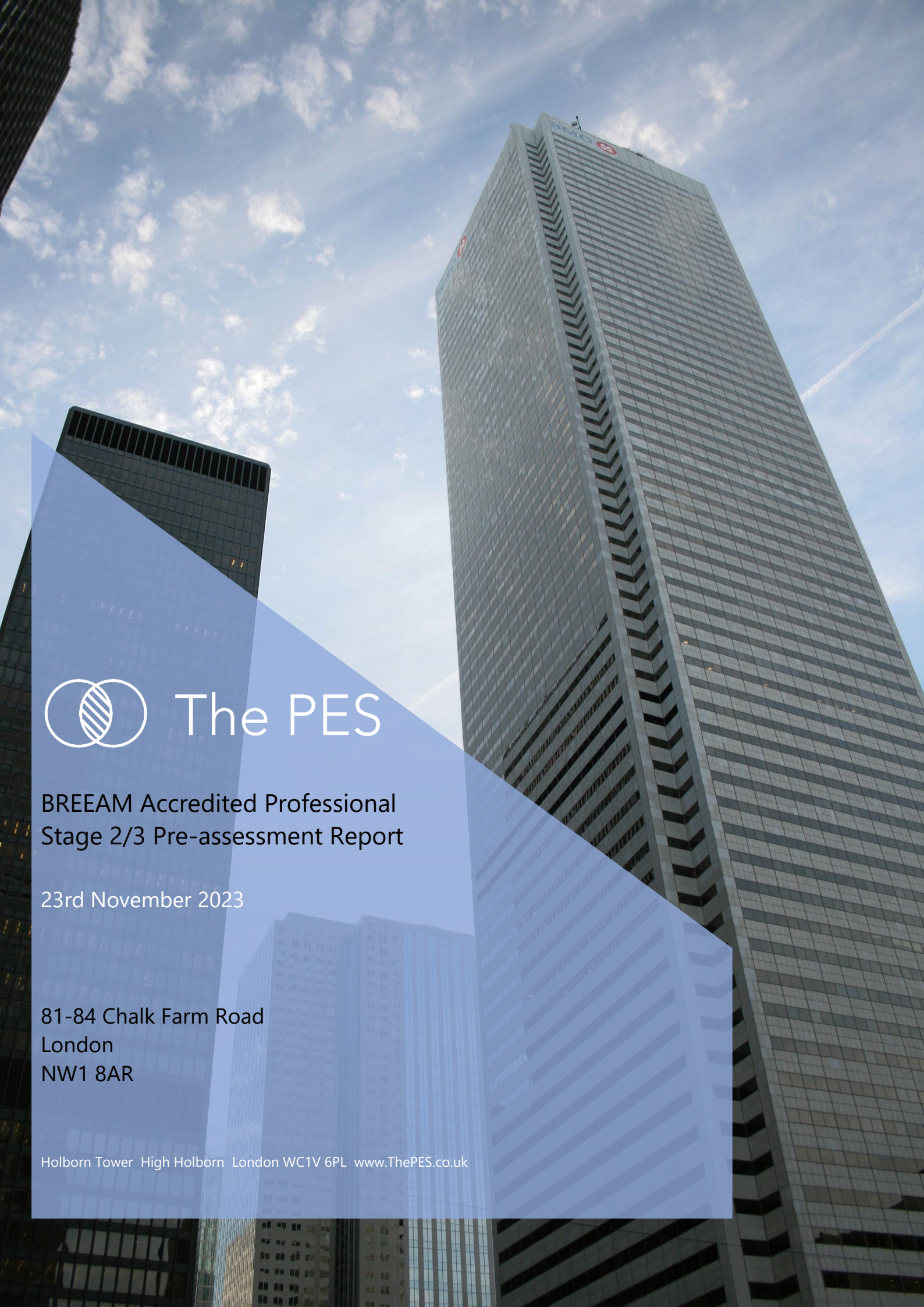

The PES

BREEAM Accredited Professional
Stage 2/3 Pre-assessment Report

23rd November 2023

81-84 Chalk Farm Road
London
NW1 8AR

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81-84 Chalk Farm Road

BREEAM Refurbishment & Fit-Out 2014 – BREEAM AP Report

Table of Contents

1.0 INTRODUCTION

The predicted BREEAM ratings for the proposed development are shown in Table 1.1 below.

Table 1.1

Building Type	BREEAM Rating
Higher Education	**71.35% - Excellent (Part 1 to 4)**

The above projected scoring is based upon client brief to achieve the highest level of BREEAM rating for the proposed development which involves the erection of a single storey upwards extension and change of use of the entire building from gym (Class E) use to either education use (Class F.1 Learning & Non-residential institution) or office use (Class E).

The applicant is seeking to appoint a BREEAM Accredited Professional (AP) in order to receive the appropriate Stage 2/3 advice and report, as set out within the BREEAM Refurbishment & Fit-Out 2014 manual below: -

One credit - Sustainability Champion (design)

9. A Sustainability Champion has been appointed to facilitate the setting and achievement of BREEAM performance targets 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 (see Relevant definitions) 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.

This report has been prepared by The PES Ltd, on behalf of UPP Limited for the proposed Higher Educational Centre.

The PES Ltd has been appointed in June 2023 to assist with the BREEAM New Construction 2018 assessment on the proposed development. PES and in particular the licensed assessors Rubina Singh & Neil Ingham has been trained by the BRE to be able to undertake BREEAM assessments as an Advisory Professional (AP).

2.0 BREEAM Overview

BREEAM schemes are an environmental assessment method for buildings. Each standard sets the best practice in environmental design and has become the de facto measure to describe a buildings environmental performance.

BREEAM has the following aims:

- To mitigate the impacts of buildings on the environment
- To enable buildings to be recognised according to their environmental benefits
- To provide a credible, environmental label for buildings
- To stimulate demand for sustainable buildings

BREEAM has the following objectives:

- To provide market recognition to low environmental impact buildings
- To ensure best environmental practice is incorporated in buildings
- To set criteria and standards surpassing those required by regulations and challenge the
- market to provide innovative solutions that minimise the environmental impact of buildings
- To raise awareness of owners, occupants, designers and operators of the benefits of buildings with a reduced impact on the environment
- To allow organisations to demonstrate progress towards corporate environmental objectives.

The BREEAM UK Non-domestic Refurbishment and Fit-out 2014 scheme can be used to assess the environmental life cycle impacts of existing non-domestic buildings at the refurbishment and fit-out stages. The definition of 'refurbishment' encompasses a wide range of works to improve the performance, function and overall condition of an existing building. 'Fit-out' also encompasses a wide range of works, however it is more associated with internal works to the building including the first fit-out of a newly constructed building or re-fitting an existing building.

The BREEAM UK Non-domestic Refurbishment and Fit-out 2014 scheme provides a modular set of criteria that are applied depending upon the scope of works for a particular project type including:

- Part 1: Fabric and Structure
- Part 2: Core Services
- Part 3: Local Services
- Part 4: Interior Design

The scheme is split into these assessment parts to allow the scheme to reflect the aspects of a building that are tenant or landlord responsibilities, as well as the varied life cycle stages that each component or element is upgraded

In the case of 81-84 Chalk Farm Road the works include parts 1 to 4 as noted above.

Credits are awarded over 10 categories of sustainability consisting of a number of issues, summarised in table 3.1 below.

Table 3.1: BREEAM 2014 Refurbishment and Fit-out environmental sections and assessment issues

Management	**Health & Wellbeing**
• Project brief and design • Life cycle cost and service life planning • Responsible construction practices • Commissioning and handover • Aftercare	• Visual comfort • Indoor air quality • Safe containment in laboratories • Thermal comfort • Acoustic performance • Safety and security
Energy	**Transport**
• Reduction of energy use and carbon emissions • Energy monitoring • External lighting • Low carbon design • Energy efficient cold storage • Energy efficient transportation systems • Energy efficient laboratory systems • Energy efficient equipment • Drying space	• Sustainable transport solutions • Proximity to amenities • Cyclist facilities • Maximum car parking capacity • Travel plan
Water	**Materials**
• Water consumption • Water monitoring • Water leak detection • Water efficient equipment	• Environmental impact of materials • Hard landscaping and boundary protection • Responsible sourcing of materials • Insulation • Designing for durability and resilience • Material efficiency

Waste	Land Use & Ecology
• Project waste management • Recycled aggregates • Operational waste • Speculative floor and ceiling finishes • Adaptation to climate change • Functional adaptability	• Site selection • Ecological value of site and protection of ecological features • Minimising impact on existing site ecology • Enhancing site ecology • Long term impact on biodiversity
Pollution	**Innovation**
• Impact of refrigerants • NOx emissions • Flood risk management and reducing Surface water run-off • Reduction of night time light pollution • Reduction of noise pollution	• Innovation

Scores and Rating

There are four main elements that determine the building rating:-

1. **BREEAM rating benchmarks**

Table 3.2 below summarises the overall percentage score that is required to classify within each rating.

Table 3.2

BREEAM Rating	% Score
Unclassified	< 30
Pass	≥ 30
Good	≥ 45
Very Good	≥ 55
Excellent	≥ 70
Outstanding	≥ 85

2. BREEAM environmental weightings

Table 3.3 below outlines the environmental weightings that are adopted in each section to convert the credits awarded into an overall percentage score.

Table 3.3

BREEAM Section	Core Weighting	Part 1 Only	Part 2 Only	Part 3 Only	Part 4 Only	Parts 1 & 2	Parts 2 & 3	Parts 3 & 4
Management	12%	15.0%	16.7%	16.5%	20.0%	13.0%	16.5%	14.1%
Health and Wellbeing	15%	14.8%	14.4%	15.3%	19.9%	11.0%	15.3%	15.9%
Energy	19%	16.4%	24.5%	24.3%	2.5%	18.8%	24.3%	22.5%
Transport	8%	10.0%	11.2%	11.1%	13.4%	8.6%	11.1%	9.5%
Water	6%	0.0%	7.5%	7.4%	10.1%	5.7%	7.4%	7.1%
Materials	12.5%	15.6%	5.4%	5.3%	19.3%	13.4%	5.3%	13.7%
Waste	7.5%	9.4%	9.3%	9.2%	11.2%	8.1%	9.2%	7.9%
Land Use and Ecology	10%	12.5%	0.0%	0.0%	0.0%	10.7%	0.0%	0.0%
Pollution	10%	6.3%	11.0%	10.9%	3.6%	10.7%	10.9%	9.3%
Total	100%	100%	100%	100%	100%	100%	100%	100%

Minimum BREEAM standards

To achieve a BREEAM rating, the minimum percentage score must be achieved (table 3.2) and the minimum standards (number of credits) applicable to that rating level, table 3.4 below.

Table 3.4

Minimum Standards by BREEAM Rating Level					
BREEAM issue	**Pass**	**Good**	**Very Good**	**Excellent**	**Outstanding**
Man 03: Responsible construction practices	None	None	None	One credit (Considerate construction)	Two credits (Considerate construction)
Man 04: Commissioning and handover	None	None	None	Criterion 9 (Building User Guide)	Criterion 9 (Building User Guide)
Man 05: Aftercare	None	None	None	Parts 2 and 3 only: One credit (Seasonal Commissioning)	Parts 2 and 3 only: One credit (Seasonal Commissioning)
Ene 01: Reduction of energy use and carbon emissions	None	None	None	Parts 1,,3 and 4(full assessments)	Parts 1,,3 and 4(full assessments)

				Six credits, varies for other assessment types	Ten credits, varies for other assessment types
Ene 02: Energy monitoring	None	None	Part 2,3 and 4 One credit (First sub-metering credit)	Part 2,3 and 4 One credit (First sub-metering credit)	Part 2,3 and 4 One credit (First sub-metering credit)
Wat 01: Water consumption	None	One credit (where applicable)	One credit (where applicable)	One credit (where applicable)	Two credits (where applicable)
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
Mat 03: Responsible sourcing of materials	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Wst 01: Construction waste management	None	None	None	None	One credit
Wst 03: Operational waste	None	None	None	One credit	One credit

3. **BREEAM credits for innovation**

Innovation credits provide additional recognition for a building that innovates in the field of sustainable performance, above and beyond the level that is currently recognized and rewarded within standard BREEAM issues.

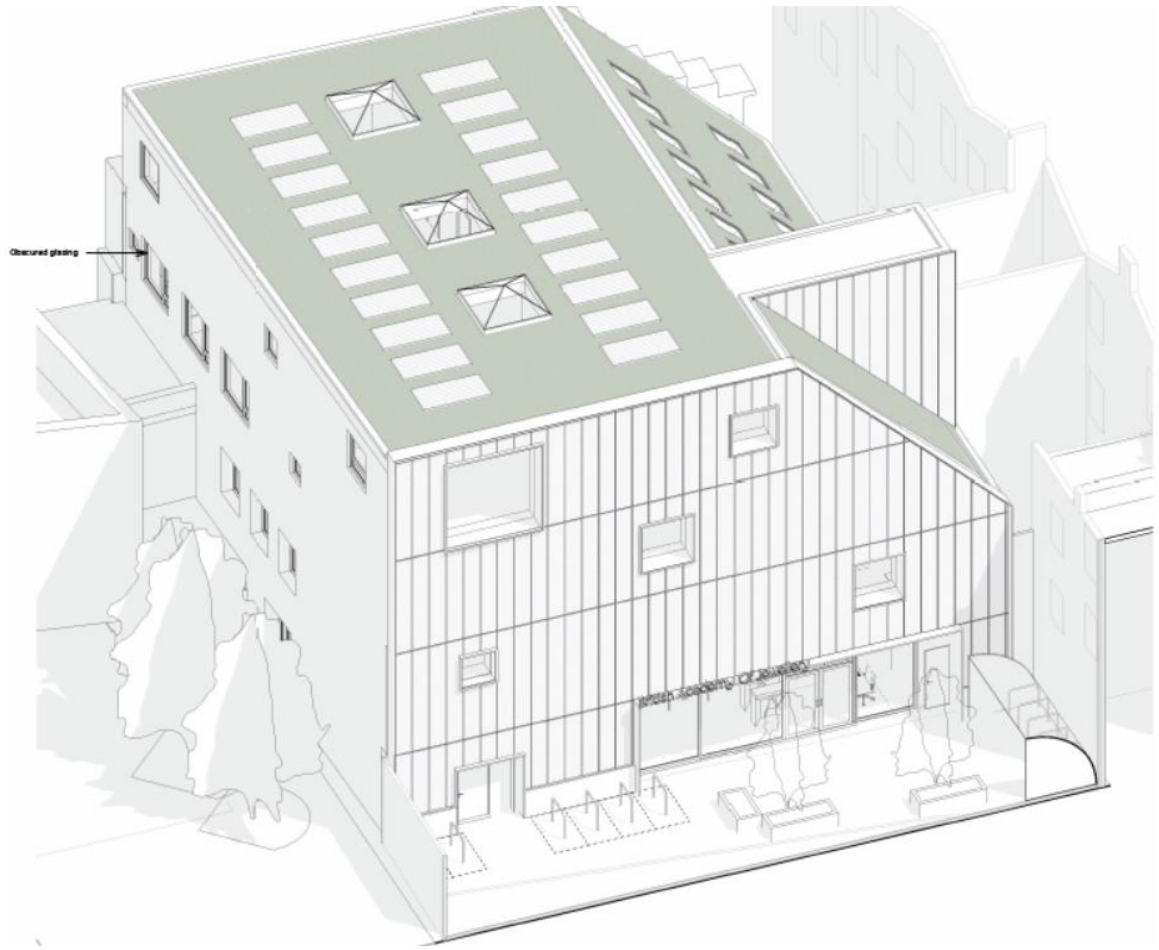
Current Assessment – Design parameters

For this RFO 2014 pre-assessment, the following design parameters were used within the BREEAM Calculator Tool to commence the assessments:

- Scheme - BREEAM 2014 Refurbishment and Fit-out
- Building Type – Public - Education – Higher Education Institution
- Project type – Part 1 to 4 Refurbishment
- Functions/facilities specified in the building:-
  - Centralised plant with VRF heating and cooling
  - Mechanical ventilation with low specific fan powers,
  - Low energy lighting (LED lighting throughout) with occupant controlled zoning;
  - Energy efficient lighting controls – photocell controls and presence detection
  - Adequate cycle storage and cyclist facilities proposed
  - Roof mounted PV array

3.0 CONCEPT DESIGN STAGE 2 REPORT

3.1 Development Proposals



The application site is a detached building located on the northern side of Chalk Farm Road. The building is a three-storey building set back from the main frontage of Chalk Farm Road.

The proposals under consideration within this report seeks full-planning permission for erection of a single storey upwards extension and change of use of the entire building from gym (Class E) use to either education use (Class F.1 Learning & Non-residential institution) or office use (Class E).

3.2.1 Stage 2/3 Reporting

The design team sought advice upon, and discussions related to the early stage requirements in terms of studies and reports to inform the design moving forward, summarised as below.

MAN01 –Stakeholder consultation: engagement of key stakeholders (incl. team member with significant construction experience) and their roles and responsibilities.

MAN01 - BREEAM AP has to be appointed for the project; the concept stage AP to be submitted with a pre-assessment with the planning application. The stage 3/4 reporting can be undertaken at Stage 3b/4 post planning.

MAN02-Elemental level & Component level LCC to be carried out for the development

HEA01 -Daylighting & View-Out credits not feasible to the project.

HEA02 – to commission an indoor air quality plan to inform other issues within the HEA section, ventilation and internal finishes.

HEA06 – Suitably Qualified Security Specialist has to be appointed.

Energy – the project scores over 60% of the energy credits as required by local planning policy.

TRA05 – Project team to produce a compliant Travel Plan for the development

MAT01 – Option 2: Elemental assessment of environmental performance information approach to be taken to calculate the credits achievable. Team to provide specifications of the relevant building elements

MAT02 & MAT03– Requires a sustainable procurement plan to be in place; Contractor to have procurement policy in place, or to produce bespoke plan for the project

MAT05 – Designing for durability & resilience – no scope to protect external fabric

MAT06 – Set targets to optimise use of materials in a written statement to be provided by the architects

WST01 – Pre-demolition audit of existing building, structures, hard standing needs to be carried out. This is to task the form of an Architectural appraisal – see section details provided.

WST06 – The architects to consider and complete a study of design for disassembly and functional adaptability; section details provided.

3.3 London Plan

The project sits within the London Borough of Camden (Camden).

Chapter 9 deals with Sustainable Infrastructure:- Policy SI5 Water infrastructure

C Development proposals should:

2) achieve at least the BREEAM excellent standard (commercial development)

3.4 BREEAM Strategy

A BREEAM pre-assessment tracker is attached at Section 7.0.

The above **Stage 2/3issues** have been discussed with the client and reported in the attached BREEAM tracker.

The report takes the form of a tracker document and details:-

- Target scoring as per the agreed strategy from the initial design team meeting
- Summary details of the design stage requirements
- Specific advice for project team and any required actions
- A section to identify the individual responsibility for meeting the required actions within the project team members

Where felt appropriate, and if any sections require specific reference to the compliance requirements contained with the BREEAM technical manual, then the Section Details are reproduced under 4.0 (below), for the guidance of the project team.

4.0 SECTION DETAILS

It is considered that the below detailed BREEAM matters should be taken on board at this early stage of design development

MAN 02 – Life cycle cost and service life planning

Elemental life cycle cost (LCC)

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.

Component level LCC Plan

3.A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to Technical Design – RIBA Stage 4) in line with PD 156865:2008 and includes the following component types (where present):

HEA 04 – Thermal Comfort

Thermal modelling

1. Thermal modelling has been carried out using software in accordance with CIBSE AM111 Building Energy and Environmental Modelling.

2. The software used to carry out the simulation at the detailed design stage provides full dynamic thermal analysis. For smaller and more basic building designs with less complex heating or cooling systems, an alternative less complex means of analysis may be appropriate (such methodologies must still be in accordance with CIBSE AM11).

3. The modelling demonstrates that:

a. For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design2, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type).

b. For naturally ventilated/free running buildings:

i. Winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design, Table 1.5; or other appropriate industry standard (where this sets a higher or more appropriate requirement/level for the building type).

ii. The building is designed to limit the risk of overheating, in accordance with the adaptive comfort methodology outlined in CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings3.
4. Where undertaking a Part 4 assessment a competent person (e.g. chartered building services engineer) must assess the suitability of existing building services and controls to identify any changes that may be required as a result of fit-out works (e.g. as a result of changes to internal layout, occupant density, additional equipment that may increase cooling loads etc.).
5. 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.

Thermal zoning and controls
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.

HEA 06 – Safety & Security

Security of site and building

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), see compliance note where the refurbishment or fit-out zone comprises part of a larger building.
2. The 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 SQSS are implemented (see CN7. Any deviation from those recommendations or solutions will need to be justified, documented and agreed in advance with a suitably qualified security specialist.

TRA 05 – Travel Plan

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 following (as a minimum):
a. Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified.
b. Travel patterns and transport impact of future building users.
c. Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children).
d. Disabled access (accounting for varying levels of disability and visual impairment).
e. Public transport links serving the site.
f. Current facilities for cyclists.
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 building's 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 refurbishment or fit-out and be supported by the building's management in operation.

MAT 0 1 – Environmental Impacts of Materials

Option 2: Elemental assessment of environmental performance information

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.

Relevant elements
1. Part 1 includes elements of the fabric and structure including: a. External walls (envelope, structure and finishes) b. External windows and roof lights c. Structural frame d. Basements/retaining walls (including excavations) e. Upper floors (including horizontal structure) f. Roof (including coverings) g. Stairs h. External solar shading devices, access structures etc. i. Ground/lowest floor
2. Part 2 and 3 includes elements used for core and local services including: a. Heat source, space heating, air-conditioning and ventilation b. Communication, security and control systems c. Electrical installations d. Fire and lightning protection e. Lift and conveyor installations/systems f. Water and waste installations g. Sanitary installations
3. Part 4 includes interior fit-out elements including: a. Internal floor finishes (including access floors) b. Internal ceiling finishes (including suspended/access ceilings) c. Internal walls and partitions d. Internal wall finishes e. Internal windows f. Internal doors g. Furniture (desks, chairs, display cabinets, shelving) h. Fittings (shop fittings, railings, screens, gutters, vents, air grilles)
4. Hard landscaping and boundary protection are included where within scope of works

Mat 05 - Protecting vulnerable parts of the building from damage

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:
1a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.).
1b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas.
1c. Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the building façade for all car parking areas and within 2m for all delivery areas.

Mat 06 – Material Efficiency

1. Opportunities have been identified, and appropriate measures investigated and implemented within the scope of refurbishment or fit-out works, to optimise the use of materials through building design, procurement, refurbishment, maintenance and end of life (see examples in Table 60 and Table 61 , in the Additional information section)
2. The above is carried out by the design/construction team in consultation with the relevant parties (see CN3) at each of the following RIBA stages:

a. Preparation and Brief
b. Concept Design
c. Developed Design
d. Technical Design
e. Construction.

WST 01 – Construction Waste Management

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 forecasts 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
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.

WST 06 – Functional Adaptability

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.

The study should consider:

1. The potential for major refurbishment, including replacing the façade.
2. Design aspects that facilitate the replacement of all major plant within the life of the building e.g. panels in floors/walls that can be removed without affecting the structure, providing lifting beams and hoists.
3. The degree of adaptability of the internal environment to accommodate changes in working practices.
4. The degree of adaptability of the internal physical space and external shell to accommodate change in-use.
5. The extent of accessibility to local services, such as local power, data infrastructure etc.

The implementation will be specific to the building and scope of project,

1. The feasibility for multiple/alternative building uses and area functions e.g. related to structural design of the building
2. Options for multiple building uses and area functions based on design details e.g. modularity
3. Routes and methods for major plant replacement e.g. networks and connections have flexibility and capacity for expansion
4. Accessibility for local plant and service distribution routes e.g. detailed information on building conduits and connections infrastructure
5. The potential for the building to be extended, horizontally and/or vertically.

5.0 BREEAM ASSESSMENT

The subsequent attachment highlights the BREEAM credits that have been targeted for the 81-84 Chalk Farm Road development and provides the corresponding BREEAM percentage scores.

This concept stage assessment and report at Section 7.0 represents the performance of the building at the early design stage of the assessment, prior to detailed design/planning and before the beginning of operations on site. Certification at this stage does not, therefore, represent the buildings final 'as built' BREEAM performance.

6.0 CONCLUSIONS

Taking on the guidance for the advisory professional, the Developer and Principle Contractor will commit to achieving the required score with the above recommendations incorporated into the specification. As a result, 81-84 Chalk Farm Road will enjoy reduced operating and life cycle costs due to the enhancement over and above current Building Regulations and built-in features designed to reduce environmental impact and greenhouse gases.

Overall, the carbon footprint of the scheme will be minimised along with its Ecological impact. All stakeholders involved stand to benefit as a result of the assessment and recommendations.

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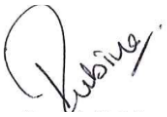

Prepared **Date 23rd Nov 2023**

Checked **Date 23rd Nov 2023**

7.0 BREEAM TRACKER AND REPORT

BREEAM Refurbishment and Fit-out 2014

Pre-assessment Estimator

81-84 Chalk Farm Road | **BREEAM UK Refurbishment and Fit-Out 2014** | **Target: Excellent (70%)**

Public | Education | Higher education institutions

Parts 1, 2, 3, 4

Whole building, Fully fitted out

Definite: 71.35% EXCELLENT

Possible: 5.41% EXCELLENT

Evidenced: 0.00% UNCLASSIFIED

Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
-	-	-	-	-	-	-	-	-	-	-
Management										
Man 1 - Project brief and Design	**Stakeholder consultation- project team** (1 credit)	Prior to completion of the Concept Design (RIBA Stage 2 or equivalent), the client, building occupier, the design team and principal contractor have met to identify and define their roles, responsibilities and contributions for each of the key phases- of project delivery and how the outcomes of the consultation process have influenced or changed the Initial Project brief	1 to 3	1			4	Stakeholder consultation has taken place during early design stages, defining roles and responsibilities of the project team and demonstrating how the consultation process has influenced the overall design Supporting evidence to include: 1. Construction Programme 2. Responsibilities Schedule 3. Meeting minutes of stakeholder consultation activities from concept stage to detailed design stage 4. List of stakeholders involved 5. Design & Access Statement	Project Team	NOT Set Up
	Third party consultation (1 credit)	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 and how the outcomes of the consultation exercise have influenced or changed the Initial Project Brief and Concept Design. Prior to completion of the detailed design (RIBA Stage 4, Technical Design or equivalent), consultation feedback has been given to, and received by, all relevant parties.	4 to 6	1				Relevant interested parties (e.g. intended building users, FM staff, representative consultation group from existing community, existing partnerships and networks) have been consulted by the design team and covers a minimum consultation content - See section details for definiton of interested parties Supporting evidence to include: 1. Statement of community involvement 2. Public consultation report 3. Documentation demonstrating consultation activities with existing partnerships and networks having experience on projects with same building type	Project Team	NOT Set Up
	Sustainability Champion - Design stage (1 credit)	A Sustainability Champion (BREEAM AP) has been appointed to facilitate the setting and achievement of BREEAM performance target(s) for the project which are formally agreed between the client and design/project team no later than the Concept Design stage (RIBA Stage 2 or equivalent).	9 to 11	1				Early stage involvement of BREEAM AP to provide appropriate advise for successful delivery of agreed performance targets and monitoring progress from concept design to developed design stages Supporting evidence to include: 1. The AP appointment letter 2. Meeting notes/ recorded correspondence that can demonstrate BREEAM issues are a regular agenda item and AP attendance 3. The AP progress report (for each work stage)	BREEAM AP	NOT Set Up
	Sustainability Champion - monitoring progress (1 credit)	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.	12,13	1				Early stage involvement of BREEAM AP to provide appropriate advise for successful delivery of agreed performance targets and monitoring progress from concept design to developed design stages Supporting evidence to include: 1. The AP appointment letter 2. Meeting notes/ recorded correspondence that can demonstrate BREEAM issues are a regular agenda item and AP attendance 3. The AP progress report (for each work stage)	BREEAM AP	NOT Set Up
Man 2 - Life cycle cost and service life planning	**Elemental Life Cycle Costing** (2 credits)	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'	2b	2			4	The developer is to commission Elemental Life Cycle Costing in accordance with relevant standards and demonstrate how the LCC plan has influenced the building and systems design and specification -See section details for defintion of Elemental LCC Supporting evidence to include: 1. Elemental level LCC Plan	QS	NOT Set Up
	Component level LCC plan (1 credit)	A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to Technical Design – RIBA Stage 4) in line with PD 156865:2008 envelope, services, finishes and external spaces	3,4		1			The developer is to commission Component Life Cycle Costing in accordance with relevant standards and demonstrate how the LCC plan has influenced the building and systems design and specification -See section details for defintion of Component LCC Supporting evidence to include:	QS	NOT Set Up
	Capital cost reporting (1 credit)	Report the capital cost for the building in pounds per square metre (£k/ m2)	5	1				The developer will publish predicted capital cost at design stage in pounds per square metre of gross internal floor area (£k/ m²) Supporting evidence to include: 1. Letter of commitment by developer - See draft letter	Client	NOT Set Up
	Pre-requisite	**Pre-requisite-**All Timber and timber based products to be legally sourced in line with FCS/PEFC including Site Timber	1	Y				Ensure all timber and timber based products will be legally sourced in line with FCS/PEFC including site timber Supporting evidence to include: 1. Letter of commitment by contractor - See draft letter	Contractor	NOT Set Up

Public Education Higher education institutions

Parts 1, 2, 3, 4

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Evidenced: 0.00% UNCLASSIFIED

Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
Man 3 - Responsible Construction Practices Minimum Standards- one credit Considerate Construction	**Environmental management - EMS System** (1 credit)	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 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.	2,3	1			6	Contractor to have ISO 14001 accreditation in place and implement best practice pollution and prevention policies in line with the required standards Supporting evidence to include: 1. Letter of commitment by contractor - See draft letter	Contractor	NOT Set Up
	Sustainability Champion(construction) (1 credit)	A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages	4 to 6	1				BREEAM AP involved throughout Construction, Handover and Close Out stages to monitor construction progress against the agreed performance targets and providing relevant feedback to the project team Supporting evidence to include:	Contractor	NOT Set Up
	Considerate Construction (up to 2 credits)	Where the principal contractor has used a 'compliant' organisational, local or national considerate construction scheme and their performance against the scheme has been confirmed by independent assessment and verification.The BREEAM credits can be awarded as follows: a. One credit where the contractor achieves 'compliance' with the criteria of a compliant scheme. b. Two credits where the contractor significantly exceeds 'compliance'	7a,b	2				Register project with CCS and provide written commitment of intended target	Contractor	NOT Set Up
	Monitoring of construction-site impacts (2 credits)	Requires monitoring, recording and reporting energy use (kWh or litres, water consumption(m3) where measured) resulting from all on-site construction processes (and dedicated off-site monitoring) throughout the build programme and transport movements and impacts from delivery of majority of construction materials to site and construction waste from site.	8 to 17	2				Principal contractor to monitor and report energy use and water consumption from on-site construction activities, as well as transport of materials and waste to and from site Supporting evidence to include: 1. Letter of commitment by contractor - See draft letter	Contractor	NOT Set Up
Man 4 - Commissioning and Handover Minimum Standards- Criterion 9 Building User Guide	**Commissioning testing schedule and Responsibilities** (1 credit)	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 in accordance with, current Building Regulations, BSRIA1 and CIBSE2 guidelines and/or other appropriate standards The principal contractor appoints an appropriate team member to monitor and programme pre-commissioning and accounts for the commissioning and testing programme, responsibilities and criteria within their budget and main programme of work	1 to 4	1			4	Appropriate project team member is to schedule commissioning including optimal timescales and appropriate testing and commissioning of all building services systems including BMS in line with best practice including inspecting, testing, identifying and rectifying defects via an appropriate method Supporting evidence to include: 1. Letter of commitment by appropriate project team member - See draft letter	M&E Specification	NOT Set Up
	Commissioning building services (1 credit)	The commissioning and testing schedule and responsibilities credit is achieved. 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.	5,6b	1				Provide approrpriate commitment to undertake the required reporting/advice	M&E Specification	NOT Set Up
	Testing and inspecting building fabric (1 credit)	The commissioning and testing schedule and responsibilities credit is achieved. A Suitably Qualified Professional accounts for a thermographic survey and air-tightness tests within the programme of works, and that any defects which are detected are rectified prior to building handover The survey confirms: a. Continuity of insulation in accordance with the construction drawings b. Avoidance of excessive thermal bridging c. Avoidance of air leakage paths through the fabric (except through intentional openings)			1					NOT Set Up
	Handover (1 credit)	A Building User Guide (BUG) is developed prior to handover for distribution to the The building's staff (or where relevant residents) The non-technical facilities management team/building manager Other building users, e.g. visitors/community users	10,11	1				Principal Contractor to provide a non-technical & technical user guide and two training schedules for the building occupiers and premises facilities manager timed appropriately around handover and proposed occupation. Supporting evidence to include: 1. Letter of commitment by contractor- See draft letter	Contractor	NOT Set Up
Man 5 - Aftercare Minimum Standards- One credit	**Aftercare support** (1 credit)	There is (or will be) operational infrastructure and resources in place to provide aftercare support to the building occupier/management prior to initial occupation The dedicated aftercare team/building occupier can confirm to co-ordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied.	1, 2	1			3	Commitment by developer and contractor to put in place the necessary infrastructure and resources to provide aftercare support to the building occupier or management team and establish operational infrastructure to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is substantially occupied.	Contractor	NOT Set Up
	Seasonal commissioning (1 credit)	Seasonal commissioning activities will be completed over a minimum 12-month period, once the building becomes substantially occupied. For complex systems, a specialist commissioning manager must be employed to carry out - Testing of all building services under full load conditions - Where applicable, testing should also be carried out during periods of extreme (high or low) occupancy. - Interviews with building occupants to identify problems or concerns regarding the effectiveness of the systems. - Re-commissioning of systems and incorporating any revisions in operating procedures into the operations and maintenance (O&M) manuals.	3a	1				Specialist Commissioning Manager or External consultant to undertake commissioning activities over a min 12 month period for the complex/ simple building systems proposed once the building becomes substantially occupied	M&E Specification	NOT Set Up

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~~Minimum Standards- One credit~~ Seasonal Commissioning	**Post occupancy evaluation** (1 credit)	The client or building occupier makes a commitment to carry out a post-occupancy evaluation (POE) exercise one year after initial building occupation. The POE is carried out by an independent party A review of the design intent and construction process i. Internal environmental conditions (light, noise, temperature, air quality) ii. Control, operation and maintenance iii. Facilities and amenities iv. Access and layout v.Other relevant issues vi. Sustainability performance The client or building occupier makes a commitment to carry out the appropriate dissemination of information on the building's post-occupancy performance	4,5	1				The developer, in cooperation with the building occupier will commit to carrying out a post occupancy evaluation (POE) exercise one year after initial building occupation Supporting evidence to include: 1. Letter of commitment by developer - See draft letter	Project Team	NOT Set Up
SECTION CREDIT SCORE				**20**	**2**	**0**	**21**			
Health & Wellbeing										
Hea 01 - Visual Comfort	**Glare control** (1 credit)	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 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 use or location of shading does not conflict with the operation of lighting control systems.	1,2	1				A glare control assessment is used to determine the areas of the building that are at risk of glare. Compliant shading measures are specified in all relevant areas to avoid potential glare. Also, ensure glare control strategy does not increase energy consumption used for lighting - See Section details for Definition of relevant areas & Methodology Supporting evidence to include: 1. survey of or modelling of the relationship between sunlight and the building 2. Design studies demonstrating sunlight is prevented from reaching the eyes of building occupants, or the computer screens during occupied hours	Architects	NOT Set Up
	Daylighting (up to 2 credits - building type dependent)	Where evidence provided demonstrates that the relevant building areas meet good practice daylighting criteria: - 2% daylight factor for either 40%, 60% or 80% of compliant areas(typically those areas occupied continuously for 30 minutes or more) -A uniformity ratio of at least 0.3 or a minimum point daylight factor of at least 0.3 times the relevant average daylight factor value Spaces with glazed roofs, such as atria, must achieve a uniformity ratio of at least 0.7 or a minimum point daylight factor of at least 0.7 times the relevant average daylight factor value OR - A view of sky from desk height (0.7m) is achieved AND - The room depth criterion d/w +d/HW < 2/(1-RB) is satisfied.	Public Buiding Type			3	7	Relevant building areas to meet good practice daylight factors OR meet good practice average and minimum point daylight illuminance as outlined in Table 5.1: Minimum values of average daylight factor required, Table 5.2: Daylighting uniformity criteria and Table 5.3: Space type and illuminance requirements - See section details for Table 5.1, 5.2 & 5.3 & Defintion of relevant areas Supporting evidence to include: 1. Design drawings 2. Daylight Calculations by appropriate consultant	M&E Specification	NOT Set Up
	View out (upto 2 credits)	Two credits where 95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening One credit where 80% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening The window/opening must be ≥ 20% of the surrounding wall area. 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 82061	4,5			2		95% of the floor area in 95% of spaces for each relevant building area to be within 8 m of an external wall which has a window or permanent opening. Window/opening must be ≥ 20% of the surrounding wall area Supporting evidence to include: 1. Design drawings demonstrating appropriate view-out in relevant areas 2. Window Schedule		NOT Set Up
	Internal and external lighting, zoning & control (1 credit)	**Internal Lighting-**All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. Internal lighting in all relevant areas of the building is designed to provide illuminance levels in accordance with the SLL Code for Lighting 2012 and any other relevant industry standard. **External Lighting-**external lighting provided 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. **Zoning & Occupant Control** Internal lighting is zoned to allow for occupant control - In office areas, zones of no more than four workplaces b. - Workstations adjacent to windows/atria and other building areas separately zoned and controlled - Dining, restaurant, café areas: separate zoning of servery and seating/dining areas	7 to 12	1				Internal/ external lighting to be designed in accordance with the relevant standards Supporting evidence to include: 1. Internal lighting layouts and schedules 2. External lighting layouts 3. Letter of formal confirmation of compliance by M&E consultant see draft letter of commitment sent under separate cover	M&E Specification	NOT Set Up
	Indoor air quality Plan (1 credit)	An indoor air quality plan has been produced considering the following: a. Removal of contaminant sources b.Dilution and control of contaminant sources c.Procedures for pre-occupancy flush out d.Third party testing and analysis e. Maintaining indoor air quality in-us	1	1				A site specific Indoor Air Quality Plan is to be commissioned by the developers outlining actions/recommendations to minimise indoor air pollution during occupation Supporting evidence to include: 1. Copy of Indoor Air Quality Plan	Contractor	NOT Set Up

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Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
Hea 02 - Indoor Air Quality	**Ventilation** (1 credit)	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 b. In naturally ventilated buildings/spaces: openable windows/ventilators are over 10m from sources of external pollution Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779:2007 Annex Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO2) or air quality sensors specified In mechanically ventilated buildings/spaces: sensor(s) are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space	2 to 5	1			5	Implementing robust means of ventilation design for naturally ventilated OR air-conditioned and mixed mode buildings in accordance with relevant standards. Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO_2) or air quality sensors specified Supporting evidence to include: 1. Relevant sections/ clauses of the building specification or contract 2. Design Drawings	M&E Specification	NOT Set Up
	(VOC) emission levels-products (1 credit)	All decorative paints and varnishes specified meet the criteria in Table - 18 At least five of the seven remaining product categories listed in Table - 18 meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions (listed in the table	6,7	1				Construction products listed within Table 5.11: Emission criteria by product type meet the emission limits, testing requirements and any additional requirements stated -See section details for Table 5.11	Architects	NOT Set Up
	(VOC) emission levels-post construction (1 credit)	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). 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.	8 to 12		1			Post-construction formaldehyde & VOC concentration testing carried out to meet required levels in accordance with the relevant standards Supporting evidence to include: 1. Commitment by contractor to carry out necessary testing post-construction	Project Team	NOT Set Up
	Adaptability - potential for natural ventilation (1 credit)	i. Room depths are designed in accordance with CIBSE AM10 (section 2.4) to ensure effectiveness of any natural ventilation system. The openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate. OR ii. The design demonstrates that the natural ventilation strategy provides adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates. This is demonstrated using ventilation design tool types recommended by CIBSE AM107	13, 14	1				Provide dynamic modelling outputs/report to demonstarte AM10 compliance with apotential natural ventilation strategy	M&E Specification	NOT Set Up
Hea 03 - Safe containment in Laboratories	**Containment Laboratory containment devices and containment areas** (1 credit)	**Not Applicable**	--				0	Not Applicable		NOT Set Up
	Buildings with containment level 2 and 3 laboratory facilities (1 credit)									NOT Set Up
Hea 04 - Thermal Comfort	**Thermal Modelling** (1 credit)	Thermal modelling has been carried out using software in accordance with CIBSE AM111 Building Energy and Environmental Modelling For air conditioned buildings, summer and winter operative temperature ranges in occupied spaces are in accordance with the criteria set out in CIBSE Guide A Environmental design2, Table 1.5; or other appropriate industry standard For air conditioned buildings, the PMV and PPD indices based on the above modelling are reported.	1 to 4	1			3	Full dynamic thermal modelling to be undertaken in accordance with CIBSE AM11 standards and demonstrating compliance with criteria set out in CIBSE Guide A Environmental design(79), Table 1.5; or other appropriate industry standard and limiting risk of overheating in accordance with CIBSE TM52: The limits of thermal comfort: avoiding overheating in European buildings(80) Supporting evidence to include: 1. Letter of commitment by M&E consultant 2. Relevant sections/ clauses of the building specification or contract 3. Thermal modelling results	M&E Specification	NOT Set Up
	Adaptability for a projected climate change scenario (1 credit)	Thermal Modelling credit is achieved The thermal modelling demonstrates that the relevant requirements set out in criteria above are achieved for a projected climate change environment For air conditioned buildings, the PMV and PPD indices based on the above modelling are reported.	--	1				Dynamic modelling for a future climate change scenario with TRY weather data as detailed within the manual extract Supporting evidence to include: 1. Letter of commitment by M&E consultant 2. Relevant sections/ clauses of the building specification or contract 3. Thermal modelling results	M&E Specification	NOT Set Up
	Thermal zoning and controls (1 credit)	Thermal Modelling credit is achieved The thermal modelling analysis has informed the temperature control strategy for the building and its users. The strategy for the proposed heating and cooling should tackle the following issues: - Zones within the building and how the building services could efficiently and appropriately heat or cool these areas; - The amount of occupant control required for these zones - How the proposed systems will interact with each other (where there is more than one system) and how this may affect the building occupants thermal comfort; and - The need or otherwise for an accessible building user actuated manual override for any automatic systems	10 to 12	1				The thermal modelling analysis has informed the temperature control strategy for the building and its users. Supporting evidence to include: 1. Thermal comfort strategy highlighting the points that have been considered and decisions taken accordingly 2. Design drawings	M&E Specification	NOT Set Up

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Hea 05 - Acoustic Performance ?	**Sound insulation and internal ambient noise levels** (3 credits)	Where the building meets the acoustic performance standards and testing requirements Where a suitably qualified acoustician is appointed to define a bespoke set of performance requirements for all function areas in the building using the three acoustic principles defined a. Sound insulation b. Indoor ambient noise level c. Reverberation times., setting out the performance requirements for each and the testing regime required	Public Building Type ?	2		1	4	The building meets the appropriate acoustic performance standards and testing requirements. A suitably qualified acoustician is to be appointed to define a bespoke set of performance requirements for all function areas in the building	Suitably Qualified Acoustician	NOT Set Up
	Reverberation times (1 credit)	Rooms/areas used for speech or performance, including public speaking		1						NOT Set Up
Hea 06 - Safety & Security ?	**Security of site and building** (1 credit)	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) and proposes a set of recommendations or solutions that would be require to be implemented	11 to 13	1			1	A Suitably Qualified Security Specialist (SQSS) conducts an evidence-based Security Needs Assessment for the project and recommendations to be incorporated within the proposal Supporting evidence to include: 1. Correspondence from or a copy of the report/ feedback from the ALO/CPDA/Security Consultant confirming: - Scope of their advice/ involvement - The stage of design in which their advice was sought - Summary of their recommendations	Security Consultant	NOT Set Up
SECTION CREDIT SCORE				**13**	**1**	**6**	**20**			
Ene 01 - Reduction of CO2 Emissions Minimum Standards- 6 credits ?	**Energy Performance** (upto 15 credits)	Where evidence provided demonstrates an improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO2 emissions. Calculate an Energy Performance Ratio for New Constructions (EPR NC). Compare the EPR NC achieved with the benchmarks and award the corresponding number of BREEAM credits	1	8		7	15	Team to agree to follow elemental approach or to consider whole building model with EPC.inp outputs	M&E Specification	NOT Set Up
Ene 02 - Energy Monitoring Minimum Standards-First Sub-metering credit ?	**Sub-metering of major energy consuming systems** (1 credit)	The following major energy consuming systems (where present) are monitored using either a Building Energy Management System (BEMS) or separate accessible energy sub meters with a pulsed output to enable future connection to a BEMS hat enable at least 90% of the estimated annual energy consumption of each fuel to various end-use categories: - Space Heating; - Domestic Hot Water; - Humidification; - Cooling; - Fans (major); - Lighting; - Small Power (lighting and small power can be on the same sub-meter where supplies are taken at each floor/department); and - Other major energy-consuming items where appropriate The end energy consuming use is identifiable to the building user through labelling or data outputs.	1,4	1			1	Appropriate energy metering systems to be installed for each fuel type assigned to end-use category outlined below:- 1. Space heating 2. Domestic hot water heating 3. Humidification 4. Cooling 5. Ventilation, i.e. fans (major) 6. Pumps 7. Lighting 8. Small power 9. Renewable or low carbon systems (separately) 10. Controls Meters to be clearly labelled and accessible for building users Supporting evidence to include: 1. Schematics/ design drawings indicating sub-meters 2. Letter of commitment by M&E consultant	M&E Specification	NOT Set Up
	Sub-metering of high energy load and tenancy areas (1 credit)	Where evidence provided demonstrates that an accessible BEMS or accessible sub-meters will be provided covering the energy supply to all tenanted, or in the case of single occupancy buildings, relevant function-areas or departments within the building/unit.	5					Not Applicable		NOT Set Up
Ene 03 - External lighting ?	**External Lighting** (1 credit)	The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic	2,3	1			1	External lighting to be low energy, meet minimum colour rendering and controlled by time switch or daylight control	M&E Specification	NOT Set Up
	Passive design analysis (1 credit)	The first credit within issue Hea 04 Thermal comfort has been achieved The building uses passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis and the analysis demonstrates a meaningful reduction in the total energy demand	1 to 3	1				The first credit under Hea 04-Thermal modelling is achieved Thereafter, the design team have considered appropriate passive design strategies that will be incorporated into the final design and report on reduction in CO_2 emissions Supporting evidence to include: 1. The feasibilty study report 2. Results from a dynamic simulation model demonstrating the reduced energy demand and CO_2 emissions from the specified passive design measures.	M&E Specification	NOT Set Up

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Ene 04 - Low Carbon Design	**Free Cooling** (1 credit)	The passive design analysis credit is achieved The building uses ANY of the free cooling strategies listed to reduce the cooling demand 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 mechanical ventilation (i.e. naturally ventilated).	4 to 6		1		3	Include a free cooling analysis in the passive design analysis carried out for the project and incorporate relevant free cooling strategies wiithin the design Supporting evidence to include: 1. The feasibilty study report 2. Results from a dynamic simulation model and other used methods demonstrating that the free cooling strategy can meet the building's cooling demand.		NOT Set Up
	Low or zero carbon technologies (1 credit)	A local LZC technology/technologies has/have been specified for the building/development in line with the recommendations of this feasibility study carried by the energy specialist by the completion of the Concept Design stage (RIBA Stage 2 or equivalent)and this method of supply results in a meaningful reduction in regulated carbon dioxide (CO_2) emissions (see compliance)	--	1				An LZC feasibility study has also been commissioned and the appropriate technology will be utilised to further reduce carbon emissions Supporting evidence to include: 1. The feasibilty study report 2. Results from a dynamic simulation model demonstrating reductions in CO_2 emissions from the specified low zero carbon technology.	M&E Specification	NOT Set Up
Ene 05 - Energy Efficient Cold Storage	**Refrigeration Energy Consumption** (1 credit)	**Not Applicable**	--				0	Not Applicable		NOT Set Up
	Indirect Greenhouse gas emissions (1 credit)		--							NOT Set Up
Ene 06- Energy Efficient Transportation Systems	**Energy consumption** (1 credit)	Where lifts, escalators and/or moving walks (transportation types) are specified: An analysis of the transportation demand and usage patterns for the building has been carried out to determine the optimum number and size of lifts, escalators and/or moving walks. The energy consumption has been calculated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks.	1	1			3	The developers will undertake an analysis of different lifts, escalators or moving walks specified to determine optimum alternatives The selected lift system will also incorporate energy efficient systems within the design Supporting evidence to include: 1. Professional report/study of transportation analysis and calculations	Lift supplier	NOT Set Up
	Energy efficient feature - (2 credits)	For each lift, the following three energy efficient features are specified: a.The lifts operate in a standby condition during off-peak periods. 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.	2 to 4	2						NOT Set Up
Ene 07 - Energy Efficient Laboratory Systems	**Pre-requisite**	**Not Applicable**	--				0	Not Applicable		NOT Set Up
	Design Specification (1 credit)									NOT Set Up
Ene 08 - Energy Efficient Equipment	**Energy Efficient Equipment** (2 credits)	Identify the building's unregulated energy consuming loads and systems/ or processes and estimate their contribution to the total annual unregulated energy consumption of the building Demonstrate a meaningful reduction in the total annual unregulated energy consumption of the building.	--				0	Not Applicable	Client	NOT Set Up
Ene 09 - Drying Space	**Drying Space** (1 credit)	**Not Applicable**	--				0	Not Applicable		NOT Set Up
SECTION CREDIT SCORE				**15**	**1**	**7**	**23**			

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	Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
Transport	**Tra 01 - Sustainable Transport Accessibility**	**Accessibility Index** (upto 5 credits)	The public transport Accessibility Index (AI) for the assessed building is calculated and BREEAM credits awarded in accordance with the table of building types, AI benchmarks (refer Table 29 of the manual) 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	Other Building	5			5	Project AI to be assessed and the TRA01 calculator tool completed	Project Team	NOT Set Up
	Tra 02 - Proximity to Amenities	**Proximity to amenities** (1 credit)	Where the building is located within close proximity of, and accessible to, local amenities which are likely to be frequently required and used by building occupants The building is located within 500m of at least 2 of the following local amenities: - Food outlet / grocery shop - Post Box - Cash Machine - GP surgery/medical centre - Pharmacy	Other Building	1			1	Assessor to assess the availability of local amenities		NOT Set Up
	Tra 03 - Cyclist Facilities	**Cycle Storage** (1 credit)	Where evidence provided demonstrates that the number of compliant cycle storage spaces provided are in accordance with the following: -for small retail unit 10 number of cycle spaces	Office	1			2	Compliant number of cyclist storage spaces to be provided and confirmed via scheme drawings and specification		NOT Set Up
		Cyclist facilities (1 credit)	Where evidence provided demonstrates that the number of compliant cycle storage spaces provided are in accordance with the following: - cyclist facilities for all staff only		1				Compliant number of cyclist facilities to be provided and confirmed via scheme drawings and specification		NOT Set Up
	Tra 04 - Maximum Car Parking Capacity	**Car Parking Capacity** (upto 2 credits)	The building's car parking capacity is compared to the maximum car parking capacity benchmarks (refer Table - 33 of the manual) The benchmarks vary according to the building's public transport Accessibility Index (AI determined in accordance with BREEAM issue Tra 01 Public transport accessibility	Offices				0	Not Applicable		NOT Set Up
	Tra 05 - Travel Plan	**Travel Plan** (1 credit)	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 following (as a minimum): a. Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. b. Travel patterns and transport impact of future building users. c. Current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children) d. Disabled access (accounting for varying levels of disability and visual impairment) e. Public transport links serving the site f. Current facilities for cyclists.	1 to 4	1			1	Submit copy of Travel Plan & design drawings demonstrating examples of design measures		NOT Set Up
	SECTION CREDIT SCORE				**9**	**0**	**0**	**9**			
Water	**Wat 01 - Water Consumption** **Minimum Standards- 1 credit (where applicable)**	**Water Consumption** (upto 5 credits)	The water consumption (L/person/day) for the assessed building is compared against a baseline performance 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) g.Washing machines (domestic and commercial or industrial sized).	1 to 3	3		2	5	Please provide fittings specification to confirm water efficiency of the domestic water-consuming components	Architect	NOT Set Up
	Wat 02 - Water Monitoring **Minimum Standards- criterion 1 only**	**Water Monitoring** (1 credit)	The specification of a water meter on the mains water supply to each building; 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 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	1 to 5	1			1	Provide schematic drawing indicating pulsed water meter on the main supply Require a formal letter of commitment or design drawings	M&E Specification	NOT Set Up
		Leak Detection Systems (1 credit)	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.	1	1				Please provide confirmation of a leak detection system capable of detecting major leaks is to be installed Supporting evidence to include:	M&E Specification	NOT Set Up

Public Education Higher education institutions

Parts 1, 2, 3, 4

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Possible: 5.41% EXCELLENT

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Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
Wat 03 - Water Leak Detection & Prevention	**Flow Control devices** (1 credit)	Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed	2	1			2	Submit manufacturer product details of flow control device proposed and/or scheme drawing indicating the systems provided	M&E Specification	NOT Set Up
Wat 04 - Water Efficient Equipment	**Water Efficient Equipment** (1 credit)	The design team has identified all unregulated water demands that could be realistically mitigated or reduced. System(s) or processes have been identified to reduce the unregulated water demand, and demonstrate, through either good practice design or specification, a meaningful reduction in the total water demand of the building.	1,2				0	Not Applicable	Project Team	NOT Set Up
SECTION CREDIT SCORE				**6**	**0**	**2**	**8**			
Mat 01 - Environmental impact of materials	**Project Life Cycle Assessment** (upto 6 credits)	The project uses a life cycle assessment (LCA) tool or undertakes a building information model life cycle assessment (BIM LCA) to measure the life cycle environmental impact of the refurbishment or fit-out works.	--	4		2	6	Building fabric to be assessed against the BRE's Green Guide to specification The design team to provide full breakdown of constructions proposed submit specification providing a detailed description of each applicable element and its constituent material spec	Project Team	NOT Set Up
Mat 02 - Hard Landscaping & Boundary Protection	**Hard Landscaping & Boundary protection** (1 credit)	**Not Applicable**	--				0	Not Applicable		NOT Set Up
Mat 03 - Responsible Sourcing of Materials **Minimum Standards-criterion 1 only**	**Prerequisite**	All timber and timber based products used on the project is ' Legally harvested and traded timber	1				4	Not Applicable	Contractor	NOT Set Up
	Sustainable procurement plan (1 credit)	The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan	2	1				Produce sustainable procurement plan in line with BREEAM guidance See Section details		NOT Set Up
	Responsible sourcing of materials (RSM) (3 credits)	The available RSM credits can be awarded where the applicable building materials (refer to)are responsibly sourced in accordance with the BREEAM methodology,	3,4	2		1		Requires specification of building elements and ALL material used within Design team to provide detailed schedule of materials		NOT Set Up
Mat 04 - Insulation	**Embodied Impact** (1 credit)	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. The Insulation Index for the building fabric and services insulation is the same as or greater than 2.5	1,2	1			1	Provide supplier/manufacturer details along with area/volumes of insulation used for external walls, roof and building services Suggest materials sourced that comply	Contractor	NOT Set Up
Mat 05 - Designing for durability & resilience	**Protecting vulnerable parts of the building from damage**	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 which includes 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.	--	1			1	Provide drawing showings the areas of vulnerability and protection measures proposed See Section Details	Architect	NOT Set Up
	Protecting exposed parts of the building from material degradation (1 credit)	The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors (refer Table -50 of the manual)						Provide note confirming the design and specification measures in place to limit these degradation effects. Requires written report-Issue required to achieve credit See Section Details		NOT Set Up

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Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
Mat 06 - Material Efficiency	**Material Efficiency** (1 credit)	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: a. Preparation and Brief b. Concept Design c. Developed Design d. Technical Design e. Construction.	1,2	1			1	Please provide 1. Strategic brief/ written statement to include section on material efficiency which identifies client aspirations and objectives 2. Resource management plan to inculde accurate waste forecasts, oppurtunities to design out waste and increase reclaimed content See section details for material efficiency opportunities examples along with table 9.15 for material efficiency strategy.	Architect	NOT Set Up
SECTION CREDIT SCORE				**10**	**0**	**3**	**13**			
Wst 01 - Construction Waste Management	**Pre-refurbishment Audit** (1 credit)	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.	1	1			7	A pre-demolition audit of the existing structure will be required, identifying recyclable waste streams	Project Team	NOT Set Up
	Reuse and direct recycling of materials (2 credits)	Where waste material types detailed in Table - 64 (BREEAM Manual) are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling	2 to 4			2		Issue not targetted	Contractor	NOT Set Up
	Resource efficiency (3 credits)	Where a Resource Management Plan (RMP) has been developed covering the non-hazardous waste related to on-site construction and dedicated off-site manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction	5,6	2	1			A pre-demolition audit of the existing structure will be required, identifying recyclable waste streams	Contractor	NOT Set Up
	Diversion of resources from landfill (1 credit)	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:	7	1					Contractor	NOT Set Up
Wst 02 - Recycled Aggregates	**Recycled Aggregates** (1 credit)	Where evidence provided demonstrates the significant use (>25% by weight or volume) of recycled or secondary aggregates in 'high-grade' building aggregate uses. To contribute to the total amount, the percentage of high-grade aggregate specified per application (where present) that is recycled and/or secondary aggregate, must meet the following minimum levels (by weight or volume) (refer Table-54 of the manual)	1 to 3			1	1	See Compliance Requirments for guidance See Section Details for methodology		NOT Set Up
Wst 03 - Operational Waste **Minimum Standards-1 credit**	**Operational Waste** (1 credit)	There is dedicated space(s) to cater for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. The dedicated space(s) must be: - Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams - Accessible to building occupants / facilities operators for the deposit of materials and collections by waste management contractors - 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. Space requirements: For each 1,000m2 of NIA, 2m2 of storage space for recyclables should be provided. If there is also catering in the building, this area should be doubled. If tenants are sharing waste storage space, there is a cap on size: maximum 10m2 (20m2 with catering waste) for buildings of 5,000 m2 or larger.	1 to 3	1			1	provide drawings indicating the location of external waste/ recycling storage area to be accessible and clearly labelled Area of waste storage to be at least 2sqm per 1000sqm of NIA	Architects	NOT Set Up
Wst 04 - Speculative Floor and Ceiling Finishes	**Speculative Floor and Ceiling finishes** (1 credit)	Office building types only 1. For tenanted areas (where the future occupant is not known), prior to full fit-out works, interior finishes (including carpets, other floor finishes, ceiling finishes and any other interior finishes) have been installed in a show area only. 2. In a building being refurbished or fitted out for a specific occupant, that occupant has selected (or agreed to) the specified interior finishes.	--				0	Not Applicable	Architects	NOT Set Up
Wst 05 - Adaptation to Climate Change	**Adaptation to climate change – structural and fabric resilience** (1 credit)	Conduct a climate change adaptation strategy appraisal for structural and fabric resilience by the end of Concept Design (RIBA Stage 2 or equivalent), in accordance with the following approach: a. Carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. The assessment should cover the following stages: i. Hazard identification ii. Hazard assessment iii. Risk estimation iv. Risk evaluation v. Risk management.	--				0	Not Applicable	Architects	NOT Set Up

Public Education Higher education institutions

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Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
Land Use & Ecology										
Wst 06 - **Functional Adaptability**	**Functional Adaptability** (1 credit)	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. Functional adaptation measures have been adopted in the design by Technical Design stage (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	1,2	1			1	A building-specific functional adaptation strategy study required for building over its lifespan the client and design team to consider potential future adaptation/uses for the building	Architect	NOT Set Up
SECTION CREDIT SCORE				**6**	**1**	**3**	**10**			
LE 01 - **Site Selection**	**Previously Occupied Land** (1 credit)	At least 75% of the proposed development's footprint is on an area of land which has previously been occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.	--				0	Not Applicable	Architect	NOT Set Up
	Contaminated Land (1 credit)	A contaminated land specialist's site investigation, risk assessment and appraisal has deemed land within the site to be affected by contamination. The site investigation, risk assessment and appraisal have identified: a. The degree of contamination b. The contaminant sources/types c.The options for remediating sources of contamination which present an unacceptable risk. The client or principal contractor confirms that remediation of the site will be carried out accordingly	--						Land Specialist/ Client	NOT Set Up
LE 02 - **Ecological Value of Site & Protection of Ecological Value Features**	**Protection of Ecological Features** (1 credit)	All existing features of ecological value within and surrounding the construction zone and site boundary area are adequately protected from damage during clearance, site preparation and construction activities in line with BS42020: 2013 In all cases, the principal contractor is required to construct ecological protection recommended by the SQE, prior to any preliminary site construction or preparation works	2, 3				0	Not Applicable	Suitably Qualified Ecologist	NOT Set Up
LE 03 - **Minimising impact on existing site ecology**	**Change in ecological value** (1 credit)	**Not Applicable**	--				0	Not Applicable	Suitably Qualified Ecologist	NOT Set Up
LE 04 - **Enhancing Site Ecology**	**Ecologist's report and recommendations** (1 credit)	The SQE has provided an Ecology Report based on a site visit/survey with appropriate recommendations for the enhancement of the site's ecology at Concept Design stage (RIBA Stage 2 or equivalent) and the early advice have been, or will be, implemented in the final design and build	1 to 3				0	Not Applicable	Suitably Qualified Ecologist	NOT Set Up
	Increase in ecological value (1 credit)	The first credit is met The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build, and the SQE confirms that this will result in an increase in ecological value of the site, with an increase of six plant species or greater	3 to 6					Not Applicable	Suitably Qualified Ecologist	NOT Set Up
LE 05 - **Long Term Impact on Biodiversity**	**Impact on Biodiversity** (2 credits)	Where a Suitably Qualified Ecologist (SQE) is appointed prior to commencement of activities on-site and they confirm that all relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with during the design and construction process. Where a landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion in accordance with BS 42020:2013 Where additional measures to improve the assessed site's long term biodiversity are adopted	2,3				0	Not Applicable	Suitably Qualified Ecologist	NOT Set Up
SECTION CREDIT SCORE				**0**	**0**	**0**	**0**			
Pollution										
Pol 01 - **Impact of Refrigerants**	**Pre-requisite**	All systems (with electric compressors) must comply with the requirements of BS EN 378:2008 (parts 2 and 3) and where refrigeration systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice	2	Y			3	Supporting evidence to include: Please provide written confirmation that all systems with electric compressors comply with the requirements of BS EN 378:2016 within MEP performance specification OR Confirmation that no refrigerant systems in building	M&E Specification	NOT Set Up
	Impact of refrigerant (1 to 2 credits)	Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of ≤ 100 kgCO2e/kW cooling/ heating capacity. OR Where air-conditioning or refrigeration systems are installed the refrigerants used have a Global Warming Potential (GWP) ≤10.	3,4	1	1					NOT Set Up
	Leak detection (1 credit)	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. The system must be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident	6,7			1				NOT Set Up

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Pol 02 - Nox Emissions	**Nox Emissions** (upto 3 credits)	Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a Nox emission level (measured on a dry basis at 0% excessO2) as follows: NOx Emission levels for heating and hot water (mg/kWh) Credits ≤ 100 mg/kWh - 1 credit ≤ 70 mg/kWh - 2 credits ≤40 mg/kWh - 3 credits	1, 2			3	3	Supporting evidence to include: Please supply detailed MEP specification for installed systems, or submit draft letter to confirm no fossil fuel systems		NOT Set Up
Pol 03 - Surface Water Run-off	**Flood risk** (1 to 2 credits)	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 Or 1 Credit: Where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium or high annual probability of flooding.	1,2	2			2	Supporting evidence to include: 1. Please provide site specific FRA to confirm flood risk zone and any resilience measures in line with BS 8533:2017 2. Require confirmation of qualifications of suitably qualified consultant	Structural	NOT Set Up
	Surface water run-off (2 credits)	Pre-requisite An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with the following criteria: 1 Credit: Where drainage measures are specified to ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site at 1-year and 100-year return period events. Calculations include an allowance for climate change 1 Credit: Where flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance)						Appropriate Consultant/Hydrologist	NOT Set Up
	Minimising water course pollution (1 credit)	The Appropriate Consultant confirms that there is no discharge from the developed site for rainfall up to 5mm. In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. All water pollution prevention systems have been designed and detailed in accordance with the recommendations of Pollution Prevention Guideline 31 and where applicable the SUDS manual2						Appropriate Consultant/Hydrologist	NOT Set Up
Pol 04 - Reduction of Night Time Light Pollution	**Reduction in Night Time Light Pollution** (1 credit)	1 Credit: 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: -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 - All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. - 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. - Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements	--				1		M&E Specification	-
Pol 05 - Reduction of Noise Pollution	**Reduction in Noise Pollution** (1 credit)	1 Credit: Where there are, or will be, no noise-sensitive areas or buildings within 800m radius of the assessed development. **OR** Alternatively, where the building does have noise-sensitive areas or buildings within 800m radius of the development, one credit can be awarded as follows: - Where a noise impact assessment in compliance with BS 74451 has 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 - The noise impact assessment must be carried out by a suitably qualified acoustic consultant holding a recognised acoustic qualification - 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	--	1			1	Supporting evidence to include: 1. Please provide a noise impact assessment compliant with BS 4142:2014; to be untaken by a suitably qualified consultant. 2. Please provide evidence of the acousticians qualifications (see Section Detail for definition)	Suitably Qualified Acoustician	NOT Set Up
SECTION CREDIT SCORE				**4**	**1**	**4**	**10**			
Man 03 - Responsible Construction Practices										-

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Innov	Category	Assessment Issues	Compliance Requirements	BREEAM User Guide	Definite	Possible	Not Targeting	Max Credits Available	Design Stage (Assessor Notes)	Action/Responsible person	Tracker
	Man 05 - Aftercare										-
	Hea 01-Visual Comfort										-
	Hea 02 - Indoor Air Quality										-
	Ene 01 - Reduction of Energy Use										-
	Wat 01 - Water Consumption										-
	Mat 01 - Environmental Impact of Materials										-
	Mat 03 - Responsible Sourcing of materials										-
	Wst 01 - Project waste management										-
	Wst 02 - Recycled Aggregates										-
	Wst 05 - Adaptation to climate change										-
	Pol 03 - Flood Risk Management										-
	SECTION CREDIT SCORE (MAX 10)				0%	0%	0%	10%			

Summary

		Definite incl Innov	Possible incl Innov	Not Available excl Innov	Max Credits Available excl Inov			
Management	Man	19.00	2.00	0.00	21.00	13.6%	14.72	0.01290476
Health & Wellbeing	Hea	13.00	1.00	6.00	20.00	14.6%	11.41	0.00731000
Energy	Ene	15.00	1.00	7.00	23.00	16.9%	12.03	0.00734783
Transport	Tra	9.00	0.00	0.00	9.00	5.3%	7.73	0.00000000
Water	Wat	6.00	0.00	2.00	8.00	6.8%	4.29	0.00000000
Materials	Mat	10.00	0.00	3.00	13.00	14.1%	12.38	0.00000000
Waste	Wst	6.00	1.00	3.00	10.00	8.5%	4.83	0.00847000
Land Use & Ecology	LE	0.00	0.00	0.00	0.00	9.0%	0.00	0.00000000
Pollution	Pol	4.00	1.00	4.00	10.00	11.3%	3.96	0.01129000
Innovation (values are added to individual topics) extra	*Inn*	*0%*	*0%*	*0%*	*10%*		71.35	0.04732259
Totals		**82**	**6**	**25**	**114**			
Weighted Total		**10.26**	**0.78**	**3.32**	**14.48**			
Weighted % of Weighted Max + Innovation %		**71%**	**5%**	**23%**	**100%**			