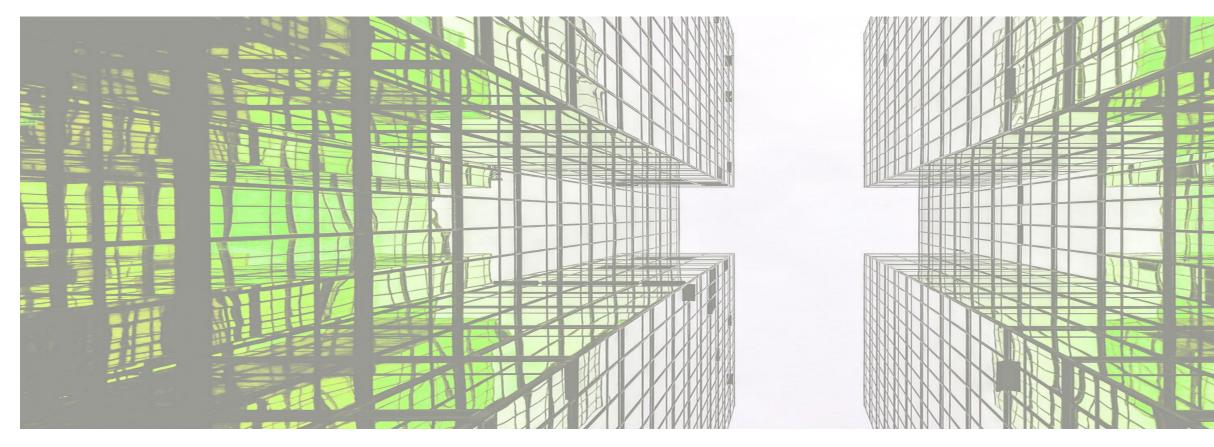
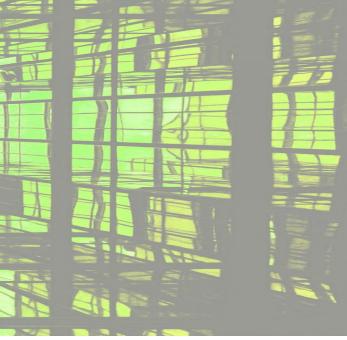
BREEAM Pre-Assessment

16-24 Whitfield Street and 55 Tottenham Court Road, Camden, London

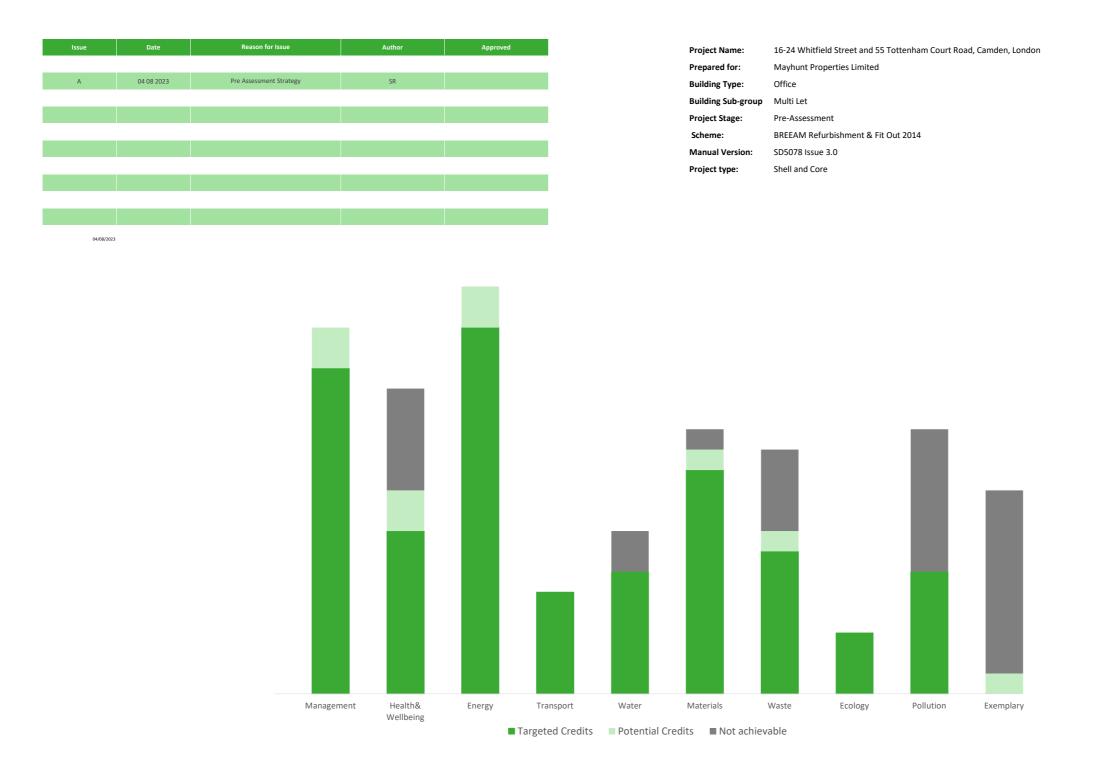
Prepared for Mayhunt Properties Limited 01-Sep-23















Project Name:	16-24 Whitfield Street and 55 Tottenham Court Road, Camden, London	Targeted BREEAM score % and rating	70%	
Building Type:	Office	Potential Additional Score	79%	NOT TARGETED
Project Type:	Fully Fitted (RFO Parts 1,2,3)	Achieved scoring %	0%	
BREEAM	DDEFANALUK Defunctions and end Eth Out (DEO)			

Methodology: BREEAM UK Refurbishment and Fit Out (RFO)

BREEAM Credit Ref. Credit Title Credit Name Available Targeted Potential Achieved MANAGEMENT A clear sustainability brief developed prior to conce Stakeholder Consultation (Project Delivery) 1 1 contribution of project team for key phases of the pro-Project Brief Man 01 and Design Consult all relevant parties on minimum consultation 0 1 Stakeholder Consultation (Third Party) 1 Stage 4 feedback to all relevant parties must be given Appointment of BREEAM AP prior to RIBA Stage 2. Sustainability Champion (Design) 1 1 team. BREEAM AP monitor and report progress against agr Sustainability Champion (Monitoring Process) 1 1 up to PC Stage. An outline, entire asset elemental life cycle cost Elemental Life Cycle Cost (LCC) 2 2 Standardised method of life cycle costing for construe Life Cycle Cost and Man 02 A component level LCC plan has been developed by Component Level Life Cycle Cost Options Appraisal Service Life Planning 1 1 of life cycle costing for construction procurement' PD Report the capital cost for the fit-out works in poun Capital Cost Reporting 1 1 Scoring and Reporting tool. All timber and timber-based products used during c Pre-requisite: Legal and sustainable timber sustainable i.e. FSC or PEFC certified. Contractor operates EMS: certificate of ISO 14001, Environmental Management 1 1 8555:2003 and has reached stage four of the imple prevention procedures: PPG6, Pollution Prevention G A BREEAM AP is appointed to monitor complianc criteria during the Construction, Handover and Close BREEAM AP (Site) 1 1 Responsible Construction Management based on Cor >25 to <35 - 1 credit Responsible Construction Management Man 03 **Responsible Construction Practices** Minimum Standard: 1 credit Excellent, 2 credits 2 2 >35 - 2 credits Outstanding Principal contractor monitor energy and water consu Monitoring of Construction Site Impacts - Utility and 1 1 Water Consumption

l Requirement	RIBA Stage
cept design. Identify and define roles, responsibilities and roject delivery.	2
n content at RIBA Stage 2. Prior to completion of RIBA en and received.	2
BREEAM target must be formally agreed with the design	2
reed BREEAM performance targets throughout the project	4
plan has to be carried out at RIBA stage 2 in line with uction procurement PD 156865:2008.	2
r the end of RIBA Stage 4 in line with 'Standardised method D 156865:2008.	4
nds per meter square (£/m2) via the BREEAM Assessment	4
construction process of the project are legal and	4
, EMAS or have a structure that is in compliance with BS lementation stage. And implement best practice pollution Guidelines.	4
ice with the relevant sustainability performance/process e Out stages.	4
onsiderate Contractors Scheme score of:	4
umption on site.	4

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Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
		Monitoring of Construction Site Impacts - Transport of Construction Materials and Waste	1	1			Principal contractor to monitor fuel consumption of transport of materials and waste to/from site.	4
		Commissioning - Testing Schedule and Responsibilities	1	1			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 appopriate team member to monitor and programme precommissioning, commissioning and testing. Principal contractor accounts for commissioning and testing in overall programme.	4
Man 04	Commissioning and Handover	Commissioning Building Services	1	1			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.	4
		Testing and Inspecting Building Fabric	1	0	1		contractor accounts for commissioning and testing in overall programme. above, plus for buildings with complex services and systems, appoint a specialist commissioning to undertake design reviews and provide input on programme and management of commissioning. nd thermographic survey required. TBC.	4
		Handover Minimum Standard: 1 credit Excellent and Outstanding	1	1			A Building User Guide will be developed prior to handover for distribution to the building occupiers and a committed schedule of training for building occupiers.	4
		TOTAL	18	16	2	0		
	MANAGEMENT	% of total score	13.02%	8.72%	1.45%	0.00%		
		% of each credit		0.7	2%			



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage				
HEALTH &	HEALTH & WELLBEING											
		Daylighting	3	0	1		Up to 3 credits, dependent on % of staff and public occupied spaces that achieve average daylight factor of 2% and treatment areas of 3%, 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	4				
Hea 01	Visual Comfort	View Out	2	0	1		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.	4				
		Internal and External Lighting Levels, Zoning and Controls	1	1			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.	4				
		Indoor Air Quality (IAQ) Plan	1	1			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.	<u>*</u> 4				
		Ventilation	1	0			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.	r 4				
Hea 02	Indoor Air Quality	Adaptability - Potential for Natural Ventilation	1	0			The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios. Occupied spaces of the building are designed to be capable of providing fresh air entirely via a natural ventilation strategy. Room depths are designed in accordance with CIBSE AM10 (section 2.4) to ensure effectiveness of any natural ventilation system. The openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate; OR The design demonstrates that the natural ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates. This is demonstrated using ventilation design tool types that meet the requirements of CIBSE AM10	4				



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
	Thermal Comfort	Thermal Modelling	1	1			Thermal modelling to be carried out in accordance with CIBSE AM 11.Air conditioned building to be designed in accordance with CIBE Guide A and the PMV & PPD to be reported; for naturally ventilated building consider overheating in line with CIBSE TM52.	4
Hea 04		Adaptability for a projected climate change scenario	1	1			The thermal modelling demonstrates the building is designed for a projected climate change environment and for conditioned building report PMV & PPD.	4
		Thermal Zoning and Controls	1	1			Above thermal comfort analysis informs temperature control strategy, and strategy provides compliant zoning and controls to its users.	4
Hea 05	Acoustic Performance	Acoustic Performance	2	2			Meet relevant acoustic performance standards for sound insulation and indoor ambient noise levels. Suitably qualified acoustician to undertake calculation and testing requirements.	4
Hea 06	Safety and Security	Security of Site and Building	1	1	0		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.	2
		TOTAL	15	8	2	0		
	HEALTH & WELLBEING	% of total score	12.95%	6.91%	1.73%	0.00%		
		% of each credit		0.8	6%			



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
ENERGY								
Ene 01	Reduction of Energy Use and Carbon Emissions	Energy Performance Minimum Standard: 6 credits Excellent; 10 credits for Outstanding	15	10	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 EPC inp of the existing building. Energy Assessment to be circulated to the team. EPC inp	
Ene 02	Energy Monitoring	Sub-Metering of Major Energy Consuming Systems Minimum Standard: 1 credit Very Good, Excellent and Outstanding	1	1			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.	4
		Sub-Metering of High Energy Load and Tenancy Areas	1	1			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.	4
		Passive Design Analysis	1	1			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.	2
Ene 04	Low Carbon Design	Free Cooling	1	0			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.	4
		Low Zero Carbon Feasibility Study	1	1			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.	2
		Energy Consumption	1	1			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.	4
Ene 06	Energy Efficient Transportation Systems	Energy Efficient Features - Lifts	2	2			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 by specified.	4
		TOTAL	24	18	4	0		
	ENERGY	% of total score	17.49%	13.12%	2.92%	0.00%		
		% of each credit		0.7	3%	1		

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Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage				
TRANSPOR	TRANSPORT											
Tra 01	Sustainable Transport Solutions	Accessibility Index / Dedicated Bus Service	3	3			The public transport Accessibility Index (AI) for the assessed building is calculated and BREEAM credits awarded according to the building type.	4				
Tra 02	Proximity to Amenities	Proximity to Local Amenities	1	1			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).	4				
Tra 05	Travel Plan	Travel Plan	1	1			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.	2				
		TOTAL	5	5		0						
	TRANSPORT	% of total score	4.22%	4.22%	0.00%	0.00%						
		% of each credit		0.8	4%							

WATER								
Wat 01	Water Consumption	Water Consumption Minimum Standard: 1 credit Good, Very Good, Excellent and 2 credits Outstanding	5	3			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.	4
Wat 02	Water Monitoring	Water Monitoring Minimum Standard: Criterion 1 - water meter on mains Good, Very Good, Excellent and Outstanding	1	1			Specification of water meter with pulsed output and BMS connected on mains water supply to building.	4
Wat 03	Water Leak Detection	Leak Detection System	1	1			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.	4
		Flow Control Devices	1	1			Flow control devices that regulate the supply of water to WC area/facility must be provided.	4
		TOTAL	8	6	0	0		
	WATER	% of total score	6.75%	5.06%	0.00%	0.00%		
		% of each credit		0.8	4%	•		



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
MATERIAL	S							
Mat 01	Life Cycle Impacts	Project lifecycle assessment study	6	6	1		LCA completed for proposed refurbishment works, and design team demonstrates how LCA reduced environmental impact.	2
		Pre-requisite: Legal and sustainable timber. Minimun	n Standard:all Rat	tings			100% of timber and timber-based products used n the project are 'Legal' and 'Sustainable' as per UK Government's Timber Procurement Policy (TPP).	4
Mat 03	Responsible Sourcing of Construction Products	Sustainable Procurement Plan	1	1			A Sustainable Procurement Plan 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).	4
		Measuring Responsible Sourcing	3	2			To specify materials from manufacturers who can provide EMS Certification, FSC, PEFC, SFI, CARES, Eco- reinforcement, BES 6001, Supply chain.	4
Mat 04	Insulation	Embodied Impact	1	1			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.	4
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			The building incorporates suitable durability and protection measures and specification to limit materials degradation between environmental factors.	4
Mat 06	Material Efficiency	Preparation and Brief Concept Design Developed Design Technical Design Construction	1	0			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.	1 2 3 4 5
		TOTAL	13	11	1	0		
	MATERIALS	% of total score	15.82%	13.39%	1.22%	0.00%		
		% of each credit		1.2	2%			



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
WASTE								
		Pre-refurbishment audit	1	0	1		Completion of Pre-Refurbishment Audit during RIBA Stage 2 to guide design, consideration of materials to be reused and targets for waste management.	2
		Reuse and direct recycling of materials	2	0			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.	4
Wst 01	Project Waste Management	Construction Resource Efficiency Minimum Standard: 1 credit Outstanding	3	2			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.	4
		Diversion of Resources from Landfill	1	1			Prepare a compliant Resource Management Plan (RMP) and divert at least 85% by volume or 90% of waste from landfill.	4
Wst 02	Recycled Aggregates	Recycled Aggregates	1	0			% of high grade aggegrate use that is recycled or secondary aggregate meets minimum levels.	4
Wst 03	Operational Waste	Operational Waste Minimum Standard: 1 credit Excellent and Outstanding	1	1			A dedicated central space for storage of recyclable waste, clearly labelled and accessible to building occupants/facilities operators. A minimum of 2m ² per 1000m2	4
Wst 04	Speculative Finishes (Offices only)	Speculative Floor and Ceiling Finishes	1	1			To install floor and ceiling finishes selected by the known occupant or if occupant not known in show area only.	4
Wst 05	Adaptation to climate change	Structural and fabric resilience	1	1			Conduct a climate change adaptation strategy appraisal for structural and fabric resislience by end of RIBA Stage 2, with risk assessment to identify and evaluate potential impacts over projected life cycle from expected extreme weather events.	2
Wst 06	Functional Adaptability	Functional Adaptability	1	1			Carry out and implement a functional adaptation appraisal at RIBA Stage 2 and adopt the measures in RIBA Stage 4.	2
		TOTAL	12	7	1	0		
	WASTE	% of total score	9.49%	5.54%	0.79%	0.00%		
		% of each credit		0.7	'9%	•		



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage					
LAND USE	LAND USE & ECOLOGY												
Ecology Ro	oute Selection	-					Route 1: Project team member Route 2: Suitably Qualified Ecologist (SQE)	1					
LE 04	Enhancing Site Ecology	Ecologist's Report & Recommendations	2	2			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.						
LE 05	Long Term Impact on Biodiversity	Long Term Impact on Biodiversity	1	1			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.	4					
		TOTAL	3	3	0	0							
	LAND USE & ECOLOGY	% of total score	7.60%	7.60%	0.00%	0.00%							
		% of each credit		2.5	3%								



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
POLLUTION	N							
		Pre-Requisite: Systems with Electric Compressors					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.	4
Pol 01	Impact of Refrigerants	Impact of Refrigerants	2	1			1 credit where Refrigerant's Direct Effect Life Cycle CO_2 equivalent emissions (DELC CO_2e) of \leq 1000 kg CO_2e/kW cooling/heating capacity; 2 credits where DELC is \leq 100 kg CO_2e/kW	4
		Leak Detection	1	0			All systems are hermetically sealed or only use environmentally benign refrigerants or a permanent automated refrigerant leak detection system is required.	4
Pol 02	NOx Emissions	NOx Emissions	3	0			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.	4
		Flood Resilience	2	2			Site specific Flood Risk Assessment prepared by specialist to confirm that the site is a low probability of flooding from all sources of flooding.	4
Pol 03	Flood and Surface Water Management	Surface Water Run Off	2	1			No increase of impermeable surfacing. Review calculations.	4
		Minimising Watercourse Pollution	1	0			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.	4
Pol 04	Reduction of Night Time Light Pollution	Reduction of Night Time Light Pollution	1	1			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. Advertsiment consent to align with BREEAM.	4
Pol 05	Reduction of Noise Pollution	Reduction of Noise Pollution	1	1			A BS 4142:2014 compliant noise impact assessment to be carried out by Acoustician, and recommendations for mitigation incorporated in design.	4
		TOTAL	13	6	0	0		
	POLLUTION	% of total score	12.66%	5.84%	0.00%	0.00%		
		% of each credit		0.9	7%			



Credit Ref.	Credit Title	Credit Name	Available	Targeted	Potential	Achieved	BREEAM Requirement	RIBA Stage
EXEMPLARY								
Man 03	Responsible Construction Practices	Considerate Construction	1	0	1	0	Responsible Construction Management based on Considerate Contractors Scheme score of >40 (plus BRE specific requirements that are good site management practices).	4
Man 05	Aftercare	Aftercare	1	0		0	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	When relevant building areas exceed good practice daylight factor OR the relevant building areas exceed good practice average and minimum point daylight illuminance criteria.	4
Hea 02	Indoor Air Quality	Indoor Air Quality	1	0		0	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.	4
Ene 01	Reduction of Emissions	Reduction of Energy Use and Carbon Emissions	1	0		0	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.	4
Wat 01	Water Consumption	Water Consumption	1	0		0	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.	4
Mat 01	Life Cycle Impacts	Life Cycle Impacts	1	0	0	0	LCA completed for proposed refurbishment works, and design team demonstrates how LCA reduced environmental impact, achieving maximum points .	2
Mat 03	Responsible Sourcing of Materials	Responsible Sourcing of Construction Products	1	0		0	Achieve 50% of the points available in the Mat 03 calculation through sourcing of main building materials from responsible suppliers.	4
Wst 01	Construction Waste Management	Construction Resource Efficiency and Diversion of Resources from Landfill	1	0		0	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% volume or 95% in tonnage of demolition waste from landfill.	4
Wst 02	Recycled Aggregates	Project Sustainable Aggregate Points	0	0		0	Identify all aggregate types, quantities and calculate the distance travelled by transport type. Points are awarded using BREEAM Wst 02 calculator.	4
Wst 05	Adaptation to Climate Change	Responding to Climate Change	1	0		0	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.	4
EXEMPLARY		TOTAL	10	0	1	0		
		% of total score	10.00%	0.00%	1.00%	0.00%		
Targeted BREEAM Score		Overall Credits	122	80	11	0		
		Final BREEAM score:	110.00%	70.39%	9.10%	0.00%		