Project 5a, 20-22 Southampton Place

For Morgan Lovell

BREEAM Pre-Assessment RevB

July 2022

Verte Ltd

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NOTICE

This document and its contents have been prepared and are intended solely for Morgan Lovell's information and use in relation to the works at 20-22 Southampton Place.

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Document History

Job Number: v405		**Doc Ref: v405 Project 5a, 20-22 Southampton Place BREEAM Pre-Assessment RevB 20220720**		
Revision	Purpose description	Originated	Authorised	Date
A	Draft	AD	RM	July 2022
B	Draft	JRC	AD	July 2022

Client Sign-off

Client	Morgan Lovell
Project	Project 5a 20-22 Southampton Place
Document Title	BREEAM Pre-assessment
Job No	v405
Revision	B
Doc Reference	v405 Project 5a, 20-22 Southampton Place BREEAM Pre-Assessment RevB 20220720

BREEAM Assessor Information

BRE Registration Number	TBC
Licensed Assessor	A Diprose
BREEAM AP	N/A
Assessor Support	A Findlay
BREEAM Scheme	BREEAM Refurbishment and Fit-Out (2014)
BREEAM Scheme Version	2014 (SD216)
Assessment Stage	Pre-Assessment

BREEAM Assessment Information

Building Type and Sub-Group	Office – General Office Building
Building Floor Area	~ 779 sqm NIA
Building Services (Heating)	Electric Radiators
Building Services (Cooling)	VRF
Building Services (DHW System)	Point of Use
Building Services (Controls)	TBC
Commercial Cold Storage Systems	N/A
Transportation Systems	Yes, existing transportation systems
Laboratory (Type, Area and Size)	N/A
Laboratory Containment level	N/A
Fume Cupboards/Containment Devices	N/A
Unregulated Water Uses	No

Contents

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1.Executive Summary

This report illustrates the BREEAM 2014 Non-Domestic Refurbishment and Fit-Out rating that the current design proposals for 20-22 Southampton Place can achieve under the scheme.

The proposed works comprise full planning and listed building consent application for change of use of Nos. 20-22 Southampton Place and 46-47 Bloomsbury Square from Class F1 (learning and non-residential institution) to Class E (commercial, business and service), together with internal and external refurbishment works and the erection of replacement external plant.

Assessment Scope		Assessed?
Part 1	**Fabric and Structure:** Building façade, roof, and windows. Where 50% of the individual element is upgraded/refurbished OR where this makes up over 25% of total building envelope.	No
Part 2	**Core Services:** Heating, ventilation and air-conditioning (HVAC), building management system, water services and low/zero carbon (LZC) technologies. Where at least two systems are installed/upgraded and require compliance with Building Regulations.	Yes
Part 3	**Local Services:** Lighting (fittings, systems and controls), local ventilation, heating and cooling; point of use water heaters. Where at least two fixed local services are installed/upgraded.	Yes
Part 4	**Interior Design:** Wall, floor and ceiling coverings; partitions, raised floor systems; furniture and fittings. Where alterations are made to at least 50% by area of two or more of these AND at least one of the following: Sanitary fittings, equipment and local electrical installations.	Yes

Table 1: BREEAM RFO Assessment Scope.

Following an initial pre-assessment workshop, the following scores and ratings have been established. To note these scores are based on a Part 2,3 & 4 assessment.

The predicted baseline score based on the current design is **34.56%**, a rating of **PASS**. A score of **30%** is required to achieve a rating of PASS.

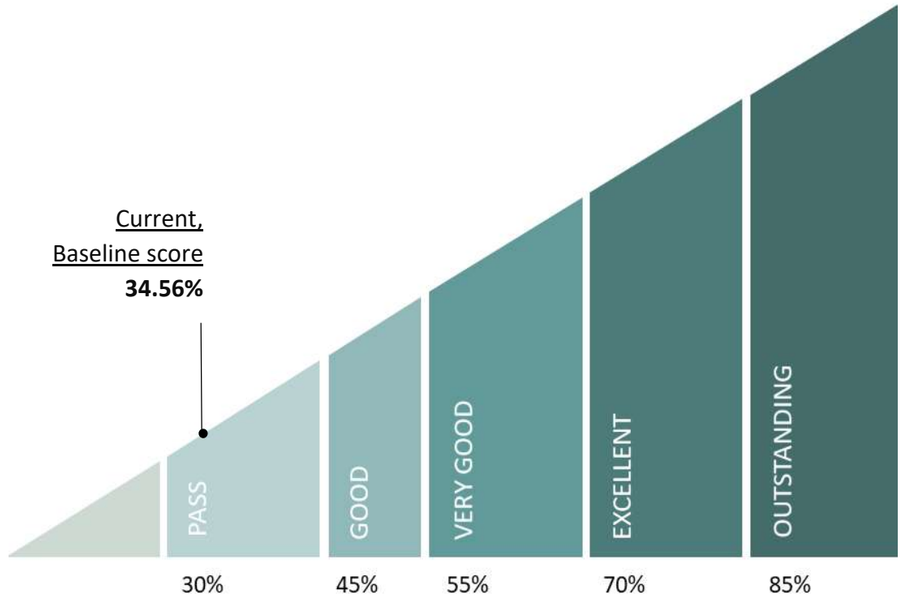

Figure 1: BREEAM performance chart with score represented.

In addition to meeting the minimum score thresholds for a BREEAM rating, credits that are assigned as minimum standards to particular ratings, are also required within the final credits achieved. Currently the following minimum standards are not feasible due to the building's listed nature and spatial constraints. A full review of the minimum standards is included within Section 4.

Ene 02 Energy Monitoring – Monitoring Major Energy Uses
Minimum standard for BREEAM Very Good, Excellent and Outstanding ratings.

Credit not considered feasible following review of criteria by electrical sub-contractor. The design of the electrical installation includes for separate metering to the lighting and power systems.

The requirement for metering to the space heating and domestic hot water systems would be difficult to achieve without further intrusion into the existing building fabric to install additional sub main cables, distribution boards and the possibility of an additional riser throughout each building.

Wst 03 Operational Waste

Minimum standard for BREEAM Excellent and Outstanding ratings.

Credit considered not achievable as due to space and design constraints provision of a bin store is not included within the scope of works.

A detailed Table setting out the scoring strategy associated with the above ratings is provided within Section 6.

2. Introduction

Verte Ltd have been instructed by Morgan Lovell to carry out a BREEAM Pre-assessment of the proposed works to 20-22 Southampton Place.

The proposed works comprise full planning and listed building consent application for change of use of Nos. 20-22 Southampton Place and 46-47 Bloomsbury Square from Class F1 (learning and non-residential institution) to Class E (commercial, business and service), together with internal and external refurbishment works and the erection of replacement external plant.

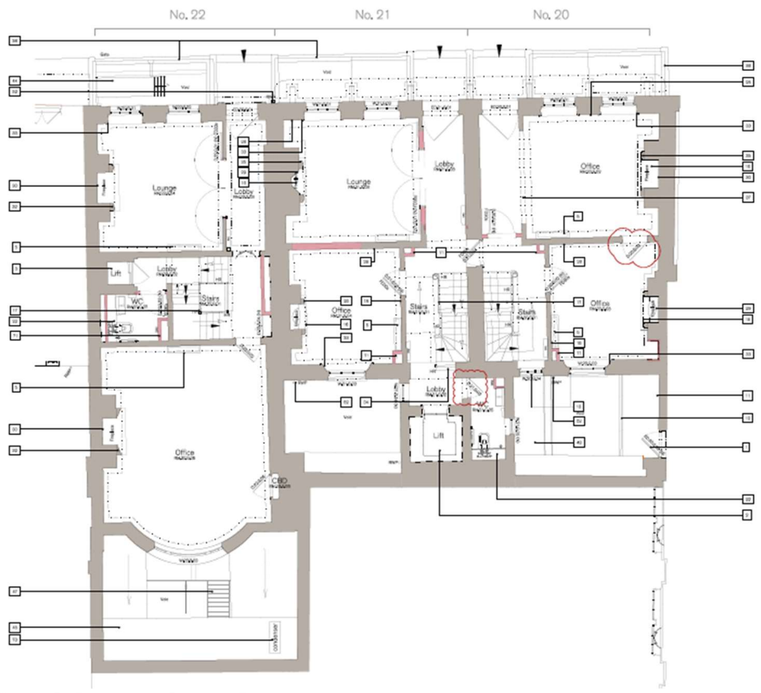

Figure 2: Proposed Ground Floor layout.

The report provides a status of the development's performance with regards to BREEAM Refurbishment and Fit-Out 2014.

The following sections detail the proposed development's performance against the BREEAM criteria.

2.1 BREEAM Refurbishment and Fit-Out 2014

The BREEAM UK Refurbishment and Fit-out scheme is a performance-based assessment method and certification scheme for existing building refurbishment and fit-out projects.

The primary aim of BREEAM UK Refurbishment and Fit-out is to promote the delivery of sustainable refurbishment and fit-out, to mitigate the life cycle impacts of existing 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 refurbishment/fit-out works process.

This enables the client, through the BREEAM assessor and the BRE Global certification process, to measure, evaluate and reflect the performance of their refurbishment or fit-out project against best practice in an independent and robust manner.

As illustrated in Figure 3, the scheme provides a modular framework split up into four separate parts that are assessed according to the scope of work of the project, with each part defining a set of individual measures and associated criteria that each project is assessed against. This allows projects to be assessed against the parts that are within the scope of influence of the project, while also ensuring that similar project types are assessed against a comparable set of criteria.

This approach provides the scheme's users with a flexible means of measuring the environmental performance of their building and comparing it with other buildings across the property market, backed with the assurance that independent third-party certification of the assessment process provides.

Figure 1: BREEAM RFO 2014 Assessment Parts.

The performance of a BREEAM-assessed project is quantified by several individual measures and associated criteria stretching across a range of environmental issues, which highlights the full set of assessment issues that may be applied to a project. The performance of the project is then ultimately expressed as a single certified BREEAM rating, i.e., the label (Section 3 describes how a BREEAM rating is calculated).

2.2 Recent Workshops

Verte Ltd met with the Morgan Lovell design team on the 20/06/2022, then met additional with the wider client team on 07/07/2022, to review the design and to set out a feasible scoring strategy and determine the maximum BREEAM score that could be achieved.

3. BREEAM Status Summary

This section is intended as a summary of the BREEAM assessment status for 20-22 Southampton Place based on a Part 2, 3 and 4 assessment.

3.1 Summary Score Sheet

Ref No.	Description	Credits	
		Available	Baseline
Management			
Man 01	Project Brief and Design	4	0
Man 02	Life cycle cost and service life planning	4	1
Man 03	Responsible construction practices	6 + 1e	6
Man 04	Commissioning and Handover	3	3
Health and Wellbeing			
Hea 01	Visual Comfort	7 + 1e	0
Hea 02	Indoor Air Quality	5 + 2e	1
Hea 04	Thermal Comfort	3	0
Hea 05	Acoustic Performance	3	0
Hea 06	Safety and Security	1	0
Energy			
Ene 01	Reduction of CO_2 emissions	15 + 5e	5
Ene 02	Energy Monitoring	2	0
Ene 03	External Lighting	1	0
Ene 04	Low Carbon Design	3	0
Ene 06	Energy Efficient Transportation Systems	2	0
Transport			
Tra 01	Public Transport Accessibility	3	3
Tra 02	Proximity to amenities	1	1
Tra 03	Cyclist facilities	2	0
Tra 04	Maximum Car Parking Capacity	2	2
Tra 05	Travel Plan	1	0
Water			
Wat 01	Water Consumption	5 + 1e	2
Wat 02	Water Monitoring	1	0
Wat 03	Leak Detection	2	0
Materials			
Mat 01	Life Cycle Impacts	6 + 1e	3
Mat 03	Responsible Sourcing of Materials	4 + 1e	2
Mat 04	Insulation	1	1
Mat 05	Designing for Durability and Resilience	1	1
Mat 06	Material Efficiency	1	0
Waste			
Wst 01	Construction Waste Management	7	1
Wst 03	Operational Waste	1	0
Wst 04	Speculative Floor and Ceiling Finishes	1	0
Wst 06	Functional Adaptability	1	0
Pollution			
Pol 01	Impact of Refrigerants	3	0
Pol 02	NO_x Emissions	0	0
Pol 03	Surface Water Run Off	2	2
Pol 04	Reduction of night-time light pollution	1	0
Pol 05	Noise Attenuation	1	1
Innovation			
ALL	Approved Innovation and Exemplary Level Credits	1	0

RFO Office Assessment	
Baseline Target Score	**34.56%**

3.2 Scoring Scenario

It has been established that the development currently has the potential to achieve a score of **34.56%** which provides a **Pass** rating with a **4.56%** margin of contingency over the minimum 30% required for BREEAM Pass.

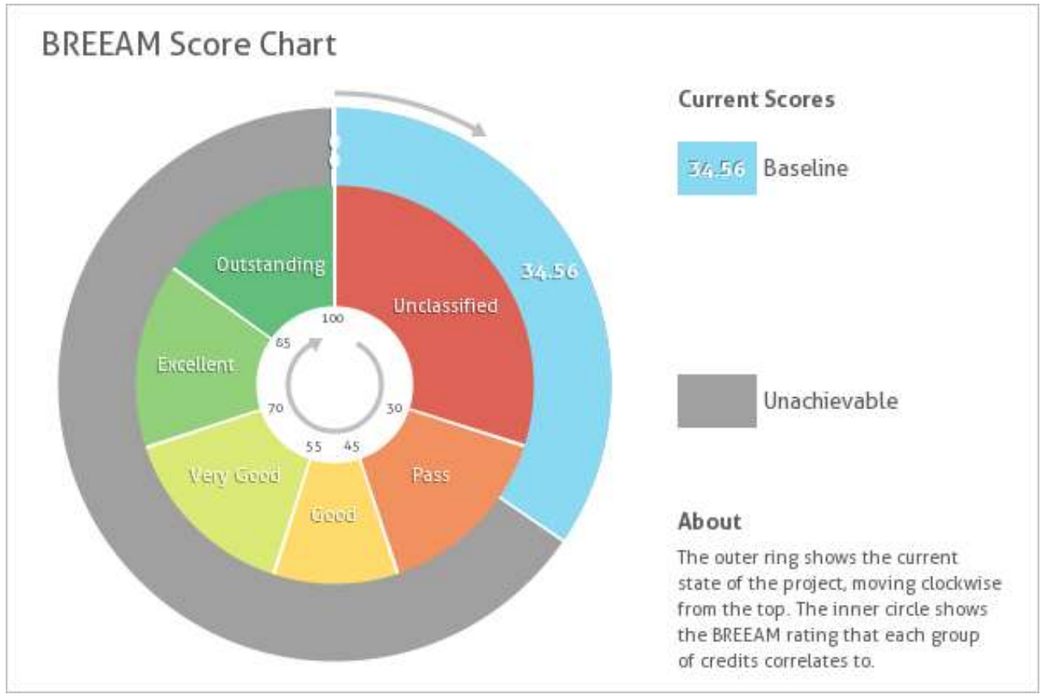

Figure 2: BREEAM Target Score.

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4. Minimum Standards

The following Table sets out the minimum standards associated with each BREEAM rating and feasibility on 20-22 Southampton Place.

BREEAM Issue	Pass	Good	Very Good	Excellent	Outstanding	Achieved?
Man 03 Responsible construction practices	None	None	None	One credit (Considerate construction)	Two credits (Considerate construction)	Included within 34.56% target score.
Man 04 Commissioning and handover	None	None	None	Criterion 9 (Building User Guide)	Criterion 9 (Building User Guide)	Included within 34.56% target score.
Ene 01 Reduction of energy use and carbon emissions	None	None	None	Parts 1, 2, 3 and 4 (full assessments): Six credits, varies for other assessment types	Parts 1, 2, 3 and 4 (full assessments): Ten credits, varies for other assessment types	Currently 5 credits are anticipated based on a high level review of the Ene 01 performance schedule. Feasibility of additional credits would require a detailed energy performance review.
Ene 02 Energy monitoring	None	None	Parts 2, 3 and 4: One credit (first sub-metering credit)	Parts 2, 3 and 4: One credit (first sub-metering credit)	Parts 2, 3 and 4: One credit (first sub-metering credit)	Credit not considered feasible following review of criteria by electrical sub-contractor. The design of the electrical installation includes for separate metering to the lighting and power systems. The requirement for metering to the space heating and domestic hot water systems would be difficult to achieve without further intrusion into the existing building fabric to install additional sub main cables, distribution boards and the possibility of an additional riser throughout each building.
Wat 01 Water consumption	None	One credit (where applicable)	One credit (where applicable)	One credit (where applicable)	Two credits (where applicable)	Included within 34.56% target score.
Wat 02 Water monitoring	None	Part 2: Criterion 1 only	Part 2: Criterion 1 only	Part 2: Criterion 1 only	Part 2: Criterion 1 only	Included within 34.56% target score.
Mat 03 Responsible sourcing of materials	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Included within 34.56% target score.
Wst 01 Project waste management	None	None	None	None	One credit	Included within 34.56% target score.
Wst 03 Operational waste	None	None	None	One credit	One credit	Credit considered not achievable as due to space and design constraints provision of a bin store is not included within the scope of works.

5. Early Action Credits

BREEAM criteria includes time critical elements which cannot be awarded if they are not dealt with in the prescribed timeframe. These credits are considered no longer achievable and have been excluded from scoring. The total of these credits is 8.45%, which even if included as part of the scoring would be a shortfall of the minimum 70% required for BREEAM Excellent.

BREEAM RFO 2014 Credit	Reports/Actions Required	RIBA Stage	Responsibility
Man 01 Project Brief and Design Stakeholder Consultation (Project Deliver)	Project Execution Plan and Design Team Responsibility Matrix required. Meeting minutes over the course of the design phases to be collated ongoingly.	To be completed by the end of **Stage 2**.	**Project Manager**
Man 01 Project Brief and Design Stakeholder Consultation (Third Party)	Stakeholder consultation to be undertaken, ideally to be evidenced through a Statement of Community Involvement.	To be completed by the end of **Stage 2**.	**Project Manager**
Man 01 Project Brief and Design – BREEAM AP	BREEAM Accredited Professional to be appointed to monitor and advise on performance targets.	To be appointed within **Stage 2.**	**BREEAM AP**
Man 02 Life Cycle Cost and Service Life Planning – Elemental LCC	An Elemental Life Cycle Cost analysis to be undertaken, with recommendations showing how material choices can provide cost savings.	To be completed within **Stage 2.**	**Life Cycle Cost Consultant**
Hea 06 Safety Security	A Security Needs Assessment should be undertaken by a security specialist, providing design recommendations.	To be completed within **Stage 2.**	**Security Consultant**
Mat 06 Material Efficiency	Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life. The above is carried out by the design/construction team in consultation with the relevant parties at each of the following RIBA stages: • Preparation and Brief, • Concept Design, • Developed Design, • Technical Design, • Construction.	To be started within **Stage 1.**	**Whole Design Team**
Wst 06 Functional Adaptability	A building-specific functional adaptation strategy study has been undertaken by the client and design team which includes recommendations for measures to be incorporated to facilitate future adaptation.	To be completed by the end of **Stage 2.**	**Design Team**

6. Pre-assessment Scoring

BREEAM RFO 2014 Offices Design Stage Register - Project 5a, 20-22 Southampton Place
BREEAM Reg: TBC RevB 20220720/ Parts 2, 3 & 4

Refer to Main BREEAM Manual for the Compliance Requirements.
The type of evidence which should be provided is detailed below.
Evidence should be collated in individual credit folders (electronically).
Highlighted in Grey - Not relevant to scheme.
GREEN: CREDIT ACHIEVED
AMBER: FURTHER INFORMATION REQUIRED TO ACHIEVE THE CREDIT
RED: INFORMATION NOT AVAILABLE TO ACHIEVE THE CREDIT

Target Score: 34.56% PASS

Verte sustainability

			Refurbishment (RFO)					
Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Man 01.1	Project Brief & Design - Stakeholder Consultation (Project Delivery)	**One credit where** 1.A clear sustainability brief is developed prior to Concept Design which sets out: a. Client requirements e.g. internal environmental conditions required b. Sustainability objectives and targets including target BREEAM rating, business objectives etc. c. Timescales and budget d. List of consultees and professional appointments that may be required e.g. Suitably Qualified Acoustician etc. e. Constraints for the project e.g. t Technical, legal, physical, environmental. 2.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. 3.In defining the roles and responsibilities for each key phase of the project, the following must be considered: a. End user requirements b. Aims of the design and design strategy c. Particular installation and construction requirements/limitations d. design and construction risk assessments e.g. CDM, legionella risk assessment e. Legislative requirements e.g. building control notification, heritage requirements f. Procurement and supply chain g. Identifying and measuring project success in line with project brief objectives h. Occupiers' budget and t Technical expertise in maintaining any proposed systems i. Maintainability and adaptability of the proposals j. Requirements for the production of project and end user documentation k. Requirements for commissioning, training and aftercare support. 4.The project team demonstrate how the project delivery stakeholder contributions and the outcomes of the consultation process have influenced or changed the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design.	1	0	0	Provide: 1) The project brief highlighting how items 1-a to 1-e are covered. 2) The project responsibility matrix illustrating key stakeholder responsibilities at key stages. 3) The Project Execution Plan, illustrating how items 3-a to 3-k are considered. 4) Meeting minutes confirming the required stakeholders have been involved from RIBA STAGE 2 and that the required topics have been covered and roles and responsibilities have been allocated. 5) Examples of how this process has impacted on the Initial Project Brief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design. This can be meeting minutes / marked up drawings.		24/06/2022: Credit requires early stakeholder consultation from the design team. At the time of this BREEAM review the credit is now considered as unachievable if actions have not already been completed.
Man 01.2	Project Brief & Design - Stakeholder Consultation (Third Party)	**One credit where** 4. Prior to completion of the Concept Design stage, all relevant third party stakeholders have been consulted by the design team and this covers the minimum consultation content. 5. The project must demonstrate how the stakeholder contributions and outcomes of the consultation exercise have influenced or changed the Initial Project Brief and Concept Design. 6. Prior to completion of the detailed design (RIBA Stage 4, T Technical Design or equivalent), consultation feedback has been given to, and received by, all relevant parties. PLEASE VIEW: GN Man 01.2	1	0	0	Provide: 1) Consultation plan confirming the required stakeholders shall be consulted with. 2) Meeting minutes and agenda confirming the required stakeholders have been involved from RIBA Stage 2 and that the required topics have been covered and roles and responsibilities have been allocated. 3) Examples of how this process has impacted on the Initial Project Brief and the Concept Design. This can be meeting minutes / marked up drawings. 4) Meeting minutes, marked up drawings etc. confirming feedback has been fed back prior to RIBA Stage 4.		24/06/2022: Credit requires early stakeholder consultation from the design team. At the time of this BREEAM review the credit is now considered as unachievable if actions have not already been completed.
Man 01.3	Project Brief & Design - Sustainability Champion (Design)	**One credit where** 9.A Sustainability Champion has been appointed to facilitate the setting and achievement of BREEAM performance target(s) for the project. The design stage Sustainability Champion is appointed to perform this role during the feasibility stage (Stage 1, Preparation and Brief stage, as defined by the RIBA Plan of Work 2013 or equivalent). 10.The defined BREEAM performance target(s) has been formally agreed between the client and design/project team no later than the Concept Design stage (RIBA Stage 2 or equivalent). 11. To achieve this credit at the interim design stage assessment, the agreed BREEAM performance target(s) must be demonstrably achieved by the project design. This must be demonstrated via the BREEAM Assessor's design stage assessment report.	1	0	0	Provide: 1) Letter confirming BREEAM AP appointment at RIBA Stage 1. 2) Contract / Planning requirements confirming the BREEAM Rating required, RIBA Stage 2. 3) Meeting minutes confirming the attendance of the BREEAM AP and that sustainability is included in all design team meeting agendas.		24/06/2022: Credit requires early appointment of a BREEAM AP. Though an initial BREEAM Pre-assessment was undertaken there has not been enough early design stage involvement from a BREEAM AP to achieve the credit.

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Target Score: 34.56% PASS

Verte sustainability

			Refurbishment (RFO)					
Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Man 01.4	Project Brief & Design - Sustainability Champion (monitoring progress)	**One credit where** 12. The Sustainability Champion criteria 8, 9 and 10 have been achieved. 13. A Sustainability Champion is appointed to monitor progress against the agreed BREEAM performance target(s) throughout the design process and formally report progress to the client and design team. To do this the Sustainability Champion must attend key project/design team meetings during the Concept Design, Developed Design and T Technical Design stages, as defined by the RIBA Plan of Work 2013, reporting during, and prior to, completion of each stage, as a minimum	1	0	0	Provide: 1) SAME AS ABOVE		24/06/2022: Credit requires early appointment of a BREEAM AP. Though an initial BREEAM Pre-assessment was undertaken there has not been enough early design stage involvement from a BREEAM AP to achieve the credit.
Man 02.1	Life cycle cost and service life planning - Elemental life cycle cost (LCC)	**Two credits where** 1.An elemental life cycle cost (LCC) analysis has been carried out at Process Stage 2 (equivalent to Concept Design - RIBA Stage 2) together with any design option appraisals in line with 'Standardised method of life cycle costing for construction procurement' PD 156865:20081. 2.The LCC analysis shows: a. An outline LCC plan has been undertaken for the project based on the building's basic structure and envelope, appraising a range of options and based on the life expectancy of the refurbished building, e.g. 20, 30, 50+ years. b. The servicing strategy for the project outlining services component over a 15 -year period, in the form of an 'elemental LCC Plan'. c. A fit-out strategy is developed outlining fit-out options over a 10-year period.	2	0	0	Provide: 1) Elemental LCC.		24/06/2022: Credit not achievable as Stage 2 Life Cycle Costing analysis was not completed.
Man 02.2	Life cycle cost and service life planning - Component life cycle cost (LCC)	**One credit where** 3.A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to T Technical Design – RIBA Stage 4) in line with PD 156865:2008 and includes the following component types (where present): Part 1 assessments, including components within scope of works. Envelope, e.g. cladding, windows, and/or roofing Part 2 & 3 assessments including newly specified local and core services. Newly specified local and/or core service equipment, e.g. boiler, air-conditioning, air handling unit, and/or controls etc. Parts 1 – 4, where finishes are within scope of works. Finishes, e.g. walls, partitions, floors and/or ceilings etc. Where external spaces are within scope of works. External spaces, e.g. alternative hard landscaping, boundary protection. 4.Demonstrate, using appropriate examples provided by the design team, how the component level LCC plan has been used to influence building and systems design/specification to minimise life cycle costs and maximise critical value	1	0	0	Provide: 1) Component level LCC. 2) Marked up drawings/specification confirming how the component level LCC has influenced the design.		20/07/2022: Credit not included within current scope of works.
Man 02.3	Life cycle cost and service life planning - Capital cost reporting	**One credit where:** 5. Report the capital cost for the building in pounds per square metre (£k/m2), via the BREEAM Assessment Scoring and Reporting tool, Assessment Issue Scoring tab, Management section.	1	1	0	Provide: 1) Data cost in £ per square meter.	Cost Consultant	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell.

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Verte sustainability

			Refurbishment (RFO)					
Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Man03.1	Pre-requisite & Environmental Management	**Pre-requisite** 1. All timber and timber based products used on the project is ' Legally harvested and traded timber' **One Credit where** 2.The principal contractor operates an environmental management system (EMS) covering their main operations. The EMS must be either: a. Third party certified, to ISO 14001/EMAS or equivalent standard; or b. Have a structure that is in compliance with BS 8555: 2003 and has reached phase four of the implementation stage, 'implementation and operation of the environmental management system', and has completed phase audits 1 to 4, as defined in BS 8555:2003. See compliance note CN5For Healthcare NHS buildings, see the pre-requisite for this issue in compliance note CN8 3.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.	1	1	0	Provide: 1) Copy of the prelims including the requirements.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. The ML team operate an Environmental Management System and are able to implement on-site procedures required to achieve credit.
Man 03.2	Responsible Construction Practices - BREEAM AP Construction Stage	**One credit where:** 4. A BREEAM AP or Site Sustainability Manager (SSM) is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability/BREEAM criteria, during the Construction, Handover and Close Out stages 5 and 6).To do this the Sustainability Champion will ideally be site based or will visit the site regularly to carry out spot checks, with the relevant authority to do so and require action to be taken to address shortcomings in compliance. The Sustainability Champion will monitor site activities with sufficient frequency to ensure that risks of non-compliance are minimised. 5. The defined BREEAM performance target forms a requirement of the principal contractor's contract. 6. To achieve this credit at the final post construction stage of assessment, the BREEAM-related performance target for the project must be demonstrably achieved by the project	1	1	0	Provide: 1) Contract Prelims requirements confirming the BREEAM Rating required, on the Main Contractor. 2) BREEAM AP/SSM reports during construction.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. Morgan Lovell have a sustainability team who are able to undertake the BREEAM AP role at construction stage.
Man 03.3	Responsible Construction Practices - CCS Mandatory: Excellent: 1 credit Outstanding: 2 credits	**Up to two credits :** 7. Where the principal contractor achieves: a. One credit where the contractor achieves 'compliance' with the criteria of a compliant scheme (a CCS score between 25 and 34) - A score of at least 5 in each of the five sections must be achieved b. Two credits where the contractor significantly exceeds 'compliance' with the criteria of the scheme (a CCS score between 35 and 39) - A score of at least 7 in each of the five sections must be achieved Innovation: As CCS Score of more than 40.	2 + 1 Innov	2	0	Provide: 1) Copy of the prelims including the requirements.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell.
Man 03.4	Responsible Construction Practices - Monitoring of Construction Site Impacts	**Up to two credits** 1) Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data (where measured) resulting from all on-site construction processes. 2) First monitoring credit - Utility consumption Energy consumption & Water consumption 3) Second monitoring credit - Transport of construction materials and waste **PLEASE VIEW: GN Man 03.4**	2	2	0	Provide: 1) Copy of the prelims including the requirements.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. The ML team are able to implement on-site procedures required to achieve credits.
Man 04.1	Commissioning and handover - Commissioning and testing schedule and responsibilities	**One credit where** 1. A schedule of commissioning and testing that identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and testing and inspecting building fabric. 2. All commissioning activities are carried out in accordance with current Building Regulations, BSRIA1 and CIBSE2 guidelines and/or other appropriate standards, where applicable and complaint commissioning of the BMS (if applicable). 3. An appropriate project team member(s) is appointed to monitor and programme pre-commissioning, commissioning, testing and, where necessary, re-commissioning activities on behalf of the client. 4. The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of works, allowing for the required time to complete all commissioning and testing activities prior to handover.	1	1	0	Provide: 1) Copy of the prelims including the requirements.	MEP	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. To note, that while the credit criteria can be implemented, there are minimal systems that will require commissioning.

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Target Score: 34.56% PASS

Verte sustainability

			Refurbishment (RFO)					
Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Man 04.2	Commissioning and handover- Commissioning building services	**One credit where** 5.The commissioning and testing schedule and responsibilities credit is achieved. 6.For projects where work is being undertaken to upgrade, renovate or install new building services and systems. a. For complex building services and systems, a specialist commissioning manager is appointed during the design stage (by either client or contractor) with responsibility for: I. Undertaking design reviews and giving advice on suitability for ease of commissioning ii.Providing commissioning management input to construction programming and during installation stages iii.Management of commissioning, performance testing and handover/post handover stages. b.For simple building services, this role can be carried out by an appropriate project team member (see criterion 3), provided they are not involved in the general installation works for the building services system(s).	1	1	0	Provide: 1) Copy of the prelims including the requirements.	MEP	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. To note, that while the credit criteria can be implemented, there are minimal systems that will require commissioning. Due to the scope of MEP services the specialist commissioning manager could be an appropriate ML team member.
Man 04.4	Commissioning and handover - Handover Mandatory Requirement: Excellent: BUG	**One credit where:** 9. A Building User Guide (BUG) is developed prior to handover for distribution to the building occupiers and premises managers . The guide includes, as far as possible, all relevant sections regarding the services and fabric installed. On completion of works the building owner/agent/user hands it over to the fit-out contractor, who can then complete the relevant sections based on the fit-out strategy. Criteria applicable only for fully fitted out buildings: 10. A training schedule is prepared for building occupiers/premises managers, timed appropriately around handover and proposed occupation plans, which includes the following content as a minimum: a. The building's design intent b. The available aftercare provision and aftercare team main contact(s), including any scheduled seasonal commissioning and post occupancy evaluation c. Introduction to, and demonstration of, installed systems and key features, particularly building management systems, controls and their interfaces d. Introduction to the Building User Guide and other relevant building documentation, e.g. design data, t Technical guides, maintenance strategy, operations and maintenance (O&M) manual, commissioning records, log book etc. e. Maintenance requirements, including any maintenance contracts and regimes in place.	1	1	0	Provide: 1) Copy of the prelims including the requirements.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell.
Hea 01.1	Visual Comfort - Glare Control	**One credit where** 1. The potential for disabling glare has been designed out of all relevant building areas using a glare control strategy, either through building form and layout and/or building design measures. 2. The glare control strategy avoids increasing lighting energy consumption, by ensuring that: a. The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The system should not inhibit daylight from entering the space under cloudy conditions, or when sunlight is not on the facade. AND b. The use or location of shading does not conflict with the operation of lighting control systems.	1	0	0	Provide: 1) Drawings or specification confirming the provision of occupant controlled glare control. 2) Where the glare risk has been designed out of the building, examples of this are required (marked up drawings), indicating how this is achieved.		20/07/2022: Credit not included within current scope of works.
Hea 01.2	Visual Comfort - Daylighting	**One credit where** The relevant building areas achieve the required daylight factors/criteria. 3.Up to three credits are awarded on a sliding scale depending on the percentage of relevant building areas that comply with one of the following daylighting criteria: a.The relevant building areas meet good practice daylight factor(s) and other criterion as outlined in Table - 12 and Table - 13: OR b. The relevant building areas meet good practice average and minimum point daylight illuminance criteria a outlined in Table - 14. 4. Two credits where daylighting provision, averaged over all relevant spaces, has improved after refurbishment or fit-out by 30% or more and there is a minimum glazing to floor area ratio of either: a. 5% glass to floor area ratio for side windows; OR b.2.5% glass to floor area ratio for roof lights; 5.One credit where daylighting provision, averaged over all relevant spaces, has improved after refurbishment or fit-out by 15% or more and there is a minimum glazing to floor area ratio of either: a. 5% glass to floor area ratio for side windows; OR b.2.5% glass to floor area ratio for roof lights	3 +1 Innov	0	0	Provide: 1) Compliant daylighting calculations.		24/06/2022: Credit not feasible due to building layout. Office spaces at lower ground level would not achieve suitable average daylighting levels for compliance with BREEAM requirements.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Hea 01.3	Visual Comfort - View Out	**One credit where** 4. 95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out. 5. The window/opening must be ≥ 20% of the surrounding wall area (Surrounding wall area refers to the area (in m2) of the internal wall on which the window/opening is located, including the area of the window/opening itself). Where the room depth is greater than 7m, compliance is only possible where the percentage of window/opening is the same as, or greater than, the values in table 1.0 of BS 8206.	2	0	0	Provide: 1) Drawings confirming the layout, distance of all desks from windows. 2) Drawings/calculations confirming windows are >20% of in wall area.		24/06/2022: Credit not feasible due to building layout. Office spaces at lower ground and ground level do not have adequate window areas for compliance with view out criteria.
Hea 01.4	Visual Comfort - Internal & External Lighting Levels & Controls	**One credit where:** - All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. - Internal lighting - Criteria applicable only to Fully fitted-out buildings 7. All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. 8. Internal lighting in all relevant areas of the building is designed to provide an illuminance (lux) level in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard. 9. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 72 sections 3.3, 4.6, 4.7, 4.8 and 4.9. 10. All external lighting located is specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas3 and BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places. 11. Internal lighting is zoned to allow for occupant control (Light switches or controls for a particular area/zone of the building that can be accessed and operated by the individual(s) occupying that area or zone. Such controls will be located within, or within the vicinity of, the zone or area they control) in accordance with the criteria below for relevant areas present within the building: a. In office areas, zones of no more than four workplaces b. Workstations adjacent to windows/atria and other building areas separately zoned and controlled c. Seminar and lecture rooms: zoned for presentation and audience areas d. Library spaces: separate zoning of stacks, reading and counter areas e. Teaching space or demonstration area f. Whiteboard or display screen g. Auditoria: zoning of seating areas, circulation space and lectern area h. Dining, restaurant, café areas: separate zoning of servery and seating/dining areas i. Retail: separate zoning of display and counter areas j. Bar areas: separate zoning of bar and seating areas k. Wards or bedded areas: zoned lighting control for individual bed spaces and control for staff over groups of bed spaces l. Treatment areas, dayrooms, waiting areas: zoning of seating and activity areas and circulation space with controls accessible to staff.	1	0	0	Provide: 1) Specification documentation confirming HFB and required internal and external lighting levels shall be achieve. 2) Drawings/Specification confirming the required controls shall be included in the design.		24/06/2022: Credit considered not feasible. Any office space that will have more than 4 work spaces will require additional lighting controls that an occupant is able to control, in addition to one light switch within each room.
Hea02.1	Indoor Air Quality Plan (IAQ)	**One credit where** 1.An indoor air quality plan has been produced and implemented, with the objective of facilitating a process that leads to design, specification and installation decisions and actions that minimise indoor air pollution during the design, construction and occupation of the building. The indoor air quality plan must consider the following: a.Removal of contaminant sources b.Dilution and control of contaminant sources c.Procedures for pre-occupancy flush out d.Protection of Heating Ventilation and Air Conditioning (HVAC) systems from sources of pollution during refurbishment/fit-out works e.g. dust e.Procedures for protecting the indoor air quality of areas outside of the refurbishment or fit-out zone that may be affected by the refurbishment/fit-out works f.Procedures for identifying and implementing third party testing and analysis required to ascertain that the contaminant sources have been removed effectively before occupancy g.Commitments for maintaining indoor air quality in-use, e.g. maintenance and cleaning of the HVAC system, ductwork and filters.	1	0	0	Provide: 1) A compliant Indoor Air Quality Plan (IAQP), (see manual page 92, SD216) OR 2) At design stage, a contractual obligation to produce a compliant IAQP.		20/07/2022: Credit not included within current scope of works.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Hea 02.2	Indoor Air Quality - Ventilation	**One credit where:** The building has been designed to minimise the concentration and recirculation of pollutants in the building as follows: 2. Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation. 3. Design ventilation pathways to minimise the build-up of air pollutants in the building, as follows: a. In air conditioned and mixed mode buildings/spaces: i. The building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution. OR ii. The location of the building's air intakes and exhausts, in relation to each other and external sources of pollution, is designed in accordance with BS EN 13779:20071 Annex A2. b. In naturally ventilated buildings/spaces: openable windows/ventilators are over 10m from sources of external pollution. For Shell & Core buildings: Where ventilation systems are not within the remit of the shell and core developer, compliance can be demonstrated through the building servicing strategy where this is predetermined by the built form or core services provision as appropriate to the shell and core option being followed. 4. Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779:2007 Annex A3. 5. Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO2) or air quality sensors specified and: a. In mechanically ventilated buildings/spaces: sensor(s) are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space. b. In naturally ventilated buildings/spaces: sensors either have the ability to alert the building owner or manager when CO2 levels exceed the recommended set point, or are linked to controls with the ability to adjust the quantity of fresh air, i.e. automatic opening windows/roof vents.	1	0	0	Provide: 1) Relevant section/clauses of the building specification or contract 2) Formal letter from the design team with details of the ventilation strategy and calculations/results from appropriate software modelling tool(s) 3) Manufacturers'/suppliers' literature		24/06/2022: Credit not feasible as not all openable windows to office spaces are <10m away from the main road, which is considered as a source of pollution.
Hea 02.3	Indoor Air Quality - Volatile organic compound (VOC) emission levels (products)	**One credit where** VOC levels compliant for products. 6. All decorative paints and varnishes specified meet the criteria in Table - 20 7. At least five of the seven remaining product categories listed in Table - 20 meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions (listed in the table). The criteria under this credit would require that material finishes that contain adhesives, are carefully selected, in order to demonstrate compliance to VOC and Formaldehyde testing requirements. The elements that need to be reviewed are: - Paints and Varnishes - Wood panels (including particle board, fibreboard including MDF, OSB, cement bonded particle board, plywood, solid wood panel and acoustic board) - Timber structures (e.g. glue laminated timber) - Wood flooring (e.g. parquet) - Resilient textile and laminated floor coverings (e.g. vinyl, linoleum, cork, rubber, carpet, laminated wood flooring) - Suspended ceiling tiles - Flooring adhesives - Wall coverings	1	1	0	Provide: 1) A materials schedule listing all relevant VOC containing finishes. 2) Compliant certification & data sheets to demonstrate compliance with BREEAM VOC criteria. OR 1) At Design Stage, contractual obligation for the contractor to achieve the stated objectives.	Architect	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. Consideration should be given to ensure low VOC content of any finishing products.

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Hea02.4	Volatile Organic Compounds - TESTING	**One credit where** VOC levels measured at post completion. 8.The formaldehyde concentration level is measured post construction (but pre-occupancy) and is found to be less than or equal to 100µg/averaged over 30 minutes (WHO guidelines for indoor air quality: Selected pollutants, 20102). 9.The total volatile organic compound (TVOC) concentration level is measured post construction (but pre-occupancy) and found to be less than 300µg/over 8 hours, in line with the Building Regulation requirements. 10.Where VOC and formaldehyde levels are found to exceed the limits defined in criteria 8 and 9, the project team confirms the measures that have, or will be taken, in accordance with the IAQ plan, to reduce the levels to within these limits, including re-measurement. 11.The testing and measurement of the above pollutants are in accordance with the following standards where relevant: a. BS ISO 16000-4: 2011 Diffusive sampling of formaldehyde in air3 b.BS ISO 16000-6: 2011 VOCs in air by active sampling4 c.BS EN ISO 16017-2: 2003 VOCs - Indoor, ambient and workplace air by diffusive sampling5 d.BS ISO 16000-3: 20116 Formaldehyde and other carbonyls in air by active sampling. 12.The measured concentration levels of formaldehyde (µg/m3) and TVOC (µg/m3) are reported, via the BREEAM Assessment Scoring and Reporting Tool.	1	0	0	Provide: 1) A compliant Indoor Air Quality Plan (IAQP), (see manual page 92, SD216) OR 2) At design stage, a contractual obligation to produce a compliant IAQP. 3) Commitment to carry out necessary testing post construction		20/07/2022: Credit not included within current scope of works.
Hea 02.5	Indoor Air Quality - Potential for Natural Ventilation	**One credit where:** The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios. The indoor air quality plan must consider the following: a.Removal of contaminant sources b.Dilution and control of contaminant sources c.Procedures for pre-occupancy flush out d.Protection of Heating Ventilation and Air Conditioning (HVAC) systems from sources of pollution during refurbishment/fit-out works e.g. dust e.Procedures for protecting the indoor air quality of areas outside of the refurbishment or fit-out zone that may be affected by the refurbishment/fit-out works f.Procedures for identifying and implementing third party testing and analysis required to ascertain that the contaminant sources have been removed effectively before occupancy g.Commitments for maintaining indoor air quality in-use, e.g. maintenance and cleaning of the HVAC system, ductwork and filters.	1	0	0	Provide: 1) Relevant section/clauses of the building specification or contract 2) Formal letter from the design team with details of the ventilation strategy and calculations/results from appropriate software modelling tool(s) 3) Manufacturers'/suppliers' literature		24/06/2022: Credit not feasible as two levels of user control for natural ventilation are required. This is typically achieved through openable windows and trickle vents. The Grade 2* listed nature of the building does not allow for two levels of user control. Additionally, analysis would be required to confirm that the natural ventilation strategy can deliver compliance with the ventilation requirements of CIBSE AM10.
Hea 04.1	Thermal Comfort - Thermal Modelling	**One credit where:** 1. Thermal modelling has been carried out using software in accordance with CIBSE AM11 1 Building Energy and Environmental Modelling. 2. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. 3. The modelling demonstrates that: **PLEASE VIEW GN Hea 4.1** 4. For air conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.	1	0	0	Provide: 1) A copy of the thermal comfort study in line with the BREEAM criteria		20/07/2022: Credit not included within current scope of works.
Hea 04.2	Thermal Comfort - Adaptability	**One credit where:** 5. Criteria 1 to 4 are achieved. 6. The thermal modelling demonstrates that the relevant requirements set out in criteria 3 are achieved for a projected climate change environment (see Relevant definitions). 7. Where thermal comfort criteria are not met for the projected climate change environment, the project team demonstrates how the building has been adapted, or designed to be easily adapted in future using passive design solutions in order to subsequently meet the requirements under criterion 6. 8. For air conditioned buildings, the PMV and PPD indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool.	1	0	0	Provide: 1) A copy of the thermal comfort study in line with the BREEAM criteria		20/07/2022: Credit not included within current scope of works.

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Hea 04.3	Thermal Comfort - Thermal Zoning and Controls	**One credit where:** 10.Criteria 1 to 4 are achieved. 11.The thermal modelling analysis (undertaken for compliance with criteria 1 to 4) has informed the temperature control strategy for the building and its users. 12.The strategy for proposed heating/cooling system(s) demonstrates that it has addressed the following: a.Zones within the building and how the building services could efficiently and appropriately heat or cool these areas. For example consider the different requirements for the central core of a building compared with the external perimeter adjacent to the windows. b.Where specified, any new local cooling or heating services (or changes to existing services) are designed to ensure they do not conflict with core services (e.g. conflicts between two separate cooling systems, conflicts between core heating and locally provided cooling systems). c.The degree of occupant control required for these zones, based on discussions with the end user (or alternatively building type or use specific design guidance, case studies, feedback) considers: i.User knowledge of building services ii.Occupancy type, patterns and room functions (and therefore appropriate level of control required) iii.How the user is likely to operate or interact with the system(s), e.g. are they likely to open windows, access thermostatic radiator valves (TRV) on radiators, change air-conditioning settings etc. iv.The user expectations (this may differ in the summer and winter) and degree of individual control (i.e. obtaining the balance between occupant preferences, for example some occupants like fresh air and others dislike drafts). d.How the proposed systems will interact with each other (where there is more than one system) and how this may affect the thermal comfort of the building occupants. e.The need or otherwise for an accessible building user actuated manual override for any automatic systems.	1	0	0	Provide: 1) A copy of the thermal comfort study in line with the BREEAM criteria 2) Temperature control strategy based on the above analysis		20/07/2022: Credit not included within current scope of works.
Hea 05	Acoustic performance	**One credit where:** 1. The building meets the appropriate acoustic performance standards and testing requirements defined in the checklists and tables section which defines criteria for the acoustic principles of: a. Sound insulation b. Indoor ambient noise level c. Reverberation times.	3	0	0	Provide: 1) An acoustic specification report of the design strategy detailing elements regarding Internal Noise, Sound Insulation and Reverberation times. 2) A programme of acoustic testing and remedial works schedule OR a contractual requirement to undertake these at construction stage (Prelims)		24/06/2022: Credit considered as not feasible following workshop with Morgan Lovell. Based on the building façade and layout constraints it is unlikely that the BREEAM criteria can be met.
Hea 06.1	Safety and Security - Security of site and building	**One credit where:** 1. A suitably qualified security specialist (SQSS) conducts an evidence-based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent). 2. A suitably qualified security specialist (SQSS) develops a set of recommendations or solutions during or prior to Concept Design (RIBA Stage 2 or equivalent). These recommendations or solutions aim to ensure that the design of buildings, public and private car parks and public or amenity space are planned, designed and specified to address the issues identified in the preceding SNA. 3. The recommendations or solutions proposed by the suitably qualified security specialist (SQSS) are implemented (see CN9. Any deviation from those recommendations or solutions will need to be justified, documented and agreed in advance with a suitably qualified security specialist.	1	0	0	Provide: 1) Suitably Qualified Security Specialist (SQSS) design report and recommendations. 2) Design drawings and specification demonstrating SQSS recommendations are implemented.		24/06/2022: Credit considered as not feasible. A Security Needs Assessment is required at Stage 2 to highlight suitable security measures that can be implemented within the building design.
Ene 01	Reduction in CO2 Emissions Mandatory Req: Excellent: 5 Credits Outstanding : 8 Credits	**Up to 15 credits** can be awarded for buildings designed to minimise operational energy demand, primary energy consumption and CO2 emission. Credit are awarded based on the Energy Performance Ratio for New Construction (EPRNC) using BREEAM Ene 01 calculator. The calculation is determined using performance data from the approved building energy calculation software.	9 + 5 Innov	5	0	Provide: 1) Option 1 - A copy of the Building Regulations Output Document from the approved software for both the existing building and proposed building. The output documents must be based on the design stage of analysis. OR 2) Option 2 - A copy of the BREEAM Refurbishment and Fit-out energy model to reflect the actual and proposed building performance and scope of the assessment as relevant to the applicable assessment parts.	MEP	24/06/2022: 5 Credits considered feasible. Credit scoring is based on a high level review of the BREEAM Ene 01 schedule, accounting for the provision of new services.

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Ene 02.1	Energy Monitoring - Monitoring Major Energy Uses Mandatory Req: VG, Excel & Outstanding - 1 credit	**One credit where:** 1. 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 (see Methodology). 2. The energy consuming systems in buildings with a total useful floor area greater than 1,000m2. are metered using an appropriate energy monitoring and management system. 3. The systems in smaller buildings are metered either with an energy monitoring and management system or with separate accessible energy sub-meters with pulsed or other open protocol communication outputs, to enable future connection to an energy monitoring and management system (see Relevant definitions). 4. The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.	1	1	0	Provide: 1) Calculations demonstrating estimated total energy use. 2) Energy strategy document detailing metering strategy of at least 90% of energy consumption estimated above. This could include amongst other documents, Services Specification, Metring Schematics, Points Schedule. 3) Confirmation that each meter is labelled/identifiable for its end use.		12/07/2022: Credit not considered feasible following review of criteria by electrical sub-contractor. The design of the electrical installation includes for separate metering to the lighting and power systems. The requirement for metering to the space heating and domestic hot water systems would be difficult to achieve without further intrusion into the existing building fabric to install additional sub main cables, distribution boards and the possibility of an additional riser throughout each building. Due to the above reasons this would also be a very costly exercise and require extension to the current programme. Note: This credit is a minimum standard for BREEAM Very Good - Outstanding ratings. As such a Very Good rating or above is not feasible.
Ene 02.2	Energy Monitoring - tenancy areas	**One credit where:** 5. An accessible energy monitoring and management system or separate accessible energy sub-meters with pulsed or other open protocol communication outputs to enable future connection to an energy monitoring and management system are provided, covering a significant majority of the energy supply to tenanted areas or, in the case of single occupancy buildings, relevant function areas or departments within the building/unit.	1	0	0	Provide: 1) Calculations demonstrating estimated total energy use. 2) Energy strategy document detailing metering strategy of at least 90% of energy consumption estimated above. This could include amongst other documents, Services Specification, Metering Schematics, Points Schedule. 3) Confirmation that each meter is labelled/identifiable for its end use.		24/06/2022: Credit considered as not feasible due to space constraints for additional sub-metering required at each floor level.
Ene 03	External Lighting	**One credit where:** 1. The building has been designed to operate without the need for external lighting (which includes on the building, signs and at entrances). OR alternatively, where the building does have external lighting, one credit can be awarded as follows: 2. The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. 3. All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.	1	0	0	Provide: 1) Relevant section/clauses of the building specification or contract 2) Design drawings 3) Manufacturers' product details		20/07/2022: Credit not included within current scope of works.
Ene 04.1	Low Carbon Design - Passive Design Analysis	**One credit where:** 1. The first credit within issue Hea 04 Thermal comfort has been achieved to demonstrate the building design can deliver appropriate thermal comfort levels in occupied spaces. 2. The project team carries out an analysis of the proposed building design/development to influence decisions made during Concept Design stage (RIBA Stage 2 or equivalent) and identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. This reduction should 5% of overall building energy demand and/or CO2 emissions. 3.The building uses passive design measures to reduce the total heating, cooling, m Exigereanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis and the analysis demonstrates a	1	0	0	Provide: 1) The results from a dynamic simulation model demonstrating the opportunities for the implementation of passive design solutions that reduce the demand for energy consuming building services 2) Evidence that the passive design measures implemented will reduce total building energy demand by at least 5%		24/06/2022: Credit not feasible as due to the listed nature of the building, significant carbon reductions from passive design measures will not be achievable.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Ene 04.2	Low Carbon Design - Free Cooling	**One credit where:** 4. The passive design analysis credit is achieved. 5. The passive design analysis carried out under criterion 2 includes an analysis of free cooling and identifies opportunities for the implementation of free cooling solutions. 6. The building uses ANY of the free cooling strategies listed below to reduce the cooling energy demand, i.e. it does not use active cooling: 1.Night time cooling (which could include the use of a high exposed thermal mass) 2.Ground coupled air cooling 3.Displacement ventilation (not linked to any active cooling system) 4.Ground water cooling 5.Surface water cooling 6.Evaporative cooling, direct or indirect 7.Desiccant dehumidification and evaporative cooling, using waste heat 8.Absorption cooling, using waste heat 9.The building does not require any significant form of active cooling or m Exigereanical ventilation (i.e. naturally ventilated). Shell only building: Only free cooling options 1 to 3 listed above are applicable.	1	0	0	Provide: 1) Correspondence from the building services engineer summarising the 'purpose designed' free cooling strategy 2) The results from a dynamic simulation model demonstrating the feasibility of the free cooling strategy		24/06/2022: Credit not feasible as the building design does not lend itself to a free cooling strategy that can achieve significant carbon reductions through a reduced cooling load.
Ene 04.3	Low Carbon Design - LZC	**One credit where:** 7. A feasibility study has been carried out by the completion of the Concept Design stage (RIBA Stage 2 or equivalent) by an energy specialist (see Relevant definitions) to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development. 8. A local LZC t Technology/t Technologies has/have been specified for the building/development in line with the recommendations of this feasibility study and this method of supply results in a meaningful reduction in regulated carbon dioxide (CO_2) emissions: The amount of energy or CO_2 emissions reduction is not specified in the criteria in this issue. However, it should not be a trivial amount. As a guide, the installation should contribute at least 5% of overall building energy demand and/or CO_2 emissions PLEASE VIEW GN Ene 04.3	1	0	0	Provide: 1) LZC study in line with BREEAM criteria 2) Design drawings or relevant sections of the building specification or contract 3) Report, calculations/outputs from the manufacturer, supplier, engineer or approved modelling software confirming carbon savings as a result of the installed LZC technology		20/07/2022: Credit not included within current scope of works.
Ene 06.2	Energy Efficient Transportation Systems - Energy Efficient Features	**Two credits where** 2.Criterion 1 is achieved. 3. For each lift, the following three energy efficient features are specified: a. The lifts operate in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b. The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. c. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. 4. Where the use of regenerative drives is demonstrated to save energy, they are specified. Escalators and/or moving walks - If present additional detail shall be provided.	2	0	0	Provide: 1) Lift specification demonstrating features specified in line with the BREEAM criteria		24/06/2022: Credit considered not feasible as the proposed lift works are for general repair only and will not include changes allowing for additional energy efficiency measures.

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Verte sustainability

			Refurbishment (RFO)					
Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Tra 01	Public Transport Accessibility	**Up to three credits where** 1. The public transport Accessibility Index (AI) for the assessed building is calculated and BREEAM credits awarded in accordance with the BREEAM tables. 2. The Accessibility Index is determined by entering the following information in to the BREEAM Tra 01 calculator: a. The distance (m) from the main building entrance to each compliant public transport node b. The public transport type(s) serving the compliant node e.g. bus or rail c. The average number of services stopping per hour at each compliant node during the operating hours of the building for a typical day . One credit - Dedicated bus service 3. For buildings with a fixed shift pattern, i.e. where building users will predominantly arrive/depart at set times, one credit can be awarded where the building occupier provides, or commits to providing a dedicated bus service to and from the building at the beginning and end of each shift/day. This credit is only available in cases where a development is unable to achieve any of the available credits using the Accessibility Index criteria (i.e. its location has a low public transport Accessibility Index).	3	3	0	Provide: 1) PTAL Calculation for the site 2) Completed copy of Tra01 calculator	Verte	24/06/2022: Credits considered feasible based on the building location which has a high PTAL rating of 6b and an accessibility index of 74.58.
Tra 02	Proximity to Amenities	**One credit where:** The building is located within close proximity of the following amenities: within 500m of two of these: Food outlet; access to cash, recreation/leisure facility for fitness; within 500m of one of these: Access to out door space, community facility, pharmacy, GP/medical surgery, childcare facility/school.	1	1	0	Provide: 1) Completed map, clearly illustrating location of amenities, distance and pedestrian access.	Verte	24/06/2022: Credit considered feasible based on the building location, with a range of amenities within a 500m walking distance.
Tra 03	Cyclist Facilities	**One credit where** 1. Compliant cycle storage spaces are provided: 1 cycle space per 10 expected building occupants. There is a sliding scale for buildings with more than 200 expected occupants. One credit where: 2. Criterion 1 has been achieved. 3. At least two of the following types of compliant cyclist facilities have been provided for all staff: a. Showers (1 per 10 cycle spaces. 8 showers is the maximum number required). b. Changing facilities c. Lockers - 1 locker per cycle space d. Drying spaces . The requirements of this credit can be reduced by 50% if 2 credits are achieved under Tra 01.	2	0	0	Provide: 1) Drawings and specification illustrating location, type and number of cycle parking facilities. 2) Drawings and specifications illustrating location, type and number of cyclist facilities, namely lockers and shower/changing areas.		24/06/2022: Credit for cyclist storage is not achievable based on the proposed NIA requiring 9No. Cycle space. Within the lower ground floor 4No. Cycle storage spaces are provided. The credit for cyclist facilities is not achievable as the building design does not have space for showers, changing areas and lockers.
Tra 04	Maximum Car Parking Capacity	**Up to two credits - Car parking capacity where:** 1. The building's car parking capacity is compared to the maximum car parking capacity benchmarks provided in the BREEAM Guidance.	2	2	0	1) Provide details of car parking facilities/numbers.	Architect	24/06/2022: Credit considered feasible as the building will be car free. As such credits are achieved by default.
Tra 05	Travel Plan	**One credit where:** 1. A travel plan has been developed as part of the feasibility and design stages. 2. A site specific travel assessment/statement has been undertaken to ensure the travel plan is structured to meet the needs of the particular site and covers the required topics listed in the BREEAM Guidance. 3. The travel plan includes a package of measures to encourage the use of sustainable modes of transport and movement of people and goods during the buildings operation and use. 4. If the occupier is known, they must be involved in the development of the travel plan and they must confirm that the travel plan will be implemented post construction and be supported by the buildings management in operation.	1	0	0	Please provide: 1) A copy of the site specific Travel Plan 2) A copy of any site specific transport assessment details 3) A commitment from the client/occupier that the travel plan measures will be implemented (letter)		20/07/2022: Credit not included within current scope of works.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Wat 01	Water Consumption Mandatory Req: Good, VG & Excel: 1 Credit Outstanding: 2 Credits	**Up to five credits where:** 1. An assessment of the efficiency of the building's domestic water-consuming components is undertaken using the BREEAM Wat 01 calculator. 2. The water consumption (L/person/day) for the assessed building is compared against a baseline performance and BREEAM credits awarded based upon Table - 35. 3. The efficiency of the following 'domestic scale' water-consuming components must be included in the assessment (where specified): a. WCs, b. Urinals, c. Taps (wash hand basins and where specified kitchen taps and waste disposal unit), d. Showers, e. Baths, f. Dishwashers (domestic and commercial sized) and g. Washing machines (domestic and commercial or industrial sized). If any greywater / rainwater recycling is available additional guidance shall be provided.	5 + 1 Innov	2	0	Provide: 1) A copy of the sanitary ware schedule identifying water consuming properties of each fitting. 2) Drawings indicating locations of each fitting 3) Completed copy of the Wat01 calculator	Architect	24/06/2022: 2 Credits included within target score, based on proposed sanitaryware fitting flow rates.
Wat 02	Water Monitoring Mandatory Req: Good, VG, Excel, Outstan: Criterion 1	**One credit where:** 1.The specification of a water meter on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source. 2.Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area (see Compliance notes). 3.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, e.g. a building management system (BMS), for the monitoring of water consumption (see Relevant definitions). 4.If the refurbishment zone is within a site that has an existing BMS, managed by the same occupier/owner (as the space undergoing refurbishment or fit-out), the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the existing BMS 5.If the refurbishment or fit-out zone is within a building that is leasehold, the pulsed/digital water meter(s) for the refurbishment or fit-out zone must be connected to the incoming water supply for water using equipment in tenanted areas (see compliance note)	1	0	0	Provide: 1) A copy of the PH services schematic illustrating location and number of water meters. 2) A copy of the water meter specification/data sheet, confirming pulsed output. 3) Calculations demonstrating that no areas or major plant consume more than 10 of total water demand. 4) If the above is the case, evidence as per 1 & 2 demonstrating this is adequately sub-metered.		24/06/2022: The minimum standard is achievable through the provision of a water meter on the incoming mains water supply. Additional water meters for water consuming areas (kitchen) and each floor plate are not achievable due to the additional space required that is not available within the building layout.
Wat 03.1	Water Leak Detection & Prevention - Detection	**One credit where:** 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 OR an in-built automated diagnostic procedure for detecting leaks is installed. b. Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time. c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods. d. Programmable to suit the owner/occupiers' water consumption criteria. e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.	1	0	0	1) Details of the major water leak detection system to be installed. 2)Drawing indicating location of system 3)BMS details		20/07/2022: Credit not included within current scope of works.
Wat 03.2	Water Leak Detection & Prevention - Prevention	**One credit where:** 2. Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fittings).	1	0	0	Provide: 1) A copy of the PH services schematic illustrating location of solenoid valves 2) A copy of Services schematics/drawings illustrating valves connected to PIRs		20/07/2022: Credit not included within current scope of works.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Mat 01	Life cycle impacts	**Up to six credits (option 2): Elemental assessment of environmental performance information** **The following are required to demonstrate compliance:** 8.Robust environmental performance information has been collected for newly specified materials or where materials are retained in situ, for elements listed in CN7 9.The total number of points achieved as set out in the Methodology section are calculated using Part B of the BREEAM Mat 01 calculator. The number of points scored is based on the percentage of each element that has been: a.reused in situ b.reused in situ with minor repairs c.specified with robust environmental performance information. 10.Credits are awarded based upon the percentage of available points achieved as set out in Table - 47 **PLEASE VIEW/COMPLETE Mat 01 Table**	6 +1	3	0	Provide: 1) Completed Mat01 Schedule indicating: -%materials re-used in situ -%materials with robust environmental information (EPD) 2) Copies of drawings, specification, product data sheets demonstrating type of proposed materials 3) Copies of Environmental Product Declarations (EPD), Recycled Content declarations, Re-use declarations for the relevant materials	TBC	24/06/2022: A basic Green Guide to Specification LCA can be undertaken, though credits capped at 3.
Mat 03.1	Responsible sourcing of materials - Sustainable Procurement Plan Mandatory Req: Any Rating: Criterion 1	**Pre-requisite** 1. All timber and timber based products used on the project is ' Legally harvested and traded timber' **One credit - Sustainable procurement plan** 2. The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan **PLEASE VIEW GN Mat 03.1**	1	1	0	Provide: 1) Copy of the prelims including the requirements.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. ML team to develop and implement a Sustainable Procurement Plan.
Mat 03.2	Responsible sourcing of materials - Sourcing of Materials	**Up to 3 credits** - Responsible sourcing of materials (RSM) are responsibly sourced in accordance with the BREEAM methodology. 18% RSM points achieved - 1 credit, 36% RSM points achieved - 2 credits, 54% RSM points achieved - 3 credits Location use categories: 1.Ceiling (including ceiling finishes), 2.Door/window, 3.Floor (including floor finishes), 4.Insulation 5.Internal partition/internal walls (including finishes), 6.Roof (including roof finishes), 7.Structure, primary and secondary, 8.External wall (e.g. cladding, lining, render, including finishes) 9.Building service, 10.Hard landscaping, 11.Other **PLEASE VIEW GN Mat 03.2** **PLEASE VIEW/COMPLETE Mat 03 Table**	3 +1 Innov	1	0	Provide: 1) Completed Mat03 Schedule indicating: -relevant materials with 2) Copies of drawings, specification, product data sheets demonstrating type of proposed materials 3) Copies of Environmental Product Declarations (EPD), Recycled Content declarations, Re-use declarations for the relevant materials	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. Consideration should be given to specifying materials from manufacturers with BES 6001 certification.
Mat 04	Insulation	**One credit where:** 1. Any new insulation specified for use within the following building elements must be assessed: a. External walls, b. Ground floor, c. Roof, d. Building services. Insulation should have an A/A+ Green Guide rating. 2. The Insulation Index for the building fabric and services insulation is the same as or greater than 2.5.	1	1	0	Provide: 1) Completed Mat 4 schedule indicating: - relevant insulation with area sizes indicated in m2 and thickness in m for envelope insulation, and estimated m3 for services insulation, plus thermal conductivity 2) Manufacturers details confirming thickness and thermal conductivity for all insulation assessed 3) Copies of drawings, specification, product data sheets demonstrating type of proposed insulation 4) Copies of Environmental Management Systems certification (e.g. ISO 14001, BES 6001), Environmental Product Declarations (EPD), Recycled Content declarations, Re-use declarations for the relevant insulation products.	Architect + MEP	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. All new insulation to have a suitable Green Guide to Specification to contribute to achieving an insulation index >2.5.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Mat 05	Designing for durability and resilience	**Protecting vulnerable parts of the building from damage.** 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: a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. c. Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas. **Protecting exposed parts of the building from material degradation** 2. The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors. **PLEASE VIEW GN Mat 05**	1	1	0	Provide: 1) Highlighted drawings identifying high traffic/vulnerable areas and measures installed 2) Copies of drawings, specification, product data sheets demonstrating type of proposed materials	Architect	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. Durability measures are included as part of design such as suitable flooring types and entrance matting. Note: Criteria 2 is not applicable as Part 1 is not within assessment scope.
Mat 06	Material Efficiency	One credit where: 1. Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life 2. The above is carried out by the design/construction team in consultation with the relevant parties at each of the following RIBA stages: a. Preparation and Brief, b. Concept Design, c. Developed Design, d. Technical Design, e. Construction. All parties (as relevant to the project stage) involved in the design, specification and/or construction of the building should be consulted. This includes but is not limited to the following: 1.Client/developer, 2.Cost consultant, 3.Architect, 4.Structural/civil engineers, 5.Building services engineers - m Exigereanical, electrical, 6.Principal contractor, 7.Demolition/strip-out contractor, 8.Environmental consultant, 9.Project management consultant, 10.Materials/component manufacturers/suppliers. PLEASE VIEW GN Mat 06	1	0	0	Provide: 1) Reports (at Preparation and Brief stage) outlining the activity relating to material efficiency (ideas discussed, analysis and decisions taken) 2) Drawings or building information model (BIM), calculations showing reduction of material use through design (Concept Design/Developed Design stages) 3) Meeting notes, construction program, responsibilities schedule (indicating parties consulted).		24/06/2022: Credit not achievable as initial material efficiency review required from Stage 1 going forward.
Wst 01 .1	Pre-refurbishment audit	1.The client shall ensure that a pre-refurbishment audit of all existing buildings, structures or hard surfaces within the scope of the refurbishment or fit-out zone is completed. The requirements for carrying out an appropriate pre-refurbishment audit are a.The audit should be carried out at the Concept Design Stage **(equivalent to RIBA stage 2)** prior to strip-out or demolition works in order to use the audit results to guide the design, consideration of materials that can be reused, and to set targets for waste management and ensure all contractors are engaged in the process of maximising high grade reuse and recycling opportunities. b.The audit should be carried out by a competent person (see Relevant Definitions) who is independent of the project, has appropriate knowledge of buildings, waste and options for the reuse and recycling of different waste streams c.Actual waste arisings and waste management routes used should be compared with those forecast from the audit and barriers to achieving targets should be investigated. The audit must be referenced in the resource management plan and cover: d.Identification and quantification of the key materials where present on the project (see Table - 66) e.Potential applications and any related issues for the reuse and recycling of the key materials in accordance with the waste hierarchy. f.Identification of local reprocessors or recyclers for recycling of materials g.Identification of overall recycling rate for all key materials h.Identification of reuse targets where appropriate. i.Identification of overall landfill diversion rate for all key materials.	1	0	0	Provide: 1) A copy of the pre-refurbishment audit carried out at **Stage 2**		24/06/2022: Credit not feasible as strip out has already been undertaken, for removal of asbestos in alignment with Local Authority requirements and consent.

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Wst 01 .2	Re-use and direct recycling of materials	Where waste material types detailed in Table - 64 are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling One credit is achieved where 50% of the total available points for the waste material types detailed in Table - 64, that are present on the project have been achieved (using the Was 01 calculator tool, see Table - 65 in the Methodology Section Two credits are achieved where 75% of the total available points for the waste material types detailed in Table - 64 , that are present on the project have been achieved (using the Was 01 calculator tool, see Table - 65 in the Methodology section)	2	0	0	Provide: 1) Copy of the prelims including the requirements.		24/06/2022: Credit not feasible as strip out has already been undertaken. As good practice cut-offs from construction materials can be returned to manufacturers (where feasible) for closed loop recycling. This alone however would not be enough to achieve the credit.
Wst 01 .3	Resource Efficiency	**Construction resource efficiency (excluding simple buildings)** 5.Develop and implement a compliant resource management plan covering the waste arisings from the refurbishment or fit-out project with the aim of minimising waste (see Relevant definitions), recording and reporting accurate data on waste arisings. 6.The non-hazardous waste relating to on-site refurbishment or fit-out, and dedicated off-site manufacture or fabrication processes generated by the building's design and construction meets, or exceeds, the resource efficiency benchmarks set out in **Table - 61** and **Table - 62** as relevant to the project type.	3	1	0	Provide: 1) Copy of the prelims including the requirements.	Contractor	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. A resource efficiency of <3.5 tonnes per 100sqm is required, to be demonstrated within final Site Waste Management Plan.
Wst 01 .4	Diversion of Resources from Landfill	Diversion of resources from landfill **One credit where:** 7. 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: 8.Non-hazardous construction waste generated by the building's design and refurbishment or fit-out is no greater than the exemplary level resource efficiency benchmark (outlined in **Table - 62** and **Table - 61**). 9.The percentage of non-hazardous construction and demolition (if relevant) waste diverted from landfill meets or exceeds the exemplary level percentage benchmark (outlined in **Table - 63**). 10.Waste materials will be sorted into separate key waste groups (according to the waste streams generated by the scope of the works; the List of Wastes/European Waste Catalogue code should be referenced) either on-site or off-site through a licensed contractor for recovery. 11.75% of difficult to manage wastes have been reused on or off-site rather than recycled, in accordance with **Table - 64**.	1 + 1 Innov	0	0	Provide: 1) Copy of the prelims including the requirements.		07/07/2022: Credit considered not feasible following feasibility workshop with Morgan Lovell and design team. A diversion from landfill rate of 90% of refurbishment and 95% of demolition/ strip out waste isrequired, to be reported within the final Site Waste Management Plan. The building strip out has already been undertaken by others and limited information is available to inform this credit. The strip out works were completed previously in line with written approval from Camden Council.
Wst 03	Operational Waste Mandatory Req: Excel & Outstanding: 1 Credit	**One credit where:** 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 waste management contractors c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily/weekly operational activities and occupancy rates.	1	0	0	Provide: 1) Drawings highlighting recyclable waste collection area compliant to points a, b, c of the criteria		24/06/2022: Credit not achievable as due to space and design constraints a bin store has not been provided. To note, this is a minimum standard for an Excellent rating and would require >2sqm of recyclable waste storage space, in additional to space for general waste storage.
Wst 04	Speculative Floor and Ceiling Finishes	**One credit where:** 1. For tenanted areas (where the future occupant is not known), prior to full fit-out works, carpets, other floor finishes and ceiling finishes have been installed in a show area only. A show area could be either a floor plate or an individual office. However, to award this credit it must be less than 25% of the net lettable floor area. 2. In a building developed for a specific occupant, that occupant has selected (or agreed to) the specified floor and ceiling finishes.	1	0	0	Provide: 1) Drawings or confirmation that floor and ceiling finishes to be completed in show area only (<25%) or agreed by tenant if known. OR exposed ceilings and raised access floors only.		24/06/2022: Credit not achievable as both floor and ceiling finishes are within the scope of proposed works.
Wst 06	Functional Adaptability	**One credit where:** 1. A building-specific functional adaptation strategy study has been undertaken by the client and design team by Concept Design (RIBA Stage 2 or equivalent), which includes recommendations for measures to be incorporated to facilitate future adaptation. 2. Functional adaptation measures have been implemented (RIBA Stage 4 or equivalent) in accordance with the functional adaptation strategy recommendations, where practical and cost effective. Omissions have been justified in writing to the assessor.	1	0	0	Provide: 1) A copy of the functional adaptability strategy study 2) Evidence such as drawings and specification demonstrating outcomes of strategy have been implemented.		24/06/2022: Credit not achievable as a Functional Adaptability Strategy would require development at Stage 2. Due to the BRE set time constraint this credit is not longer feasible.

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Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Pol 01	Impact of refrigerants	**Up to 3 credits** are available for the reduction of the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems. 3 credits where the building does not required the use of refrigerant within its installed plant/systems Leak detection - One credit where: 6. Where systems using refrigerants have a permanent automated refrigerant leak detection system installed; OR where an in-built automated diagnostic procedure for detecting leakage is installed. In all instances a robust and tested refrigerant leak detection system must be installed and must be capable of continuously monitoring for leaks. 7. The system must be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident. Shell and core buildings: If the building is designed in such a way that it avoids the need for refrigerant containing building services, and therefore no 'refrigerant-using' building services or systems will be specified for the fit-out, then the available credits can be awarded by default	3	0	0	Provide: 1) Credit targeted for leak detection: A copy of the specification clause or letter from the M&E engineer/system manufacturer confirming relevant refrigeration type and system information For further credits: 1) Documentary evidence confirming the absence of refrigerant in the development 2) A copy of the specification clause or letter from the M&E engineer/system manufacturer confirming relevant refrigeration type and system information		20/07/2022: Credit not included within current scope of works.
Pol 02	NOx emissions	**Up to three credits:** 1.Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a NO x emission level (measured on a dry basis at 0% excess O2) as follows: **1 credit** where maximum dry NOx ≤100 mg/kWh (at 0% excess O2). **2 credits** where maximum dry NOx ≤70 mg/kWh (at 0% excess O2). **3 credits** where maximum dry NOx ≤40 mg/kWh (at 0% excess O2). 2. Report via the BREEAM scoring and reporting tool the direct and indirect NO x emissions in mg/kWh and energy consumption in kWh/m 2 /yr arising from systems installed to meet the building's space heating, cooling and hot water demands. No credits may be awarded for open flue heating or hot water systems. Where the water heating can be demonstrated to be less than 10% of the building's total energy consumption, these credits can be awarded based solely on the NO x emissions from space heating.	3	0	0	Provide: 1) Relevant section/clauses of the building specification or contract. 2) Manufacturer's product details. 3) Calculations from the project team		24/06/2022: Credits not achievable. As the building will be fully electric, though positive from a wider sustainability perspective, the scheme cannot achieve Pol 02 credits. The BRE criteria assumes that systems fed by grid electricity have high associated NOx emissions, in excess of the credit thresholds.
Pol 03.1	Surface water run off - Flood Risk	**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 - Medium/high flood risk 2. Where a site-specific FRA confirms the development is situated in a flood zone that is defined as having a medium or high annual probability of flooding and is not in a functional floodplain (in accordance with current best practice national planning guidance). The FRA must take all current and future sources of flooding into consideration. 3. To increase the resilience and resistance of the development to flooding, one of the following must be achieved: a. The ground level of the building and access to both the building and the site, are designed (or zoned) so they are at least 600mm above the design flood level of the flood zone in which the assessed development is located. OR c. The final design of the building and the wider site reflects the recommendations made by an appropriate consultant in accordance with the hierarchy approach outlined in section 5 of BS 8533:2011.	2	2	0	Provide: 1) Copy of EA Flood Maps indicating flood risk for NC an FRA report is required. 2) If Medium/High, sub-sequent evidence as detailed in Cr2-3 of the guidance i.e. a flood resilience strategy is implemented.	Verte	24/06/2022: Credit considered feasible as government flood maps confirm that the building location is not at risk from flooding.
Pol 04	Reduction of night time light pollution	**One credit where** 1. Where external lighting pollution has been eliminated through effective design that removes the need for external lighting without adversely affecting the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows: 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, 2011 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 T Technical Report 5 – The Brightness of Illuminated Advertisements.	1	0	0	Provide: 1) Design drawings OR OR clauses in spec/contract 20 Indicative examples of where and how strategy complies		20/07/2022: Credit not included within current scope of works.

BREEAM RFO 2014 Offices Design Stage Register - Project 5a, 20-22 Southampton Place
BREEAM Reg: TBC RevB 20220720/ Parts 2, 3 & 4

Refer to Main BREEAM Manual for the Compliance Requirements.
The type of evidence which should be provided is detailed below.
Evidence should be collated in individual credit folders (electronically).
Highlighted in Grey - Not relevant to scheme.
GREEN: CREDIT ACHIEVED
AMBER: FURTHER INFORMATION REQUIRED TO ACHIEVE THE CREDIT
RED: INFORMATION NOT AVAILABLE TO ACHIEVE THE CREDIT

Target Score: 34.56% PASS

Verte sustainability

			Refurbishment (RFO)					
Ref. No.	Description	Criteria	Credits Available	Target	Enhanced Credits	Action/Evidence Required	Actionee	Comments
Pol 05	Noise Attenuation	**One credit where** 1. Where there are, or will be, no noise-sensitive areas or buildings within 800m radius of the assessed development. OR 2. Alternatively, where the building does have noise-sensitive areas or buildings within 800m radius of the development, one credit can be awarded as follows: a. Where a noise impact assessment in compliance with BS 7445. 1has been carried out and the following noise levels measured/determined: I. Existing background noise levels at the nearest or most exposed noise-sensitive development to the proposed development or at a location where background conditions can be argued to be similar. ii.The rating noise level resulting from the new noise source . 3. The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification and membership of an appropriate professional body. 4. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level. 5. Where the noise source(s) from the proposed site/building is greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with criterion 4.	1	1	0	Provide: 1) Drawings indicating existing and proposed noise sensitive buildings within 800m 2) Acoustician's report including qualifications and professional status OR clauses in spec/contract OR commitment letter 3) Recommendations for attenuation to be included in above report and incorporated	Acoustician	24/06/2022: Credit considered feasible following feasibility workshop with Morgan Lovell. A background noise assessment has been undertaken, confirming the proposed external condenser will have an improvement in dB rating compared to the existing background noise levels. Planning requirements for noise attenuation are more onerous than BREEAM criteria.