

124 Theobalds Road

BREEAM Refurbishment & Fit Out 2014

Design Stage Assessment

Inhabit

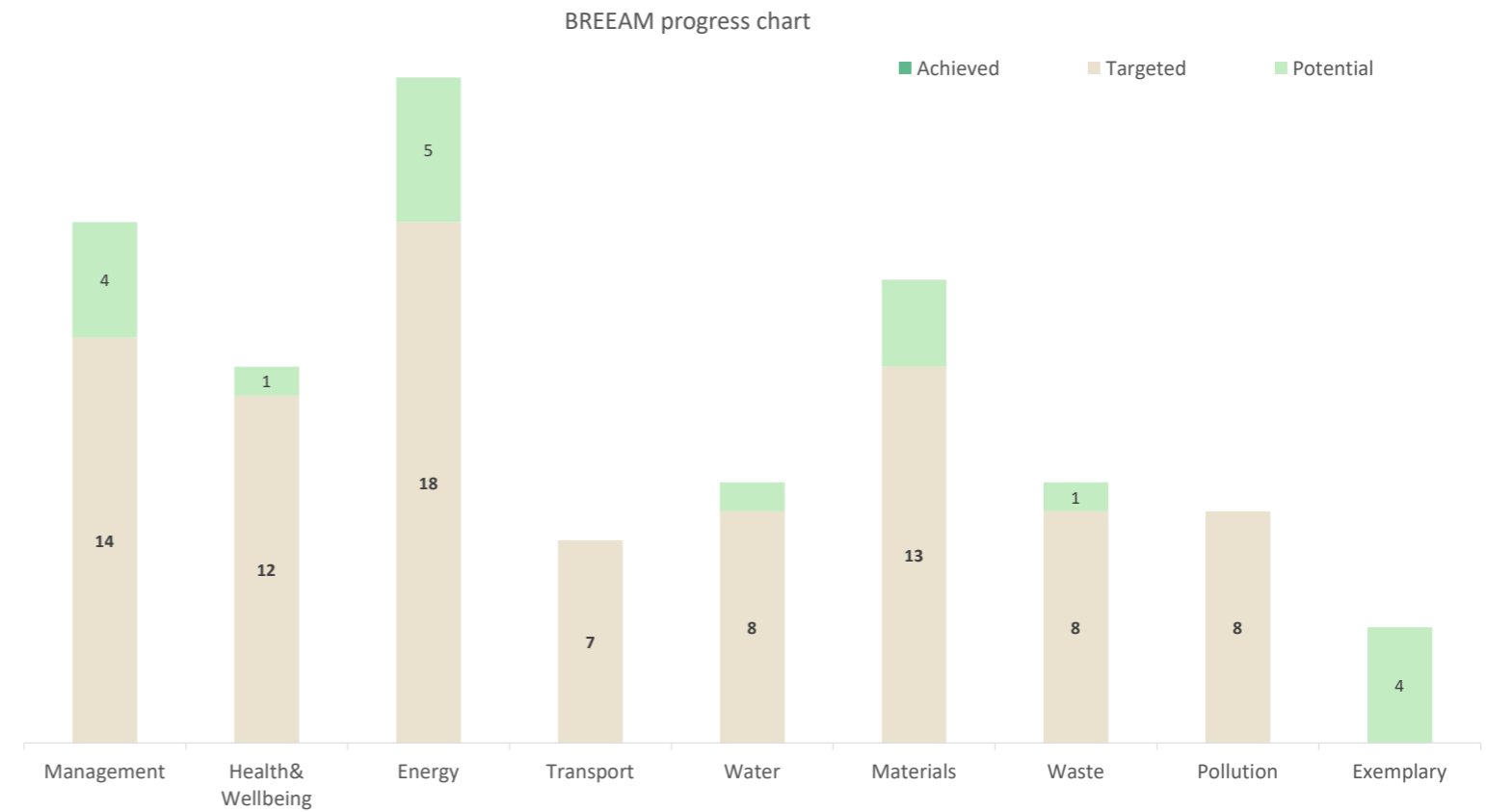
Issue	Date	Reason for Issue	Author
R.1	23.10.23	BREEAM Workshop	ZS
R.2	13.11.23	Update	ZS
R.3	18.12.23	Update - Man 02	ZS
R.4	07.03.24	Update	ZS
R.5	18.03.24	Update - Pol 03	ZS
R.6	24.03.24	Update - Man 01	ZS

Project Name: 124 Theobalds Road
Prepared for: Gravita Property (ORMS)
Building Type: Office

Project Stage: Design Stage Assessment
Scheme: BREEAM Refurbishment & Fit Out 2014
Manual Version: 2
Project type: Fully Fitted

Key Statistics

Will the building be heated and/or cooled?	Yes
Commercial/industrial refrigeration and storage systems	No
Building user transportation systems (Lifts)	Yes
Building user transportation systems (Escalators / moving walks)	No
Is demolition occurring under the developer's ownership?	Yes
Laboratory function/area and size category	No Laboratory
Laboratory containment level	No
Fume cupboards and/or containment devices	No
Are WC facilities only provided within the residential areas of long term stay?	No
Unregulated water uses present? (e.g. vehicle wash system, irrigation)	Yes
Does the building have external areas within the boundary of the assessed development?	No
Are there new or existing landscaping areas within the refurbishment or fit-out zone and within developer control?	Yes - new only
Are there any external areas within the refurbishment or fit-out zone and within developer control that can feasibly be enhanced in line with LE 04	No
Are there statutory requirements, or other issues outside of the control of the project, that impact the ability to provide outdoor space?	No



Project Name: 124 Theobalds Road
 Building Type: Office
 Project Type: Fully Fitted
 Parts 1-4

Targeted BREEAM score % and rating **74.41** **Excellent**
 Potential BREEAM score % and rating **93.36** **Outstanding**
 Achieved **0.00** **Unclassified**



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	Mandatory	Responsibility	RIBA Stage	BREEAM Requirement	Project Specific Comments	
MANAGEMENT												
Man 01	Project Brief and Design	Stakeholder Consultation (Project Delivery)	1	1		0	-	Client / Project Manager	RIBA Stage 2	A clear sustainability brief developed prior to concept design. Identify and define roles, responsibilities and contribution of project team for key phases of the project delivery.		
		Stakeholder Consultation (Third Party)	1	1		0	-	Client / Planning Consultant	RIBA Stage 2	Consult all relevant parties on minimum consultation content at RIBA Stage 2. Prior to completion of RIBA Stage 4 feedback to all relevant parties must be given and received.	Briefing Note send to Orms.	
		Sustainability Champion (Design)	1	1		0	-	BREEAM AP	RIBA Stage 2	Appointment of BREEAM AP prior to RIBA Stage 2. BREEAM target must be formally agreed with the design team.		
		Sustainability Champion (Monitoring Process)	1	1		0	-	BREEAM AP	RIBA Stage 2-6	BREEAM AP monitor and report progress against agreed BREEAM performance targets throughout the project up to PC Stage.		
Man 02	Life Cycle Cost and Service Life Planning	Elemental Life Cycle Cost (LCC)	2	0	2	0	-	LCC Specialist / QS	RIBA Stage 2	An outline, entire asset elemental life cycle cost plan has to be carried out at RIBA stage 2 in line with Standardised method of life cycle costing for construction procurement PD 156865:2008.	Abakus.	
		Component Level Life Cycle Cost Options Appraisal	1	0	1	0	-	LCC Specialist / QS	RIBA Stage 4	A component level LCC plan has been developed by the end of RIBA Stage 4 in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:2008.		
		Capital Cost Reporting	1	1		0	-	Client / QS	RIBA Stage 4	Report the capital cost for the fit-out works in pounds per meter square (£/m2) via the BREEAM Assessment Scoring and Reporting tool.		
Man 03	Responsible Construction Practices	Pre-requisite: Legal and sustainable timber						Yes	Client / Contractor	RIBA Stage 4	All timber and timber-based products used during construction process of the project are legal and sustainable i.e. FSC or PEFC certified.	For DS submission confirmation letter will suffice. Template letter will be provided.
		Environmental Management	1	1		0	-	Contractor	RIBA Stage 4	Contractor operates EMS: certificate of ISO 14001, EMAS or have a structure that is in compliance with BS 8555:2003 and has reached stage four of the implementation stage. And implement best practice pollution prevention procedures: PPG6, Pollution Prevention Guidelines.	As above.	
		BREEAM AP (Site)	1	1		0	-	Contractor	RIBA Stage 4	A BREEAM AP is appointed to monitor compliance with the relevant sustainability performance/process criteria during the Construction, Handover and Close Out stages.	As above.	
		Responsible Construction Management Minimum Standard: 1 credit Excellent, 2 credits Outstanding	2	2		0	Yes	Contractor	RIBA Stage 4	Responsible Construction Management based on Considerate Contractors Scheme score of: >25 to <35 - 1 credit >35 - 2 credits A score of 7 points in each of the 5 sections must be achieved.	As above.	
		Monitoring of Construction Site Impacts - Utility and Water Consumption	1	1		0	-	Contractor	RIBA Stage 4	Principal contractor monitor energy and water consumption on site.	As above.	
		Monitoring of Construction Site Impacts - Transport of Construction Materials and Waste	1	1		0	-	Contractor	RIBA Stage 4	Principal contractor to monitor fuel consumption of transport of materials and waste to/from site.	As above.	
Man 04	Commissioning and Handover	Commissioning - Testing Schedule and Responsibilities	1	1		0	-	Contractor	RIBA Stage 4	Schedule of commissioning and testing prepared, with confirmation of commissioning completed to relevant standards as defined by BRE. Where BMS specified, carry out specific commissioning and training of of system. Appoint appropriate team member to monitor and programme precommissioning, commissioning and testing. Principal contractor accounts for commissioning and testing in overall programme.	As above.	
		Commissioning Building Services	1	1		0	-	Contractor	RIBA Stage 4	Achieve above, plus for buildings with complex services and systems, appoint a specialist commissioning manager to undertake design reviews and provide input on programme and management of commissioning.	As above.	
		Testing and Inspecting Building Fabric	1	0	1	0	-	Contractor	RIBA Stage 4	Thermographic survey to be undertaken by professional holding a UKTA certificate and an airtightness test undertaken by professional holding with membership of ATTMA or IATS.	Can be achieved at post construction.	
		Handover Minimum Standard: 1 credit Excellent and Outstanding	1	1		0	Yes	Contractor	RIBA Stage 4	A Building User Guide (BUG) will be developed prior to handover for distribution to the building occupiers and a committed schedule of training for building occupiers.	As above.	
Man 05	Aftercare	Aftercare Support	0	0		0	-	Client / Contractor		Operational infrastructure and resources in place to collect energy and water consumption data for a minimum of 12 months with aftercare support provision (i.e. helpline).	Only available when it is not speculative refurbishment.	
		Seasonal Commissioning Minimum Standard: 1 credit Excellent and Outstanding	0	0		0	Yes/No?	Contractor		Over a 12 month period (after occupation) the seasonal commissioning activities: at summers/winter months; full/part load conditions are required to be carried out by a commissioning manager.		
		Post Occupancy Evaluation (POE)	0	0		0	-	Client		Third party appointment to undertake post occupancy evaluation exercise one year after initial building occupation to gain feedback from building users to inform operational processes.		
MANAGEMENT			TOTAL	18	14	4	0					
			% of total score	12.68%	9.86%	2.82%	0.00%					
			% of each credit	0.70%								

Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	Mandatory	Responsibility	RIBA Stage	BREEAM Requirement	Project Specific Comments	
HEALTH & WELLBEING												
Hea 01	Visual Comfort	Glare Control	1	1		0	-	Architect	RIBA Stage 4	Glare control strategy designs out potential glare in relevant building areas where risk is identified. The glare control strategy must avoid increasing lighting energy consumption and be occupant controlled devices such as blinds or external shading.		
		Daylighting	3	0		0	-	Daylighting Specialist	RIBA Stage 4	Up to 3 credits, dependent on % of kitchens/student bedrooms/communal occupied spaces that achieve average daylight factor of 2%, with uniformity ratio of at least 0.3 or room depth criterion satisfied:- 1 credit - 40% of relevant building areas 2 credits - 60% of relevant building areas 3 credits - 80% of relevant building areas	Briefing Note sent to ORMS for review.	
		View Out	2	0		0	-	Architect	RIBA Stage 4	95% of the floor area in 95% of spaces for each relevant building area is within 7 m of an external wall. The window or opening must be ≥ 20% of the surrounding wall area or compliance is sought via BS 8206. Relevant building areas include areas where workstations/desks, therefore all student bedrooms plus any amenity areas designated as study spaces.	Briefing Note sent to ORMS for review.	
		Internal and External Lighting Levels, Zoning and Controls	1	1		0	-	MEP	RIBA Stage 4	Internal lighting designed to provide lux levels in accordance with SLL Code for Lighting, CIBSE LG 7 and other relevant industry standards; and zoned to allow occupant control. External lighting designed in accordance with BS5489-1:2013 and BS EN 12464-2:2-14.		
Hea 02	Indoor Air Quality	Indoor Air Quality (IAQ) Plan	1	1		0	-	Specialist	RIBA Stage 3-4	Site specific (IAQ) plan produced and implemented, the plan must be produced and implemented. The objective is to minimise indoor air quality during the design, construction and occupation of the building.	Specialist TBC.	
		Ventilation	1	1		0	-	MEP	RIBA Stage 4	Designed to minimise the indoor concentration and recirculation of pollutant in the building. Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation.		
		Emissions from Construction Products	1	1		0	-	Architect	RIBA Stage 4	Specified products meet testing requirements and emissions levels criteria for Volatile Organic Compound (VOC) Emissions as per BREEAM manual and all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.		
		Post-construction Indoor Air Quality Measurement	1	0		1	0	-	Contractor	RIBA Stage 4	The formaldehyde concentration in indoor air is measured post construction. Where levels are found to exceed limits remediation to be undertaken. Measured levels of formaldehyde and TVOC to be reported to BREEAM Assessor.	
		Adaptability - Potential for Natural Ventilation	1	0		0	0	-	MEP	RIBA Stage 4	Occupied spaces designed to be capable of providing fresh air entirely via a natural ventilation strategy.	
Hea 04	Thermal Comfort	Thermal Modelling	1	1		0	-	Energy Specialist	RIBA Stage 4	Thermal modelling to be carried out in accordance with CIBSE AM 11. Air conditioned building to be designed in accordance with CIBSE Guide A and the PMV & PPD to be reported; for naturally ventilated building consider overheating in line with CIBSE TM52/TM59.	Risk. To be discussed with MEP.	
		Adaptability for a projected climate change scenario	1	1		0	-	Energy Specialist	RIBA Stage 4	The thermal modelling demonstrates the building is designed for a projected climate change environment and for conditioned building report PMV & PPD.	Risk. To be discussed with MEP.	
		Thermal Zoning and Controls	1	1		0	-	MEP	RIBA Stage 4	Above thermal comfort analysis informs temperature control strategy, and strategy provides compliant zoning and controls to its users.		
Hea 05	Acoustic Performance	Acoustic Performance	3	3		0	-	Acoustician	RIBA Stage 4	Meet relevant acoustic performance standards for sound insulation, indoor ambient noise levels and reverberation. Suitably qualified acoustician to undertake calculation and testing requirements.		
Hea 06	Safety and Security	Security of Site and Building	1	1		0	-	Security Consultant	RIBA Stage 2	Security Needs Assessment (SNA) undertaken by Suitably Qualified Security Specialist (SQSS) during RIBA Stage 2 and design embodies recommendations. Any deviation from recommendations to be justified and agreed with SQSS.	Briefing Note sent to ORMS for review. Not targeted - confirmed by DragonFly	
HEALTH & WELLBEING		TOTAL	19	12	1	0						
		% of total score	15.97%	10.09%	0.84%	0.00%						
		% of each credit	0.84%									

Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	Mandatory	Responsibility	RIBA Stage	BREEAM Requirement	Project Specific Comments
ENERGY											
Ene 01	Reduction of Energy Use and Carbon Emissions	Energy Performance Minimum Standard: 6 credits Excellent; 10 credits for Outstanding	15	10	5	0	Yes	Energy Specialist	RIBA Stage 4	A calculation of the energy score using the BREEAM Refurbishment and Fit-out energy model must be carried out. Local Services should be assessed as these are relevant to the scope of work: energy performance of local heating, cooling, ventilation, lighting and controls as relevant to inform the results. This must be assessed against a baseline BRUKL of the existing building. Further 2 credits also available for Heritage Conservation Specialist analysis of improving building fabric and services balanced against retaining historic character.	Methodology to be discussed with MEP.
Ene 02	Energy Monitoring	Sub-Metering of Major Energy Consuming Systems Minimum Standard: 1 credit Very Good, Excellent and Outstanding	1	1		0	Yes	MEP	RIBA Stage 4	Separate energy metering installed for each fuel type / use for 90% of estimated annual energy consumption, with pulsed output for future connection to energy management system.	
		Sub-Metering of High Energy Load and Tenancy Areas	1	1		0	-	MEP	RIBA Stage 4	This requires sub metering of different functional areas. Meter to be connected to BMS or equipped with pulsed output for future connection to energy management system.	
Ene 03	External Lighting	External Lighting	1	1		0	-	Lighting Specialist	RIBA Stage 4	Average initial luminous efficacy of not less than 70 luminaire lumens per circuit Watt. Automatic control to prevent operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.	
Ene 04	Low Carbon Design	Passive Design Analysis	1	1		0	-	Energy Specialist	RIBA Stage 2	Hea 04 to be achieved. Analysis is carried out at RIBA Stage 2 and identifies passive design measures to reduce the total heating, cooling, mechanical ventilation, lighting loads and energy consumption.	
		Free Cooling	1	0		0	-	MEP	RIBA Stage 4	Passive design is achieved and any of the free cooling strategies are implemented: night time cooling; ground coupled air cooling; displacement ventilation; ground water cooling; surface water cooling; evaporative cooling; desiccant dehumidification and evaporative cooling, using waste heat; absorption cooling, using waste heat; building does not require any significant form of active cooling or mech. ventilation i.e. naturally ventilated.	Investigate.
		Low Zero Carbon Feasibility Study	1	1		0	-	Energy Specialist	RIBA Stage 2	LZC Study carried out at RIBA Stage 2 by an energy specialist to establish most appropriate low or zero carbon energy source(s). Technology(ies) to be specified and resulted in a meaningful reduction in regulated CO2 emissions.	
Ene 06	Energy Efficient Transportation Systems	Energy Consumption	1	1		0	-	Lift Specialist	RIBA Stage 4	Where newly specified lifts within refurbishment scope, an analysis of the transportation demand and usage patterns is carried out and energy consumption has been estimated in accordance with BS EN ISO 25745 Part 2 and 3.	Only new lifts!! Briefing Note sent to ORMS for review.
		Energy Efficient Features - Lifts	2	2		0	-	Lift Specialist	RIBA Stage 4	Where newly specified lifts within refurbishment scope, energy efficient features offering the greatest potential energy savings are to be specified: standby condition during off-peak periods; lift care lighting and display across is >70lamp lumens/circuit Watt; drive controller capable of variable speed, variable-voltage and variable-frequency. Where use of regenerative drive saves energy it needs to be specified.	
Ene 08	Energy Efficient Equipment	Energy Efficient Equipment	0	0		0	-	Client		Identify the building's unregulated energy consumption and demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building.	Only became available when e.g. small power plug-in equipment is part of the fitting out scope.

ENERGY	TOTAL	24	18	5	0
	% of total score	17.04%	12.78%	3.55%	0.00%
	% of each credit	0.71%			

TRANSPORT											
Tra 01	Sustainable Transport Solutions	Accessibility Index / Dedicated Bus Service	3	3		0	-	Transport Consultant	RIBA Stage 2-4	The public transport Accessibility Index (AI) for the assessed building is calculated and BREEAM credits awarded according to the building type.	
Tra 02	Proximity to Amenities	Proximity to Local Amenities	1	1		0	-	Transport Consultant	RIBA Stage 4	Where the development is within 500 meters of at least 2 appropriate amenities and within 1km of a further 2 amenities inc. food outlet, access to cash, outdoor open space, recreation/leisure facility).	
Tra 03	Cyclist Facilities	Cycle Storage & Facilities	2	2		0	-	Architect	RIBA Stage 4	Compliant cycle storage spaces provided on site 1 per every 10 staff (spaces must be secure, fixed to permanent structure, covered overhead) with compliant 2 cyclist facilities: showers, changing facilities, lockers and drying spaces.	
Tra 04	Maximum Car Parking Capacity	Car Parking Capacity	0	0		0	-	Architect	RIBA Stage 4	Carparking capacity lower than maximum stated, depending on building use and accessibility index (only applicable to building undergoing change of use).	
Tra 05	Travel Plan	Travel Plan	1	1		0	-	Transport Consultant	RIBA Stage 2-4	A Travel Plan has been developed as part of the feasibility and design stages. Plan must include measures to encourage the use of sustainable modes of transport and movements of people and goods during the building's operation.	Briefing Note sent to ORMS for review.

TRANSPORT	TOTAL	7	7	0	0
	% of total score	5.75%	5.75%	0.00%	0.00%
	% of each credit	0.82%			

Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	Mandatory	Responsibility	RIBA Stage	BREEAM Requirement	Project Specific Comments	
WATER												
Wat 01	Water Consumption	Water Consumption Minimum Standard: 1 credit Good, Very Good, Excellent and 2 credits Outstanding	5	4	1	0	Yes	Architect	RIBA Stage 4	Specification of water efficient domestic water-consuming components, grey/rain water collection to reduce the water consumption. Use the BREEAM Wat 01 calculator to assess the efficiency of sanitaryware.	Briefing Note sent to ORMS for review. Potentially rainwater harvesting.	
Wat 02	Water Monitoring	Water Monitoring Minimum Standard: Criterion 1 - water meter on mains Good, Very Good, Excellent and Outstanding	1	1		0	Yes	MEP	RIBA Stage 4	Specification of water meter with pulsed output and BMS connected on mains water supply to building.		
Wat 03	Water Leak Detection	Leak Detection System	1	1		0	-	MEP	RIBA Stage 4	Water leak detection system with audible alarm capable of detecting a major leak on the mains water supply within the building and between the building and the utilities water meter.		
		Flow Control Devices	1	1		0	-	MEP	RIBA Stage 4	Flow control devices that regulate the supply of water to communal WC area/facility must be provided.		
Wat 04	Water Efficient Equipment	Water Efficient Equipment	1	1		0	-	Landscape Architect	RIBA Stage 4	Mitigate or reduce unregulated water usage. For this building type, assume main unregulated water use would be for irrigation.	TBC if irrigation is specified. Briefing Note sent to ORMS for review.	
WATER			TOTAL	9	8	1	0					
			% of total score	7.40%	6.58%	0.82%	0.00%					
			% of each credit	0.82%								
MATERIALS												
Mat 01	Life Cycle Impacts	Project lifecycle assessment study	6	3	3	0	-	LCA Specialist	RIBA Stage 3-4	LCA completed for proposed refurbishment works, and design team demonstrates how LCA reduced environmental impact. The LCA covers new materials as relevant to the assessment.	Confirmed if LCA specialist is appointed - possible 6 credits to be achieved with LCA.	
Mat 03	Responsible Sourcing of Construction Products	Pre-requisite: Legal and sustainable timber. Minimum Standard:all Ratings					Yes	Architect / Contractor	RIBA Stage 3-4	100% of timber and timber-based products used n the project are 'Legal' and 'Sustainable' as per UK Government's Timber Procurement Policy (TPP).		
		Sustainable Procurement Plan	1	1		0	-	Contractor	RIBA Stage 4	A Sustainable Procurement Plan (SPP) should be put in place to guide procurement towards sustainable construction and identify risk and opportunities against range of social, environmental and economic issues (i.e. BS 8902:2009).		
		Measuring Responsible Sourcing	3	2		0	-	Architect / Contractor	RIBA Stage 4	To specify materials from manufacturers who can provide EMS Certification, FSC, PEFC, SFI, CARES, Eco-reinforcement, BES 6001, Supply chain.		
Mat 04	Insulation	Embodied Impact	1	1		0	-	Architect / MEP	RIBA Stage 4	All new insulation (for building fabric and building services) must be low impact having low GWP, ODP and be A to A+ rated in the 'Green Guide to Specification' and sourced from EMS Certified Suppliers.		
Mat 05	Designing for Durability and Resilience	Protecting Vulnerable Parts of the Building from Damage and Protecting Exposed Parts of the Building from Material Degradation	1	1		0	-	Architect	RIBA Stage 4	The building incorporates suitable durability and protection measures and specification to limit materials degradation between environmental factors.	Template sent to ORMS for review.	
Mat 06	Material Efficiency	Preparation and Brief	1	1		0	-	Design Team	RIBA Stage 1	Set targets and report opportunities and methods for optimise the use of materials for each of the RIBA Stage. Consideration should be given to pre-fabrication and WRAP compliance.	Template sent to ORMS for review.	
		Concept Design							RIBA Stage 2			
		Developed Design							RIBA Stage 3			
		Technical Design							RIBA Stage 4			
		Construction							RIBA Stage 5			
MATERIALS			TOTAL	13	9	3	0					
			% of total score	15.41%	10.67%	3.56%	0.00%					
			% of each credit	1.19%								

Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	Mandatory	Responsibility	RIBA Stage	BREEAM Requirement	Project Specific Comments	
WASTE												
Wst 01	Project Waste Management	Pre-refurbishment audit	1	1		0	-	Demolition / Strip-out Contractor	RIBA Stage 2	Completion of Pre-Refurbishment Audit during RIBA Stage 2 to guide design, consideration of materials to be reused and targets for waste management	Briefing Note sent to ORMS for review.	
		Reuse and direct recycling of materials	2	0	1	0	-	Contractor	RIBA Stage 4	Where specific waste material types are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling.		
		Construction Resource Efficiency Minimum Standard: 1 credit Outstanding	3	2		0	Yes	Contractor	RIBA Stage 4	Prepare a compliant Resource Management Plan (RMP) and main contractor to achieve a construction waste resource efficiency benchmark of 4.5m ³ (or 1.2 tonnes) of construction waste generated per 100m ² GIA.		
		Diversion of Resources from Landfill	1	1		0	-	Contractor	RIBA Stage 4	Prepare a compliant Resource Management Plan (RMP) and divert at least 85% by volume or 90% of waste from landfill.		
Wst 02	Recycled Aggregates	Recycled Aggregates	0	0		0	-	Structural Engineer	RIBA Stage 4	% of high grade aggregate use that is recycled or secondary aggregate meets minimum levels.	n/a for our project.	
Wst 03	Operational Waste	Operational Waste Minimum Standard: 1 credit Excellent and Outstanding	1	1		0	Yes	Architect	RIBA Stage 4	A dedicated central space for storage of recyclable waste, clearly labelled and accessible to building occupants/facilities operators. A minimum of 2m ² per 1000m ²		
Wst 04	Speculative Finishes (Offices only)	Speculative Floor and Ceiling Finishes	1	1		0	-	Architect	RIBA Stage 4	To install floor and ceiling finishes selected by the known occupant or if occupant not known in show area only - to award this credit it must be less than 25% of the net lettable floor area OR if installation of floor finishes/suspended ceilings is included, a Lease Agreement must be implemented to confirm that tenants are not permitted to remove these finishes.		
Wst 05	Adaptation to climate change	Structural and fabric resilience	1	1		0	-	Design Team	RIBA Stage 2	Conduct a climate change adaptation strategy appraisal for structural and fabric resilience by end of RIBA Stage 2, with risk assessment to identify and evaluate potential impacts over projected life cycle from expected extreme weather events.	Template sent to ORMS for review.	
Wst 06	Functional Adaptability	Functional Adaptability	1	1		0	-	Design Team	RIBA Stage 2 & 4	Carry out and implement a functional adaptation appraisal at RIBA Stage 2 and adopt the measures in RIBA Stage 4.	Template sent to ORMS for review.	
WASTE			TOTAL	11	8	1	0					
			% of total score	8.48%	6.17%	0.77%	0.00%					
			% of each credit	0.77%								
LAND USE & ECOLOGY												
Ecology Route Selection								Route 2	Route 1: Project team member Route 2: Suitably Qualified Ecologist (SQE)			
LE 02	Protection of Ecological Features	Protection of Ecological Features	0	0		0	-	Ecologist	RIBA Stage 4	All existing features are adequately protected.	Briefing Note sent to ORMS for review.	
LE 04	Enhancing Site Ecology	Ecologist's Report & Recommendations	0	0		0	-	Ecologist	RIBA Stage 1	A suitably qualified ecologist (SQE) has been appointed by the client by the end of the RIBA Stage 1 to advise on enhancing the ecology of the site. SQE must visit the site and provide an Ecology Report with appropriate recommendations for the enhancement of the site's ecology at RIBA Stage 2. Recommendations needs to be implemented.	If this credit is applicable e.g. there are external areas within the refurbishment zone and within developer control that can feasibly be enhanced and targeted the score will be increased to 75.39%.	
LE 05	Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	2	2		0	-	Ecologist	RIBA Stage 4	SQE is appointed prior to commencement of activities on site and they confirm EU and UK legislation relating to the protection and enhancement of ecology has been complied with. Landscape and habitat management plan to be produced covering first 5 years after project completion in accordance with BS 42020:2013 Section 11.1 and handed over to the building owner/occupants. Plus additional measures for the improvement of long term biodiversity to be complied with.	Scope of work sent to Dragonfly.	
LAND USE & ECOLOGY			TOTAL	2	2	0	0					
			% of total score	4.93%	4.93%	0.00%	0.00%					
			% of each credit	2.47%								

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POLLUTION												
Pol 01	Impact of Refrigerants	Pre-Requisite: Systems with Electric Compressors						Yes	MEP	RIBA Stage 4	All systems with electric compressors comply with the requirements of BS EN 378:2016 (parts 2 and 3). Refrigeration systems containing ammonia comply with the Institute of Refrigeration Ammonia Refrigeration Systems code of practice.	
		Impact of Refrigerants	2	1	1	0	-	MEP	RIBA Stage 4	1 credit where Refrigerant's Direct Effect Life Cycle CO ₂ equivalent emissions (DELCO ₂ e) of ≤ 1000 kgCO ₂ e/kW cooling/heating capacity; 2 credits where DELCO ₂ e is ≤ 100 kgCO ₂ e/kW	Request info for draft calcs.	
		Leak Detection	1	1		0	-	MEP	RIBA Stage 4	All systems are hermetically sealed or only use environmentally benign refrigerants or a permanent automated refrigerant leak detection system is required.	Check automatic pump down system.	
Pol 02	NOx Emissions	NOx Emissions	3	2	1	0	-	MEP	RIBA Stage 4	All heating and hot water supplied by non-combustion systems OR emissions from combustion plant that provide heating and hot water do not exceed defined air emissions standards; 3 credits <40mg/kWh, 2 credits <70mg/kWh, 1 credit <100mg/kWh.		
Pol 03	Flood and Surface Water Management	Flood Resilience	2	1	1	0	-	Flood Risk Assessor	RIBA Stage 4	Site specific Flood Risk Assessment prepared by specialist to confirm that the site is a low probability of flooding from all sources of flooding.	At this stage it is not possible to determine if the site is in a Low Flood Risk Zone due to the concerns of ground water flooding. Awaiting for results from the geotechnical / environmental investigation works.	
		Surface Water Run Off	2	1	1	0	-	Flood Risk Assessor	RIBA Stage 4	For Brownfield sites - Peak rate of runoff from site shows 30% improvement compared to pre-development, for 1-yr and 100-year return Flooding of property will not occur in the event of a local drainage system failure Runoff volume no greater than pre-development, for 100-year, 6 hour event. All calculations include an allowance for climate change Relevant maintenance agreements for ownership, operation and maintenance of SuDs		
		Minimising Watercourse Pollution	1	0		0	-	Flood Risk Assessor	RIBA Stage 4	Specialist to confirm there is no discharge from the developed site for rainfall up to 5 mm and the pollution prevention systems are in line with the SUDs requirements.		
Pol 04	Reduction of Night Time Light Pollution	Reduction of Night Time Light Pollution	1	1		0	-	Lighting Specialist	RIBA Stage 4	External lighting design is in line with ILP guidance of obtrusive light and can be automatically switched off. Illuminated advertisements are designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements.		
Pol 05	Reduction of Noise Pollution	Reduction of Noise Pollution	1	1		0	-	Acoustician	RIBA Stage 4	A BS 4142:2014 compliant noise impact assessment to be carried out by Acoustician, and recommendations for mitigation incorporated in design.		

POLLUTION	TOTAL	13	8	4	0
	% of total score	12.33%	7.59%	3.79%	0.00%
	% of each credit	0.95%			

EXEMPLARY											
Man 03	Responsible Construction Practices	Considerate Construction	1	0	1	0	-	Contractor	RIBA Stage 4	Responsible Construction Management based on Considerate Contractors Scheme score of >40 (plus BRE specific requirements that are good site management practices).	
Man 05	Aftercare	Aftercare	0	0		0	-	Client	RIBA Stage 4	The client or building occupier makes a commitment to carry occupant satisfaction interviews, and analysis of energy/water consumption, quarterly for the first 3 years of occupation, with feedback on lessons learnt to developer	
Hea 01	Visual Comfort	Daylighting	1	0		0	-	Daylighting Specialist	RIBA Stage 4	When relevant building areas exceed good practice daylight factor OR the relevant building areas exceed good practice average and minimum point daylight illuminance criteria.	
Hea 02	Indoor Air Quality	Indoor Air Quality	1	0	1	0	-	Architect	RIBA Stage 4	All decorative paints and varnishes specified must meet performance standard EU Directive 2004/42/CE and testing standard BS EN ISO 1189-2:2013, Pat2. In addition, all 7 remaining product categories meet testing requirements and emissions levels criteria for Volatile Organic Compound (VOC) Emissions.	Potential credit with WELL being targeted.
Ene 01	Reduction of Emissions	Reduction of Energy Use and Carbon Emissions	1	0		0	-	Energy Specialist	RIBA Stage 4	Carbon neutral or carbon negative building is achieved. A calculation of the energy score using the BREEAM Refurbishment and Fit-out energy model must be carried out. This must be assessed against a baseline BRUKL.	
Wat 01	Water Consumption	Water Consumption	1	0		0	-	Architect	RIBA Stage 4	Specification of water efficient domestic water-consuming components to reduce the water consumption 65% beyond the baseline. Use the BREEAM Wat 01 calculator to assess the efficiency of sanitary wear including rainwater and greywater harvesting.	Investigate, once information on irrigation system is available.
Mat 01	Life Cycle Impacts	Life Cycle Impacts	1	0	1	0	-	LCA Specialist	RIBA Stage 4	LCA completed for proposed refurbishment works, and design team demonstrates how LCA reduced environmental impact, achieving maximum points.	
Mat 03	Responsible Sourcing of Materials	Responsible Sourcing of Construction Products	1	0		0	-	Architect / Contractor	RIBA Stage 4	Achieve 50% of the points available in the Mat 03 calculation through sourcing of main building materials from responsible suppliers.	
Wst 01	Construction Waste Management	Construction Resource Efficiency and Diversion of Resources from Landfill	1	0		0	-	Contractor	RIBA Stage 4	To achieve a construction waste resource efficiency benchmark of 1.6m3 (or 1.9 tonnes) of construction waste generated per 100m2 GIA and divert at least 85% by volume or 90% tonnage of non-demolition waste from landfill and 85% by volume or 95% in tonnage of demolition waste from landfill.	
Wst 02	Recycled Aggregates	Project Sustainable Aggregate Points	1	0		0	-	Structural Engineer	RIBA Stage 4	Identify all aggregate types, quantities and calculate the distance travelled by transport type. Points are awarded using BREEAM Wst 02 calculator.	
Wst 05	Adaptation to Climate Change	Responding to Climate Change	1	0	1	0	-	Design Team	RIBA Stage 4	Achieved when credits Hea 04 Thermal comfort, 8 credits in Ene 01, Ene 04 Passive analysis, 3 credits in Wat 01, Mat 05 Material degradation and Pol 03 Flood risk and 2 credits for Surface water run-off credits are achieved.	Potential credit. Will be reviewed at the end of RIBA Stage 4.

EXEMPLARY	TOTAL	10	0	4	0
	% of total score	7.00%	0.00%	2.80%	0.00%