le 02-04 Document). This should be based on inputs from the project team and appropriate consultants with representative stakeholders. Evidence from the ecologist to confirm that the mitigation hierarchy has been followed. Statement from the ecologist to confirm there will be no net loss of ecological value onsite as a result of the project. Completed GN34.	Design Team Ecologist

						5 & 6	Records of ecologist site visits Evidence to confirm habitats and ecological features where protected from damage during construction, where required (Le 02-04 Document). Ecologist post-completion conformation that there is no net loss of ecological value on site incurred from the construction and handover phases. Updated GN34.	Ecologist Main Contractor
LE 04	Ecological Change and Enhancement	4	1	0	Measures have been implemented that enhance ecological value, which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of the ‘Determining ecological outcomes’ in LE 02. Data collated are analysed and where potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site.	2	Confirmation of the ecological enhancement measures identified for the site, with justification from the SQE as to how they meaningfully enhance the sites ecology. Confirmation that the data collated has been provided to the local environmental records centre or commitment to do this. BREEAM Calculator Tool / Defra Metric Tool and evidence to support the data inputted to the tools. Completed GN34.	Ecologist & Main Contractor
						6	Evidence to demonstrate all measures considered have been implemented (where relevant) and legislation has been adhered to. Planting schedules / final or as-built landscape drawings. Updated LE 04 / DEFRA Calculations & GN32. Assessor site inspection report	Main Contractor Landscape Architect Ecologist BREEAM Assessor
LE 05	Long Term Ecology Management	2	1	0	A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. A Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS42020:2013 Section 11.1 covering at least the first five years after project completion.	6	Evidence to demonstrate measures to manage and maintain ecology throughout the project have been carried out. Evidence of collaboration between stakeholders regarding ecology. Final ecology and biodiversity handover information, in line with KBCN1373. Evidence this information has been issued to the building owner or tenant. Final LEMP .	Ecologist Main Contractor
Land Use and Ecology Totals:		13	5	0				
Pollution								
Pol 01	Impact of Refrigerants	2	1	0	Systems using refrigerants have a DELC of ≤ 1000 kgCO ₂ -eq/kW cooling and heating capacity.	6	Final / as-built drawings of the refrigerant system installed. Conformation of the make, model and refrigerant charge installed. Manufacturers literature. Pol 01 calculator tool. Assessor site inspection report	Mechanical Sub-Contractor BREEAM AP / Assessor
	Leak Detection & Containment	1	0	0	Refrigerant specification showing leak detection	6	As above.	Mechanical Sub-Contractor

Pol 02	Local Air Quality	2	2	0	All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity.	6	Final / as-built drawings of the electric domestic hot water and heating systems. Letter identifying all heat-generating equipment for space heating and domestic hot water installed. Product literature of these systems. Assessor site inspection report	Mechanical Sub-Contractor BREEAM Assessor
Pol 03	Flood Resilience	2	2	0	Flood Zone Conformation	4	Appointment of an appropriate consultant and confirmation they are qualified in line with the definition. Flood Risk Assessment. Medium to high flood risk: Evidence to show measures to increase resilience and resistance of the development to flooding: a) Confirmation of the design flood level and design drawings to show ground level of the building and access to the site and buildings and to be at least 600mm above this. OR b) Report or correspondence from an appropriately qualified professional which includes recommendations for the design of the building and site. Evidence to confirm these are to be implemented such as design drawings, contract clauses or commitment letter.	Civil Engineer
						6	Final / as-built draiange and SuDS drawings. Conformation it does not need updating. If the site is in medium or high flood risk zone: - Evidence to show measures to increase resillience and resistance of the development to flooding have been implemented. - OR Conformation of the design flood level & final / as-built drawings showing the building and access to the site is at least 600mm above the flood level.	Civil Engineer
	Rate of Surface Water Run-Off	1	0	0	Rate of surface water run off	6	Final / as-built drainage and SuDS drawings. BRE GN38 completed + associated calculation sheets. Final / as-built drawings to show the pre- and post-development permeable areas. Evidence to confirm maintenance responsibilities have been defined for SuDS solutions installed.	Civil Engineer
	Volume of Surface Water Run-Off	1	0	0	Volume of surface water run off	6	As above, plus: Information showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels, with final / as-built status.	Civil Engineer
	Minimising Watercourse Pollution	1	0	0	There is no discharge from the developed site for rainfall up to 5 mm, SuDs, pollution prevention treatment	4	Calculations and confirmation from the appropriate consultant to demonstrate that there will be no discharge from the site for rainfall up to 5mm or compliance with KBCN1059.	Civil Engineer

						6	Letter confirming the solutions proposed at the design stage have been implemented. Final / as-built drainage plan. Final / as-built drawings or statement indicating high and low risk areas of the site, source control systems, oil or petrol separators and shut off valves as appropriate, water pollution prevention systems are designed and installed with best practice guidance. Evidence to confirm maintenance responsibilities have been defined for any SuDS solutions installed. Conformation from the appropriate consultant as to how the external storage and delivery areas are in line with best practice planning guidance. Letter confirming a comprehensive drainage plan is or will be made available for the building occupiers and relevant agreements for maintenance are or will be in place. Assessor site inspection report.	Civil Engineer <
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