BP FINCHLEY ROAD

BREEAM PRE-ASSESSMENT

ISSUE AND REVISION RECORD

Revision	Date	Originator	Checked	Approved	Description
00	19/07/22	FH	JALW	JALW	Issued for Review
01	12/08/22	FH	JALW	JALW	Issued for Planning

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BREEAM PRE-ASSESSMENT

This report has been produced by WME to support the planning application for the proposed development at 104A Finchley Road.

The proposals are for the Demolition of existing petrol filling station and associated convenience store (sui generis), and erection of a six-storey building comprising ground floor commercial space (Class E) and flexible commercial/educational space (Class E/F1), and 31 x residential apartments above.

It is a requirement of Camden Local Plan 2017, *Policy CC2 Adapting to climate change* for non-domestic developments of 500m2 or above to achieve BREEAM Excellent (>/= 70%). The Camden Planning Guidance 'Energy Efficiency and Adaptation' also asks for minimum credit requirements under Energy (60%), Materials (40%) and Water (60%).

There are 2no. non-domestic spaces at 104A Finchley Road, namely commercial and education. These have 2 clear primary functions and therefore 2no. BREEAM assessments will be required. The commercial space is to be assessed under the BREEAM 2018 New Construction: Commercial Scheme, whilst the school use space will be assessed under BREEAM 2018 New Construction: Education Scheme. will be assessed as Shell & Core only.

The BREEAM framework for the non-domestic spaces have been streamlined and presented together in the appendix. It should be noted that some of the specific credit requirements will be different for each of the spaces eg. Acoustic Requirements, Ventilation requirements etc. These have been considered within the framework and the credits targeted.

At the next stage of the design, 2no. assessments will be registered with the BRE and in due course, 2no. BREEAM certificates shall be obtained for the non-domestic spaces.

BREEAM 2018 New Construction

The BREEAM UK New Construction scheme is a performance-based assessment method and certification scheme for new buildings. The primary aim is to mitigate the life cycle impacts of new buildings on the environment in a robust and cost effective manner. This is achieved through integration and use of the scheme by clients and their project teams at key stages in the design and construction process.

The overall performance of the building is quantified by a number of individual measures and associated criteria stretching across a range of environmental issues, which is ultimately expressed as a single certified BREEAM rating.

As a shell and core assessment, the most highly weighted environmental sections are Materials (17.5%), Land Use and Ecology (15%) and Energy (14%). With this in mind, it is imperative that we endeavour to maximise the score in these sections.

A BREEAM pre-assessment framework has been undertaken in coordination with the appointed design team.

The route to achieving BREEAM Excellent on the commercial space and the education space has been set out in the preassessment with the prerequisite credits and score of 70% identified as obtainable. This was determined by establishing a 'base case', and then building up on issues where it was felt the greatest value was being provided to the occupants and area.

As the scope is Shell & Core only, we have taken a conservative approach and identified a route to achieving BREEAM Excellent (71.76%) targeting credits which are considered achievable, based on what reasonable expectations can made of the design and construction teams, without incurring extensive costs.

We have also identified a number of credits (circa. Additional 6%) which are considered 'stretch' targets. These are considered achievable with additional effort and funding beyond that required to obtain those identified within the base case.

We strongly recommend that a 5% buffer is allowed for to help reduce the risk associated with achieving the required BREEAM rating. It is not uncommon for credits to be dropped as a result of design changes and/or value engineering exercises later in the work stages. Therefore, it is advised that some of these 'stretch' targets are explored post planning and incorporated into the base framework.

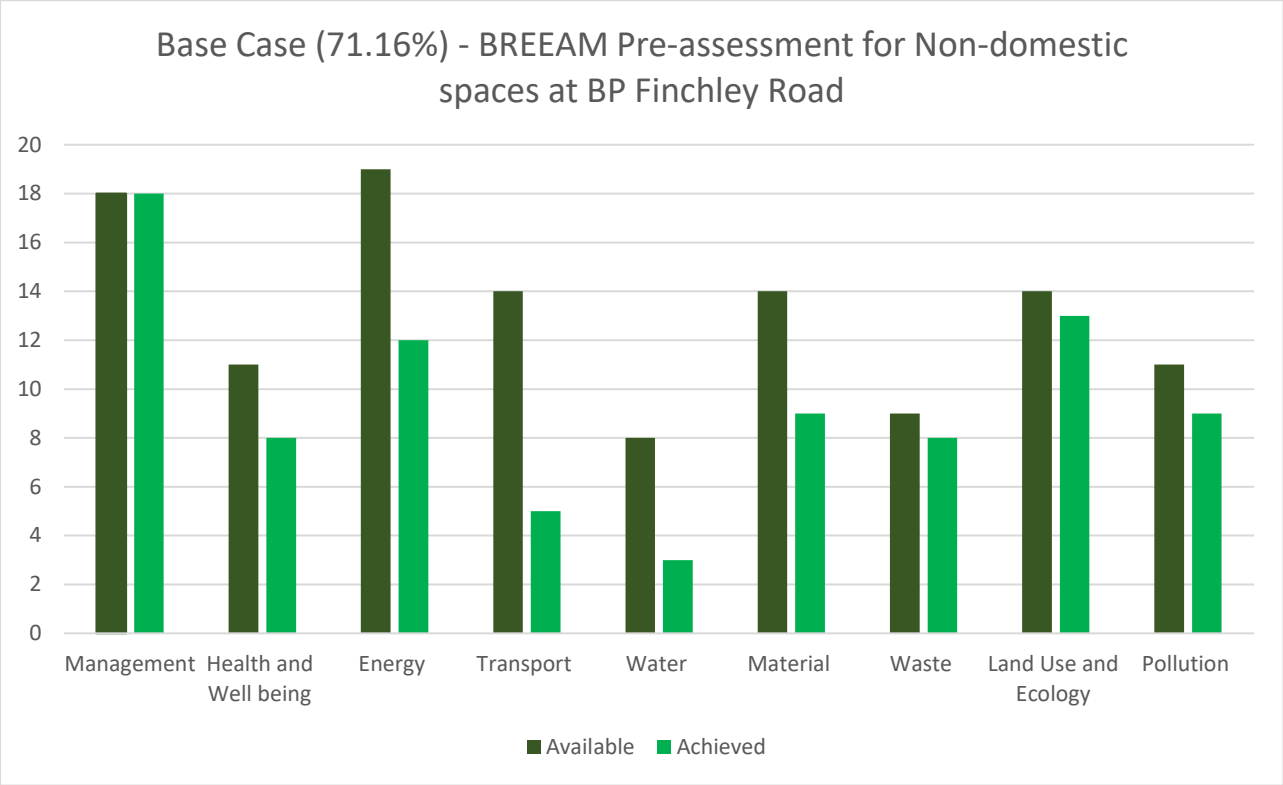
There is also the potential to pick up Innovation credits through exemplary performance and/or Innovation within the project. Whilst no innovation credits have been included within the Base case, we feel that there is potential to explore these at the next stage.

In line with Camden Planning Guidance, 'Energy Efficiency and Adaption' the proposed BREEAM framework meets minimum performance requirements in Energy (60%) and Materials (40%).

Our performance in the Water section is below the minimum requirement, as this is a shell and core assessment only. The layouts are indicative for the non-residential space only and will not be fitted as such. Therefore, in line with BREEAM guidance, we must adapt default performance figures for Wat 01: Water Consumption which limits the overall performance in the Water Section. The team are fully committed to fitting a water meter and a leak detection system on the development.

This BREEAM framework should be used as a sustainability performance indicator for the development going forward and it is imperative that it is updated in line with key design changes.

The framework contained within the Appendix gives additional detail on credits targeted and credit requirements.



Environmental Section	Available	Achieved	% Achieved	Section weighting	Indicative score
Management	18	18	1.00	11.00	11.00
Health and Well being	11	8	0.73	8.00	5.82
Energy	19	12	0.63	14.00	8.84
Transport	14	5	0.36	11.50	4.11
Water	8	3	0.38	7.00	2.63
Material	14	9	0.64	17.50	11.25
Waste	9	8	0.89	7.00	6.22
Land Use and Ecology	14	13	0.93	15.00	13.93
Pollution	11	9	0.82	9.00	7.36
					71.16

APPENDIX

Scheme	BREEAM 2018 New Construction: Commerical & Education
Job	BP Finchley Road

Rev 00: For Planning Issue

BREEAM Very Good ≥ 55%

BREEAM Excellent ≥ 70%

BREEAM Outstanding ≥ 85%

BASE CASE	STRETCH TARGETS
Target	Target
Excellent	Excellent
71.16	77.81

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Management								
Man 1	Project Brief and Design	Man 1.1	Stakeholder Consultation (Project Directory)	1	1	1	1. 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. 2. In defining the roles and responsibilities for each key phase of the project, the following must be considered: a. End user requirements b. Aims of the design and design strategy c. Particular installation and construction requirements/limitations d. Occupiers' budget and technical expertise in maintaining any proposed systems e. Maintainability and adaptability of the proposals f. Requirements for the production of project and end user documentation g. Requirements for commissioning, training and aftercare support. The sustainability Champion roles are above and beyond that of the BREEAM asessor. WME are accrediated professionals and could undertake this role, but at an additional cost.	Project Manager
		Man1.2:	Stakeholder Consultation (third Party)	1	1	1		
		Man1.3:	Sustainability Champion (design)	1	1	1		
		Man1.4:	Sustainability Champion (Construction)	1	1	1		

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Man 2	**Life Cycle Cost and Service Planning**	**Man 2.1**	**Elemental Life Cycle Cost (LCC)**	2	2	2	There is a oommitment to undertake a component life cycle cost analysis in line with PD 1568665:2008 will be undertaken at RIBA Stage 4 The client will report the capital cost in £/sqm of the development within the formal BREEAM assessment.	Client
		Man2.2	**Component Level LCC Plan**	1	1	1		
		Man2.3	**Capital Cost Reporting**	1	1	1		
Man 3	**Responsible Constructions Practices**	**Preq.**	**All timber legally sourced**		YES	YES		
		Man 3.1	**Environmental Management Plan**	1	1	1	- The principal contractor operates an environmental management system (EMS) covering their main operations.	
		Man 3.2	**Constructions Site sustainability Champion**	1	1	1	- 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: PPG61.	
		Man 3.3	**Considerate Constructions**	2	2	2	- A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria	
		Preq.	**Monitoring of Constructions Site Impact (Criterion 7)**		YES	YES	- the contractor significantly exceeds 'compliance' with the CCS	Contractor
		Man 3.5	**Utility Consumption (water and energy)**	1	1	1	- Monitor and record data on principal constructor's and subcontractors' energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation.	
		Man 3.6	**Transport of Construction materials and Waste**	1	1	1	- . Monitor and record data on principal constructor's and subcontractors' potable water consumption (m3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation.	
Man 4	**Commissioning and testing schedule and responsibilities**	**Man 4.1**	**Commissioning and testing schedule and responsibilities**	1	1	1	• Undertaken pre-commissioning, commissioning, and re-commissioning in accordance with BSRIA / CIBSE Guidance; and • Appoint a specialist commissioning manager to provide input, design reviews, advice, management, testing etc.	
	Commissioning building services	**Man 4.2**	**Commissioning building services**	1	1	1	Thermographic study is required as part of Building Fabric Inspection, this is the responsibility of the appointed contractor. Any issues identified by the thermographic study will have to be recitified, to achieve the credit.	
	Commissioning	**Man 4.3**	**Building Fabric Inspection**	1	1	1		Contractor

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
	Handover	**Man 4.4**	**Handover**	1	1	1	A Building User Guide (BUG) is developed prior to handover, for distribution to the building occupiers and premises managers	
Man 05	**Aftercare**	**Man 5.1**	**Aftercare Support**	0	0	0	Not assessed, as shell and core.	Client
		Man 5. 2	**Seasonal Commissioning**	0	0	0		
		Man 5. 3	**Post Occupancy Evaluation**	0	0	0		

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Health and Well being								
Hea 1	**Visual Cofort**	**Hea 1.1**	**Control of Glare from Sunlight**	0	0	0	Not assessed, as shell and core.	Architect
		Hea 1.2	**Day lighting (Building Type dependent)**	0	0	0	Not assessed, as shell and core.	
		Hea 1.3	**View Out**	1	0	0	View out credit is applicable to areas with workstations only. Credit conservatively withheld at present.	
		Hea 1. 4	**Internal and External lighting**	1	1	1	All external lighting located within the construction zone is designed to provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night. • Fluorescent and compact fluorescent lighting to be fitted with high frequency ballasts; • External lighting to comply with BS 5489-1:2013 & BS EN 12464-2:2014; • Internal lighting to comply with SLL Code for Lighting 2012 & areas with computers SLL Lighting Guide 7; and • All rooms to have occupant controlled lighting and be zoned in accordance with BREEAM standards.	Architect / Building Services Engineer

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Hea 2	**Indoor Air Quality**	**Preq.**	**Indoor Air Quality Plan**	YES	YES	YES	There is a commitment to produce an Indoor Air Quality Plan	Building Services Engineer
		Hea 2.2	**Ventilation**	1	1	1	2.a: Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation 2.b: Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building (see Methodology) 2.c: Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779:2007 Annex A31. The specified filters should achieve a minimum Indoor Air Quality of IDA2 2.d: Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO_2) or air quality sensors specified and: 2.d.i In mechanically ventilated buildings or spaces: sensors are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space 2.d.ii In naturally ventilated buildings or spaces: sensors either have the ability to alert the building owner or manager when CO_2 levels exceed the recommended set point, or are linked to controls with the ability to adjust the quantity of fresh air, i.e. automatic opening windows or roof vents 2.e: For naturally ventilated or mixed mode buildings, the design demonstrates that the ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates in accordance with CIBSE AM102.	Architect / Building Services Engineer
		Hea 2.3	**Emissions from construction products**	0	0	0	Not assessed, as shell and core.	
		Hea 2.4	**Post-construction indoor air quality measurement**	0	0	0	Not assessed, as shell and core.	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Hea 4	**Thermal Comfort**	**Hea 4.1**	**Thermal Modeling**	1	0	1	• Air conditioned areas will be able to achieve operative temperatures in accordance with CIBSE Guide A. • Uncooled occupied areas will be able to achieve operative temperatures in accordance with CIBSE Guide A and CIBSE TM52. • Produce a Temperature Control Strategy in guide heating and cooling design. NOTE: Thermal comfort modelling has not yet been undertaken for the commerical space.	Specialist
		Hea 4.2	**Design for Future thermal comforting**	1	0	1		
		Hea 4.3	**Thermal Zoning and controls**	0	0	0		
Hea 5	**Acoustic Performance**	**Hea 5.1**	**Acoustic Performance Requirements**	3	3	3	It is assumed that the building will meet the appropriate acoustic performance standards and testing requirements in relation to; 1.a: Sound insulation 1.b: Indoor ambient noise level 1.c: Room acoustics.	Specialist
Hea 6	**Security**	**Hea 6.1**	**Security and site and Building**	1	1	1	It has been assumed that the development will either achieve Secured by Design certification or have a Designing Out Crime Officer (DOCO) produce a Security Needs Assessment (SNA) and incorporate all of the recommendations. Architect has already been in contact with Designing Out Crime Officer in Camden.	Client / Architect
Hea 7	**Safe and Healthy surroundings**	**Hea 7. 1**	**Safe Access**	1	1	1	It has been assumed that there will be effective measures that promote safe and secure use and access to and from the building.	Architect
		Hea 7.2	**Outside Space**	1	1	1	If the assessed building does not have any external areas and access to the building is direct from the public highway or footpath, then the criteria concerning safe access are not applicable and the credit can be awarded by default	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Energy								
Ene 1	**Reduction of Energy use and CO2**	**Ene 1.1**	**Reduction of Energy use**	9	9	9	Total number of credits achieved to be determined with detailed design SBEM modelling. The joint SBEM model indicates a total of 9/9 credits.	Specialist
	Prediction of Operational Energy Use	**Ene 1.2**	**Prediction of Operational Energy Use**	4	0	4	Undertake additional energy modelling during the design and post-construction stage to generate predicted operational energy consumption figures. Credit is currently not targeted, but to be considered as a stretch target in order to increase the buffer for the required Excellent. Credit entails adapting the energy model to relfect actual operation and to account for future climate change. Credit would incur additional cost.	Specialist
Ene 2	**Energy Monitoring**	**Ene 2.1**	**Sub-metering of major energy consuming systems**	1	1	1	It has been assumed that there will be 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. 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.	Building Services Engineer
		Ene 2.2	**Sub-metering of high energy load and tenancy areas**	1	1	1		
Ene 3	**External Lighting**	**Ene 3.1**	**External lighting Specification**	1	1	1	It has been assumed that the following will be included within the Building Services Specification; • The average initial luminous efficacy of external fittings is not less than 60 lumens per circuit watt; and • All external lighting in areas of intermittent pedestrian traffic to have either an automatic time switch or daylight sensors, as well as presence detectors.	Building Services Engineer
Ene 4	**Low Carbon Design**	**Ene 4.1**	**Passive Design Analysis**	1	0	1	This is considered a stretch target as It requires detailed modelling and would incur an additional fee	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
		Ene 4.2	**Free Cooling**	1	0	0		Specialist
		Ene 4.3	**Low and zero carbon technologies**	1	0	1		
Ene 6	**Energy Efficient Transportation System**	**Ene 6.1**	**Energy consumption**	0	0	0	Lift is part of the residential scheme only.	Specialist
		Ene 6.2	**Energy efficient features**	0	0	0		
Ene 08	**Energy Efficient Equipment**	**Ene 8.**	**Energy Efficient Equipment**	0	0	0	Not assessed, as shell and core.	Architect

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Transport								
Tra 1	**Transport assessment and Travel Plan**	**Tra 1.1**	**Transport assessment and Travel Plan**	2	2	2	There is a commitment to produce a Travel Plan in line with BREEAM requirements.	Travel Consultant
Tra 2	**Sustainable Transport Measures**	**Preq.**	**Travel Plan**	0	YES	YES	PREREQUISTE A BREEAM complaint Travel plan is produced. Ie. Tra 1 is achieved.	
		Tra 2.1	**Close proximity and accessibility**	10	3	3	There is a commitment to provide public, private and active sustainable trasnport measures; 1. Provide a public transport information system in public area (1 point) 2. Provide electric recharging stations of a minimum of 3kw for at least 10% of the total car parking capacity for the development. (1 point) 3. Set up a car sharing group or facility to facilitate and encourage building users to car share. (1 point) 4. Raise awareness of the sharing scheme with marketing and communication materials. Provide priority spaces for car sharers for at least 5% of the total car parking capacity for the development. Locate priority parking spaces nearest the development entrance used by the sharing scheme participants. (1 point if you complete all 3 of point no.4) 5. Install compliant cycle racks (1 point) 6. Install compliant cycle facilities (1 point) 7. Provide accessible ammenities (2 points)	Travel Consultant

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Water								
Wat 1	**Water Consumption**	**Wat 1.1**	**Water Consumption**	5	1	1	There is a commitment to achieve a minimum of 25% improvement over the BREEAM baseline. This requires as a minimum: - WC = 6L effective flush - WHB = 10L/min - Showers = 8L/min - Baths = 160L - Kitchen Tap = 7L/min (Restaurant = 8.3L/min) There is some flexbility with the above, but MUST be verified in Wat 01 Calculator.	Architect / Building Services
Wat 2	**Water Monitoring**	**Wat 2.1**	**Water Meter on Mains supply**	1	1	1	1. The specification of a water meter on the mains water supply to each building 2. Each meter (main and sub) has a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system Credit requirements and minimum credits targeted to be included within the Green Fit Out Agreement.	Building Services Engineer
Wat 3	**Major Leak Detection**	**Wat 3.1**	**Leak Detection on buildings water mains**	1	1	1	1. A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed. The leak detection system must be: a. A permanent automated water leak detection system that alerts the building occupants to the leak 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 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.	Building Services Engineer
		Wat 3.2	**Flow Control Devices**	1	0	0	Shell and Core only. The S&C scope doesn't align with that of BREEAM. There is a commitment to 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.	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Wat 4	**Water efficient Equipment**	**Wat 4.1**	**Water Efficient Equipment**	0	0	0	Not assessed, as shell and core.	Building Services
Material								
Mat 1	**Environmental impacts from construction products - Building life cycle assessment (LCA)**	**Mat 1.1**	**Material Specification of Superstructure**	6	5	5	It is anticapated that 3 out of 6 credits are achieved for the superstructure which takes into consideration the following; External Walls, Windows, Roof, Upper floor slab, floor finishes. Mat 01 calculator is to be completed at the next stage of the design. More credit might be possible when credit is investigated in more detail at the next stage of design.	Architect/Contractor
Mat 2	**Environmental impacts from construction products – Environmental Product Declarations (EPD)**	**Mat 2.1**	**Environmental impacts from construction products – Environmental Product Declarations (EPD)**	1	1	1	To encourage availability of robust and comparable data on the impacts of construction products through the provision of EPD. 1 Specify construction products with EPD that achieve a total EPD points score of at least 20, according to the Methodology below. 2 Enter the details of each EPD into the Mat 01/02 Results Submission Tool, including the material category classification. The Mat 01/02 Results Submission Tool will verify the EPD points score and credit award	Architect/Contractor
Mat 3	**Responsible Sourcing**	**Preq.**	**All timber legally sourced**		YES	YES	1. The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan 2. All building materials are responsibly sourced in accordance with the BREEAM methodology, Whilst this credit will be passed directly on to the contractor, the paper work is arduous to collate. Cedit conservatively withheld at present.	Contractor
		Mat 3.1	**Documented sustainable Procurement plan**	1	1	1	This credit is extremely difficult to achieve.. WHilst we will pass the responsibility on to the contractor, it should not be included within the base case.	
		Mat 3.2	**% of available sourcing of materials points achieved**	3	0	0		

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Mat 5	**Designing for Durability and resilience**	**Mat 5.1**	**Protecting Vulnerable Parts of building from damage**	1	1	1	The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping elements. This must include, but is not necessarily limited to: Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas.	Architect/Contractor
		Mat 5.2	**Protecting exposed parts of the building from material degradation**					
Mat 6	**Material Efficiency**	**Mat 6.1**	**Material Optimization measures investigated and implemented at relevant stages**	1	1	1	Material Optimization has been considered with the selection of materials to date, however a specific study has not been complated. A specific study is to be appointed post planning with the intention to avoid unnecessary materials use arising from over specification without compromising structural stability, durability or the service life of the building.	Client / Contractor

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Waste								
Was 1	**Construction Waste Management**	**Was 1.1**	**Pre-demolition Audit**	1	1	1	Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. This has been completed.	Contractor
		Was 1.1	**Construction Waste Management Plan**	3	2	3	Where a Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction). 2. Where construction waste related to on-site construction and dedicated off-site manufacture/fabrication (excluding demolition and excavation waste) meets or is lower than 7.5m3 per 100m2	
		Was 1.2	**Diversion of resources from landfill**	1	1	1	The following percentages of non-hazardous construction (on-site and off-site manufacture/fabrication in a dedicated facility), demolition and excavation waste (where applicable) generated by the project have been diverted from landfill: 70% by volume - NON DEMOLITION, 80% by volume DEMOLITION,	
Was 2	**Use of recycled and sustainably sourced aggregates**	**Preq.**	**Demolition Audit**	**YES**	**YES**	**YES**	Where demolition occurs on site, to encourage the reuse of site-won material on site, complete a pre-demolition audit of any existing buildings, structures or hard surfaces in accordance with Wst 01 Construction waste management: Criterion 1 and Wst 01 Construction waste management: Criterion 2 .	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
		Was 2.1	**Recycled Aggregate**	1	1	1	1. The percentage of high grade aggregate that is recycled or secondary aggregate, specified in each application (present) must meet the following minimum % levels (by weight or volume) to contribute to the total amount of recycled or secondary aggregate, as specified in . ***BOUND*** Structural Frame 15% Bitumen or hydraulically bound base, binder, and surface courses for paved areas and roads - 30% Building Foundations - 20% Concrete road surfaces - 15% ***UNBOUND*** Pipe bedding - 100% Granular Fill - 100% To be included within the Contractors Tender Package.	Contractor
Was 3	**Operational Waste**	**Was 3.1**	**Segregation and Storage of operational waste**	1	1	1	1. Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be: a. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams b. Accessible to building occupants or facilities operators for the deposit of materials and collections by wastevmanagement 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.	Architect / Contractor
Was 5	**Adaption to Climate Change**	**Was 5.1**	**Adaption to climate change - structural and fabric resilience**	1	1	1	Adaption to climate change, with consideration to the structural and fabric resilence has been considered with the selection of materials, however a specific report has not yet been commissioned. Production of a BREEAM compliant report would incur additional fee and should be initiated Post Planning.	Client / Contractor
Was 5	**Functional Adaptability**	**Was 6.1**	**Functional Adaptability**	1	1	1	Functional Adaptability has been considered throughout the selection of materials, however a specific report has not yet been commissioned. Production of a BREEAM compliant report would incur additional fee and should be initiated Post Planning.	Client / Contractor

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Land Use and Ecology								
Le 1	Site Selection	Le 1.1	Previously Occupied Land	1	1	1	1. At least 75% of the proposed development's footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.	Client / Architect
		le 1.2	Contaminated Land	1	0	0	Geotechnical report concludes that there is no significant contamination on the site.	
Le 2	Identifying and understanding the risks and opportunities for the project	Preq.	Land of low ecological Value	0	YES	YES	The client or contractor confirms compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.	Specialist
		Le 2.1	Land of low ecological Value	1	1	1	An appropriate individual is appointed at a project stage that ensures early involvement in site configuration and, where necessary, can influence strategic planning decisions.	
		Le2.2	Protection of Ecological Value	1	1	1	.a: Current and potential ecological value and condition of the site, and related areas within the zone of influence. .b: Direct and indirect risks to current ecological value .c: Capacity and feasibility for enhancement of the ecological value of the site and, where relevant, areas within the zone of influence. Data are collated and shared with project team to inform the site preparation, design or construction works. It has been assumed that an appropriately qualified ecologist will be appointed at the relevant stage of design.	
Le 3	Managing negative impacts on ecology	Preq.	Identification and understanding the risks and opportunities for the site	1	1	1	1 LE 02 has been achieved. 2 The client or contractor has confirmed that compliance is monitored against all relevant UK, and EU or International legislation relating to the ecology of the site	
		Le 3.1	Planning, liaison, implementation and data	1	1	1	3 Roles and responsibilities have been clearly defined, allocated and implemented to support successful delivery of project outcomes at an early enough stage to influence the concept design or design brief.	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
		Le 3. 2	**Managing negative impacts of the project**	2	2	2	Route 1 (one credit) 6 Negative impacts from site preparation and construction works have been managed according to the hierarchy (see Methodology) and no net impact has resulted. Route 2 (up to two credits) 7 Negative impacts from site preparation and construction works have been managed according to the hierarchy (see Assessment route 2: For sites where complex ecological systems are likely to be present) and either: 7.a: No overall loss of ecological value has occurred (2 credits) OR 7.b: The loss of ecological value has been limited as far as possible (1 credit) It has been assumed that an appropriately qualified ecologist will be appointed at the relevant stage of design.	Specialist

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Le 4	**Change and enhancement of ecological value**	**Preq.**	**Identification and understanding the risks and opportunities for the site**	0	YES	YES	Le 03 has been achieved.	Specialist
			Liaison, implementation and data collation	1	1	1	5 The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented the solutions and measures selected in a way that enhances ecological value in the following order: 5.a: On site, and where this is not feasible, 5.b: Off site within the zone of influence.	
			Enhancement of Ecology	3	3	3	Credits are awarded on a scale of 1 to 3, based on the calculation of the change in ecological value occurring as a result of the project.	
Le 5	**Long term ecology management and maintenance**	**Preq.**	**Identification and understanding the risks and opportunities for the site**	0	YES	YES	Le04 has been achieved.	Specialist
			Planning, liaison, data, monitoring and review management and maintenance	1	1	1	3 The project team liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, on solutions and measures implemented to: 3.a: monitor and review implementation and the effectiveness 3.b: develop and review management and maintenance solutions, actions or measures. 4 In support of the above and to help ensure their continued relevance over the period of the project the following should be considered: 4.a: Monitoring and reporting of on the ecological outcomes for site implemented at the design and construction stage 4.b: Monitoring and reporting of outcomes and successes from the project 4.c: Arrangements for the ongoing management of landscape and habitat connected to the project (on and, where relevant, off site) 4.d: Maintaining the ecological value of the site and its relationship or connection to its zone of influence 4.e: Maintaining the site in line with the any sustainability linked activities, e.g. ecosystems benefits (LE 02). 4.f: Remedial or other management actions are carried out which relate to those identified in LE 02, LE 03 and LE 04.	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
			landscape and Habitat management Plan	1	1	1	6 Landscape and ecology management plan, or similar, is developed in accordance with BS 42020:20131 covering as a minimum the first five years after project completion and includes: 6.a: Actions and responsibilities, prior to handover, to give to relevant individuals 6.b: The ecological value and condition of the site over the development life. 6.c: Identification of opportunities for ongoing alignment with activities external to the development project and which supports the aims of BREEAM's Strategic Ecology Framework 6.d: Identification and guidance s to trigger appropriate remedial actions to address previously unforeseen impacts 6.e: Clearly defined and allocated roles and responsibilities. 7 The landscape and management plan or similar is updated as appropriate to support maintenance of the ecological value of the site.	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
Pollution								
Pol 1	**Impact of refriegrants**	**Preq.**	**Refrigeration systems BS**	0	YES	YES	All systems with electric compressors comply with the requirements of BS EN 378:20161 (parts 2 and 3).	Building Services Engineer
		Pol 1.1	**Impact of refrigerant**	2	0	0	All refrigerants used have a global warming potential (GWP) ≤ 10. Credit conservatively withheld at present.	
		Pol 1.2	**Leak Detection**	1	1	1	A permanent automated refrigerant leak detection system, that is robust and tested, and capable of continuously monitoring for leaks. Credit is considered a stretch target as it is adds cost . To be further investigated at the next stage of design.	
Pol 2	**Local Air Qualtiy**	**Pol 2.1**	**Local Air Qualtiy**	2	2	2	1 All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity. OR alternatively; 2 Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in BREEAM manual. (gas boiler in high pollution area = 24(mg/kWh)	Building Services Engineer
Pol 3	**Surface Water Run off**	**Preq.**	**Appropriate Consultant appointed**	0	YES	YES	A consultant with qualifications and experience relevant to designing SuDS and flood prevention measures and completing peak rate of run-off calculations. Where complex flooding calculations and prevention measures are required, this must be a specialist hydrological engineer.	
		Pol 3.1	**Low probability of flooding**	2	2	2	**Two credits - Low flood risk** 1. Where a site-specific flood risk assessment (FRA) confirms the development is situated in a flood zone that is defined as having a low annual probability of flooding (in accordance with current best practice national planning guidance). The FRA must take all current and future sources of flooding into consideration **One credit**	

Credit Ref.	Credit Title	Evid. Ref.	Evidence Description	Credits available	BASE CASE	STRETCH TARGETS	Credit requirements	Responsibility
		Pol 3.2	**Surface Water Run off - peak rate**	1	1	1	**One credit** 5. Where drainage measures are specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events. **One credit** 8. Where flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND 9. Drainage design measures are specified to ensure that the post development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development for the 100-year 6-hour event, including an allowance for climate change **One Credit** There is no discharge from the developed site for rainfall up to 5mm (confirmed by the Appropriate Consultant). 16. In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques.	Drainage Specialist
		Pol 3.3	**Surface Water Run off - volume, attenuation and discharge**	1	1	1		
		Pol 3.4	**Minimizing Watercourse Pollution**	1	1	1		
Pol 4	**Reduction of Night time light pollution**	**Pol 4.1**	**External Lighting Specification**	1	1	1	1. The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 20111. 2. The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Guidance notes for the reduction of obtrusive light, 20113. 3. All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. 4. If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes. 5. Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements4.	Building Services Engineer