RIDGE

BREEAM UK NC V7 & RFO 2014 PRE-ASSESSMENT REPORT

Octagon House Manchester

12th August 2026

OCTAGON HOUSE MANCHESTER

Prepared for

Octagon Project Manchester
31 Station Road
Cheadle Hulme
Cheadle
Cheshire
SK8 5AF

Prepared by

Ridge and Partners LLP
3 Valentine Place
London
SE1 8QH

Contact

Alex Giles
Sustainability Consultant

VERSION CONTROL

VERSION	DATE	DESCRIPTION	CREATED BY	REVIEWED BY
1.0	10.06.2026	First issue – draft	AG	HD
1.0	12.08.2026	Final Issue	AG	HD

CONTENTS

1. INTRODUCTION 4
2. MEETING AND ATTENDEES 4
3. SITE DESCRIPTION 5
4. BACKGROUND TO SUSTAINABLE DESIGN & BREEAM 6
5. BREEAM STRATEGY & TARGETS 7
6. TIME DEPENDENT ACTIONS 8
    6.1. New Construction – New Build Blocks 8
    6.2. Refurb and Fit Out - Octagon House 12
7. KEY ISSUES TO ACHIEVE AN 'VERY GOOD' CERTIFICATION 14
    7.1. New Construction – New Build Blocks 14
    7.2. Refurb and Fit Out – Octagon House 33
8. SUMMARY, RECOMMENDATIONS AND NEXT STEPS 42
9. APPENDIX A - DETAILED ASSESSMENT REPORT 43

1. INTRODUCTION

Ridge and Partners LLP have been appointed to undertake a BREEAM Pre-assessment for the proposed keyworker and purpose build student accommodation (PBSA) development in Manchester, on behalf of Octagon Project Manchester.

The BREEAM pre-assessment for the scheme includes a BREEAM V7 New Construction (NC) assessment (for the 3no new build blocks) fully fitted, multi-residential assessment, and separately under BREEAM Refurbishment & Fit Out (RFO) 2014 (Parts 1-4) for the Octagon House works (focusing exclusively on the key worker accommodation and excluding the GF / 1F healthcare use).

The scheme is currently pre-planning, with planning submission targeted for June 2026. Octagon Project is targeting a minimum BREEAM rating of Very Good for both the NC and RFO Assessments.

The purpose of this report is to identify the issues associated with targeting a Very Good rating and to provide the design team with information relating to the key actions that should be carried out to ensure successful certification.

The team should take cognisance of the information and guidance provided within this report and associated documentation, to assist them in ensuring that the design accounts for the full BREEAM requirements.

2. MEETING AND ATTENDEES

The BREEAM Pre-assessment meeting was held across two meetings on 30.04.26 and 01.05.26, and attended by:

- Alex Giles (BREEAM AP)
- James Lomas-Holt (BREEAM Assessor and BREEAM AP)
- Rob Macleay – Hodder and Partners (Architect)
- Charles Egan – Hodder and Partners (Architect)
- Kevin Bailey – Warrington Martin (PM)
- Chris Bradburn – Ridge & Partners (MEP)
- Sam Winton – Ridge & Partners (MEP)
- Andrew Bissel – Ridge & Partners (MEP)

The meeting reviewed the proposed pre-assessment pathway towards a BREEAM 'Very Good' rating. Input from key project team members was used to refine the approach, ensuring that the credits targeted are viable, and the project team are cognisant of the underlying requirements on process and design. Responsibilities were agreed, and next steps were identified, with particular attention given to credits with defined timing requirements. This report summarises the agreed target outcomes of the pre-assessment workshop.

3. SITE DESCRIPTION

The project comprises the redevelopment of the existing Octagon House scheme on the corner of Carmoor Road and Hathersage Road, in Manchester.

The development comprises the *'Full planning application for the refurbishment and extension of Octagon House and the erection of buildings of up to 11 storeys in height to accommodate a mix of uses comprising Purpose Built Student Accommodation bedrooms (205 studios and 35 apartments accommodating 255 bedrooms) (Sui Generis Use Class); Key Worker accommodation (Sui Generis Use Class) (211 units); Residential units (16 no) (Use Class C3); 2,568 sq m of healthcare use (including the retention of an existing healthcare facility on site) (Use Class Ee); and 394 sq m of commercial or community uses (Use Classes Ea, Eb, Eciii, Ee, Ef, F1e, F2b, F2c) with associated site access, car and cycle parking and landscaping. '*

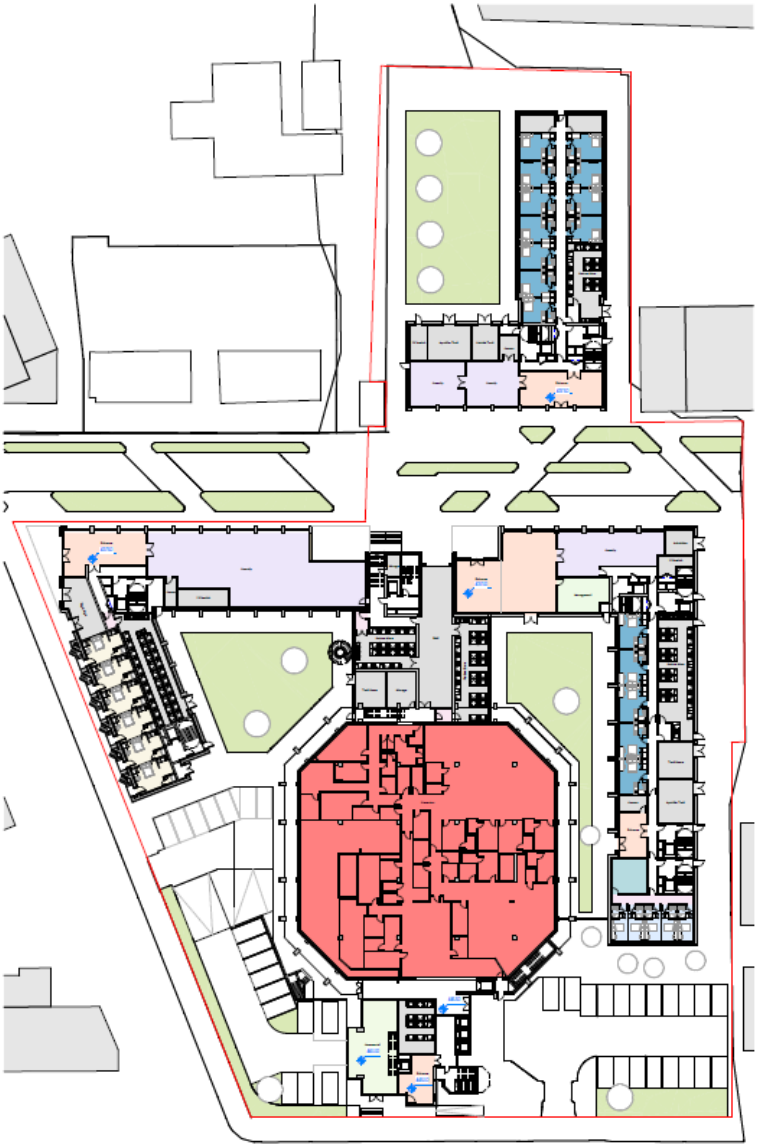


Figure 1. Proposed ground floor plan (Drawing 0670-HOD-XX-00-DR-A-20200)

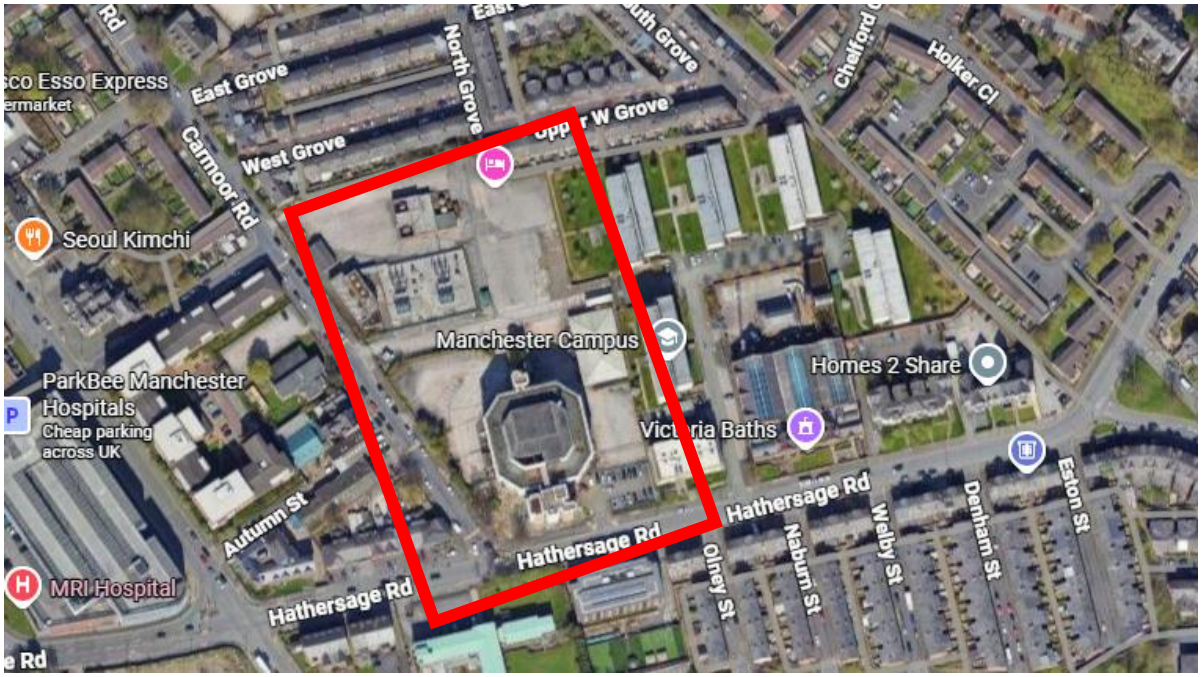


Figure 2. Current site (Google Maps –May 2026)

4. BACKGROUND TO SUSTAINABLE DESIGN & BREEAM

Sustainability is defined as the ability to meet the needs of today, without compromising the ability of future generations to provide for the needs of tomorrow. It can be described as the equilibrium between environmental and financial considerations, and the needs of the community. A truly sustainable development will achieve a balance between fitness-for-purpose, value-for-money and environmental impact and will achieve this via integration as part of a larger, sustainable community.

BREEAM (Building Research Establishment's Environmental Assessment Method) is a voluntary scheme that can be used to assess the environmental life cycle of new non-domestic buildings at the design and construction stages. The scheme assesses, encourages and rewards environmental, social and economic sustainability throughout the built environment. Buildings are assessed using a system of credits which are grouped within different categories.

An environmental weighting is applied to the scores achieved under each category as shown in the table on below, in order to calculate the final BREEAM score. The weightings have been derived from consensus-based research within various groups such as government, material suppliers and lobbyists. This research was carried out by BRE to establish the relative importance of each environmental issue. The weighting factors vary depending on the assessment type and whether the project is fully fitted, shell and core or shell only. The weightings for each category as summaries in table 1 adjacent.

BREEAM Section	V7 NC Weighting	RFO 2014 Weighting
Management	11%	14%
Health and Wellbeing	15%	16%
Energy	16.5%	17%
Transport	8.5%	5%
Water	7.5%	7%
Materials	16%	15%
Waste	7%	7%
Land Use & Ecology	10.5%	9%
Pollution	8%	11%

The assessment process results in a report covering the issues assessed together with a formal certification giving a rating on a scale of:

- PASS (requiting a score of at least 30%)
- GOOD (requiring a score of at least 45%)
- **VERY GOOD (requiring a score of at least 55%)**
- EXCELLENT (requiring a score of at least 70%)
- OUTSTANDING (requiring a score of at least 85%).

5. BREEAM STRATEGY & TARGETS

In line with Manchester City Council's planning requirements, the project is targeting a BREEAM 'Very Good' rating. The following report identifies a route-map towards achieving this target, including early actions which need to be achieved.

The full BREEAM pre-assessment tracker documents for the NC and RFO assessments can be found in Appendix A. This document provides information on the requirements for the individual credits, which make up the assessment and identifies whether the requirements can be met / committed to within the parameters of the current design or whether further considerations, funds or design changes would be required to meet the requirements.

In addition, a qualitative evaluation of risks associated with meeting the requirements of each credit has been made. Categorised as low, medium or high, these risks are based on technical or financial challenges or design team's experience in discharging the requirements of each credit.

For the development, the current targeted 'Very Good' BREEAM score for the NC Assessment is 62.91% (incl buffer of 7.91%) and 61.91% (incl buffer of 6.91%) for the RFO Assessment. In all assessments we recommend a score buffer of between 5 and 7% to allow for unexpected changes or compliance issues as the project progresses.

Within the preassessment there may be issues which are outside of the current scope of works/specification. Attention must be paid to ALL credits listed within this report, to ensure the necessary measures required to achieve the associated credits are feasible, and if so, incorporated within specifications.

It is sometimes the case that achievement of a particular BREEAM credit comes with a disproportionately increased cost, without offering equivalent advantages in functionality or sustainability. We would recommend that any such issues are identified early and that these issues are only incorporated within the design once a cost-benefit analysis has been carried out.

6. TIME DEPENDENT ACTIONS

To encourage the incorporation of sustainable design features into developments from the earliest stages, several BREEAM issues require certain actions to be undertaken prior to the completion of different RIBA Stages. If these actions are not undertaken, the associated credit may not be achieved.

The time critical actions, relevant to the NC and RFO scope of this project are provided within the sections below. The actions must be undertaken prior to the completion of the relevant RIBA Stage for the credit to be awarded.

6.1. New Construction – New Build Blocks

The time critical actions, relevant to the new build blocks assessed NC scope of this scheme are summarised respectively in Table 2 below.

Table 2. New Construction Time Dependent Actions

Credit		Time requirements	Responsibility
RIBA Stage 1			
Mat 03 Req 2	Enabling Sustainable Procurement	A Sustainable procurement plan is produced by the client and used by the design team to guide specification towards sustainable construction products from RIBA Stage 1 onwards	Octagon House
RIBA Stage 2			
Man 01 Req 1-3	Project Delivery Planning	Prior to the end of RIBA Stage 2 all the project delivery stakeholders will meet, identify, and define roles, responsibilities & contributions during each key phase.	Warrington Martin / Octagon House
Man 01 Req 4-7	Stakeholder Consultation	Prior to the end of RIBA Stage 2 the design team consult with all interested parties on matters that covers the minimum consultation content.	Warrington Martin / Octagon House
Man 01 Req 9	BREEAM AP (Concept Design)	A BREEAM Accredited Professional (AP) is Appointed as BREEAM AP During RIBA Stage 1/ 2.	Warrington Martin /Ridge (Sust)
Hea 08 Req 1-3	Security of Site and Building	Prior to the end of RIBA Stage 2, a Security Needs Assessment (SNA) must be undertaken by a suitably qualified security specialist (SQSS) and any recommendations are implemented.	SQSS / Warrington Martin
Ene 02 Req 1	Energy Strategy	An energy strategy is produced for the building at the concept design stage that describes quantitatively how the operational	Ridge (M&E) / M&E Sub

Credit		Time requirements	Responsibility
		energy and carbon performance of the building will be minimised.	
Ene 04 Req 1-2	Building Form Optimisation	An analysis of the site and proposed development is undertaken during concept design to explore the effect of building form on energy demand. Demonstrate that the analysis has informed in the building design and will lead to a reduction in building energy consumption in use.	Ridge (M&E) / M&E Sub
Ene 04 Req 3-8	Fabric Performance Optimisation	An analysis of the proposed development is undertaken to explore the impact of alternative fabric specifications on the building's demand for heating and cooling. For the award of one credit fabric performance measures which reduce the overall building heating and cooling energy demand by ≥ 5% compared to minimum values set by building regulations.	Ridge (M&E) / M&E Sub
Tra 01 / Tra 02 Prerequisite	Transport Assessment & Travel Plan	Requires that during Concept Design Stage (RIBA Stage 2) that a BREEAM compliant Transport Assessment and draft travel plan will be produced.	SLR
Mat 01 Req 3-5	Life Cycle Assessment - Superstructure	A Life Cycle Assessment (LCA) is carried out at RIBA Stage 2 in accordance with the BREEAM methodology. The reporting must provide an options appraisal and include a baseline assessment.	Project Team / Ridge (Sust)
Wst 01 Req 1-3	Pre-demolition audit	Carry out 'Pre Demolition Audit' of any existing buildings, structures or hard surfaces being considered for demolition.	TBC
Wst 05 Req 1-3	Adaption to Climate Change	Requires production of a Climate Change Adaptation Strategy Appraisal using a risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. And to develop recommendations to mitigate the identified impact before the end of RIBA Stage 2.	H&P (with Ridge M&E & Structures input)
Wst 06 Req 1-2, Req 3-5	Design for disassembly and adaptability - Recommendations	Requires production of a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of Concept Design (RIBA Stage 2) and to develop recommendations or	H&P (with Ridge M&E & Structures input)

Credit		Time requirements	Responsibility
		solutions based on the study that aim to enable and facilitate disassembly and functional adaptation.	
LE 02 Req 2-3	Ecological Survey & Evaluation	A Suitably Qualified Ecologist (SQE) must carry out a survey and evaluation for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions.	United Environmental Services
LE 02 Req 6-9	Determining Ecological Outcome	Requires that pre-planning, the project team liaise and collaborate with representative stakeholders to identify and consider ecological outcome for the site & project, and optimal ecological outcomes for the site are selected after liaising with representative stakeholders and the project team.	United Environmental Services / Design Team
RIBA Stage 3-4			
Man 03 Req 6	BREEAM AP (Site)	BREEAM AP appointed for RIBA stage 4-6 works with the team to assist with achieving the project's performance targets. This includes site spot checks.	BREEAM AP / Warrington Martin
Man 04	Commissioning Building and Design	Conduct a commissioning design review	M&E Sub
Hea 04 Req 1	Indoor Air Quality Plan	A site-specific indoor air quality plan has been produced in accordance with Guidance Note 6 (GN06). This plan informs the design, specification, and installation to maximise improvement of indoor air quality during occupation.	Ridge (M&E) / Contractor
Hea 05	Thermal Comfort	Undertake full dynamic thermal modelling to confirm whether the design can deliver required thermal comfort levels (also for a projected climate change environment)	Ridge (M&E) / M&E Sub
Ene 02 Req 2-4	Predictive Energy Modelling	Requires the production of an energy modelling report during the technical design stage which includes the following:	Ridge (M&E) / M&E Sub

Credit		Time requirements	Responsibility
		- Estimated unregulated energy uses and occupancy patterns for the building (based on CIBSE TM54:2022). - Sensitivity analysis and scenario modelling to explore the impact of key parameters and assumptions on energy consumption. - The predicted annual operational energy consumption in use by fuel type for the building based on the scenario modelling.	
Mat 01 Req 3-4	Technical Design LCA and Embodied Carbon Reporting	Requires that a technical design phase LCA calculation is undertaken from the materials that the project incorporates into the building. The LCA must include at least one assessment showing the evolving design and specification at technical design, and the embodied carbon emissions from materials used in the building must be reported using the BREEAM Platform.	Project Team / LCA Consultant / Warrington Martin
Wst 05 Req 1-3	Adaptation to Climate Change	Update 'Climate Change Adaptation Study' during Technical Design and demonstrate implementation or justify omissions	H&P (with Ridge M&E & Structures input)
Wst 06 Req 1-2, Req 3-5	Design for Disassembly and Adaptation.	Update 'Design for Disassembly and Functional Adaptation Study' during Technical Design and provide tenants guide.	H&P (with Ridge M&E & Structures input)
LE 02 Req 6-9 & LE 03 Prerequisite	Determining Ecological Outcome	Meetings held during the Developed Design Stage (RIBA Stage 3/4) with ecologist, local wildlife and environmental stakeholders, client/end user and design team (incl. landscape architect and drainage engineer) to check progress of implementation of agreed ecological impacts enhancements and mitigations.	United Environmental Services / Design Team
LE 03 Req 3 & LE 04 & 05 Prerequisie	Implementation of Measures on Site	An Ecological Clerk of Works (ECoW) or Biodiversity Champion will have been appointed by the contractor to monitor and advise on the protection of site ecology as agreed. *Please note this could be an extension of the existing ecologists scope, or if the site is deemed to have low ecological value (mainly hardstanding), the Suitably Qualified Ecologist can confirm it is unnecessary to hire an ECoW, then the contractor can nominate a*	United Environmental Services / Design Team

Credit		Time requirements	Responsibility
		biodiversity champion to influence site activities and ensure the necessary measures are implemented.	

6.2. Refurb and Fit Out - Octagon House

The time critical actions, relevant to the proposed refurbishment on Octagon House assessed under the RFO scope of this scheme are summarised respectively in Table 3 below.

Table 3. Refurb and Fit-Out Time Dependent Actions

Credit		Time requirements	Comments
RIBA Stage 1			
Man 01 Req 1-4	Stakeholder Consultation (Project Delivery)	At RIBA Stage 1, a Sustainability Brief has been produced including project budget, programme, constraints, appointment and sustainability targets.	Warrington Martin / Octagon House
LE 04	Ecologist's Report	A suitably qualified ecologist (SQE) is appointed by the end of RIBA Stage 1. To advise on the ecology of the site at an early stage.	United Environmental Services
RIBA Stage 2			
Man 01 Req 1-4	Stakeholder Consultation (Project Delivery)	Prior to the end of RIBA Stage 2 all the project delivery stakeholders will meet, identify, and define roles, responsibilities & contributions during each key phase.	Warrington Martin / Octagon House
Man 01 Req 9-11	Sustainability Champion (Design)	A BREEAM AP is appointed during RIBA Stage 1/2 to provide advice during briefing period. Formally agreeing a BREEAM Target prior to the end of RIBA Stage 2	Warrington Martin / Octagon House / Ridge
Hea 06 Req 1-3	Security of Site and Building	Requires that a Suitable Qualified Security Specialist (SQSS) conducts a Security Needs Assessment (SNA) during or prior to RIBA Stage 2 or equivalent. Note this can be done at Stage 3 if appropriate justification and agreement from the SQSS is provided.	SQSS / Warrington Martin
Ene 04 Req 7-8	LZC Feasibility	Prior to the end of RIBA Stage 2, an energy specialist must produce a BREEAM compliant Low Zero Carbon feasibility study. An LZC technology must be implemented in line with the findings of the study which reduces CO2 emissions.	Ridge (M&E) / M&E Sub

Tra 05	Travel Plan	Requires that during feasibility and design stages a BREEAM compliant Transport Assessment and draft travel plan will be produced.	SLR
Wst 05	Adaptation to Climate change	Undertaking a study to explore the structural and fabric resilience to Climate change by the end of Concept Design RIBA Stage 2	H&P (with Ridge M&E & Structures input)
Wst 06	Functional Adaptability	Requires undertaking a study to explore the functional adaptation potential of different design scenarios by the end of Concept Design (Stage 2) and to develop recommendation or solutions based on the study that aim to enable and facilitate functional adaptation.	H&P (with Ridge M&E & Structures input)
LE 04	Ecologist's Report and Recommendations	The SQE appointed at Stage 2, produces an Ecology Report based on a site visit/survey, with recommendations for the enhancement of the site's ecology at Concept Design (Stage 2)	Octagon House / United Environmental Services
RIBA Stage 3-4			
Man 01 Req 12-13	Sustainability Champion (Monitoring Progress)	The appointed BREEAM AP will continue to provide support during RIBA Stage 2, 3, & 4. They will attend a meeting and provide reports prior to, during and on completion for each stage.	Warrington Martin / Octagon House / Ridge
Man 04 Req 5-6	Commissioning Building and Design	Requires a specialist commissioning manager to be appointed during the design stage. Responsibilities include undertaking design review, providing advice on suitability for ease of commissioning, providing commissioning management input and management of commissioning, performance testing and handover.	M&E Sub-contractor
Hea 02 Req 1	Indoor Air Quality Plan	Requires an indoor air quality plan to be produced detailing actions that minimise indoor air pollution during occupation of the building.	M&E Consultant / Main Contractor
Hea 04 Req 1-5	Thermal Modelling	Requires a full dynamic thermal modelling study to be carried out in accordance with CIBSE AM11 to demonstrate the building design and service strategy can deliver thermal comfort levels in accordance with criteria set out in CIBSE Guide A, Table 1.5.	Ridge (M&E) / M&E Sub

Ene 01	Energy Performance	Undertake EPC calculations to confirm performance of existing building and new proposed building	Ridge/ M&E Sub
Mat 01 Req 3-5	Life Cycle Impacts	A basic Life Cycle Assessment using the Green Guide to Specification is undertaken by the architects.	Project Team / Warrington Martin / LCA Consultant
Wst 06 Req 1-2, Req 3-5	Design for Disassembly and Adaptation.	Update 'Design for Disassembly and Functional Adaptation Study' during Technical Design and provide tenants guide.	H&P (with Ridge M&E & Structures input)

7. KEY ISSUES TO ACHIEVE AN 'VERY GOOD' CERTIFICATION

Credits have been identified worth 62.91% for the NC assessment and 61.91% for the RFO assessment, including all BREEAM mandatory Very Good requirements. This would achieve a Very Good rating with a respective 7.91% and 6.91% margin of safety. Appendix A provides detail on the specification targeted to achieve the above score and assumptions made for each assessment (this appendix was reviewed in the BREEAM pre-assessment workshop).

The tables within the following pages have been developed to separately address the requirements for the NC and RFO assessments and provide a summary of the issues required to achieve the rating for each. These should be read in conjunction with Appendix A and the current BRE Manual which provides more detail on the requirements. Please note not all items are listed below.

7.1. New Construction – New Build Blocks

7.1.1. Client Issues (Octagon Project) / Project Manager (Warrington Martin)

Table 4. Client / Project Manager Issues

Credit		Requirements
Man 01 Req 1-3	Project Delivery Planning	Prior to the end of RIBA Stage 2 all the project delivery stakeholders will meet, identify, and define roles, responsibilities & contributions during each key phase.
Man 01 Req 4-7	Stakeholder Consultation	Prior to the end of RIBA Stage 2 the design team consult with all interested parties on matters that covers the minimum consultation content.
Man 02 Req 6	Capital Cost Reporting	Requires the capital cost for the building in (£/m²) of gross internal area (GIA) to be reported to the BREEAM assessor for reporting to the BRE.

Credit		Requirements
Man 03 Req 1 - 22	Responsible Construction Practices	Requires that any party, who at any stage, manages the construction site: - Ensures that all temporary site timber and timber-based products (excluding reused timber) used during the construction process of the project must be legal and sustainable timber. - Operates an EMS which is third party certified (e.g., ISO 14001). - Implements best practice pollution prevention policies (i.e. demonstrate compliance in line with PPG6). - Formally agrees performance targets relating to the BREEAM certification with the client and involves the BREEAM AP to ensure performance targets are met.
Hea 08 Req 1-3	Security of Site and Building	Appoint a Suitably Qualified Security Specialist (SQSS) to conduct a Security Needs Assessment (SNA), developing a set of security controls and recommendations for incorporation into the proposals. These should be implemented into the as-built development, with any deviation justified and agreed with the SQSS.
Ene 06 Req 1-4	Energy Efficient Systems	Requires Client & MEP contribution into the identification systems in the project specification (in-scope systems) that are users of unregulated energy. The expected annual energy consumption will be estimated, and the ratio of in-scope unregulated energy used by systems for regulated energy use will be calculated to determine the credit performance.
Tra 01 / Tra 02 Prerequisite	Transport Assessment & Travel Plan	Requires the appointment to produce a BREEAM compliant Transport Assessment and draft travel plan.
Wat 05 Req 1	Predict Operational Water Consumption	Requires contribution towards estimating the annual operational water consumption for the building including both sanitary, and non-sanitary uses. The following parameters are required by the BREEAM Assessor: - Number of occupied days per year - Average number of occupiers per day - Average occupancy hours per day
Wst 01 Req 1-3	Pre-demolition audit	Appoint a suitably qualified consultant to produce a 'Pre Demolition Audit' of any existing buildings, structures or hard surfaces being considered for demolition.
Wst 03 Req 1-6	Operational Waste	Requires a dedicated space, identified by clear signage, for the segregation and storage of operational recyclable waste. The space must: - Be clearly labelled for long-term durability, to assist with segregation, storage and collection of the recycle waste streams.

Credit		Requirements
		- Accessible to occupants or facilities operators for the deposit of materials and collections by waste contractors. - Of a capacity appropriate to the building type, size and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates. For consistent and large amounts of operational waste generated, provide: - Static waste compactors or balers, situated in a dedicated waste management space. - Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility. - A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. For residential institutions with self-contained dwellings, the following is required: - Provide three internal storage containers for each dwelling with: - A minimum total capacity of 30 litres - No individual container smaller than 7 litres - All containers in a dedicated non-obtrusive position (e.g. under the sink) - Storage containers for recycling in addition to non-recyclable waste storage. - Provide home composting facilities and a home composting information leaflet within the kitchen area or communal space for each self-contained dwelling.
Mat 01 Req 3-6	Building Life Cycle Assessment	Requires the appointment of an LCA Consultant to undertake a technical design and post-construction phase LCA calculation and report the embodied carbon emissions from materials used in the building.
Mat 03 Req 2	Enabling Sustainable Procurement	A Sustainable procurement plan is produced by the client and used by the design team to guide specification towards sustainable construction products from RIBA Stage 1 onwards.
LE 02-05	Land use and Ecology	Requires the appointment of an ecologist is required throughout RIBA Stage 1- handover, including the facilitation of BREEAM Ecology Workshops.
LE 02-05	Land use and Ecology	Requires client attendance at coordination environmental workshops to discuss ecological issues associated with the design, construction, maintenance, and ongoing use of the landscape. It is suggested that ecology workshops are held and co-ordinated by the ecologist, 'the Ecological Clerk of Works', to demonstrate compliance.

7.1.2. Architectural Issues (Hodder & Partners)

Table 5. Architect Issues

Credit		Requirements
Hea 01 Req 1	Natural Light	Requires at least 95% of all relevant building areas for daylight, have vertical and/or inclined windows with a glazed area ≥20% of the surrounding wall area or at least 80% of relevant building areas for daylight have a glazed area as a percentage of floor area ≥7%.
Hea 01 Req 2-4	Glare Control	Requires areas at risk of glare to be identified using a glare control assessment. The assessment should also justify any areas deemed not at risk of glare. Where risk has been identified within relevant building areas (spaces with workstations), a glare control strategy is used to design out the potential for glare. The strategy should not increase energy consumption used for lighting by maximising daylight levels in all weather and ensuring the use or location of shading does not conflict with the operation of lighting control systems.
Hea 01 Req 8-9	View Out	Requires that least 95% of the floor area in 95% of spaces for each relevant building area are within the distances of a window or permanent opening that provides an adequate view out.
Hea 04 Req 7-8	Emissions from Construction Products	Requires that three of the five product types (e.g. interior paints/coatings, flooring, ceilings, adhesives) meet the emission limits, testing requirements and any additional requirements listed in Table 5.6 and M2 of the BREEAM v7 manual. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.
Hea 07 Req 7	Outside Space	Requires that there is an appropriately sized outside space providing building users with an external amenity area. The outside space must: - Be an outdoor landscaped area open to the sky - Have appropriate seating areas and be non-smoking - Be accessible to all building users - Away from areas which may cause noise pollution e.g. building services, car parks, busy roads and delivery areas - Be permanent and be away from roads or be visually screened. Be on-site or in close proximity to the site (within 500m from the building entrance point).
Hea 08	Security of Site and Building	Requires implementation of all the recommendations identified in the Security Needs Assessment. Any deviation from the recommendations needs to be approved and justified with the SQSS.
Tra 02	Sustainable Transport Measures	Implement design measures listed in the Travel Plan and provide compliant cycle storage spaces (1 space per 10 staff, and 1 space per 2 residents), alongside cyclist facilities for staff (at least two from showers/ lockers/ changing/ drying).

Credit		Requirements
Wat 01	Water Consumption	Requires careful specification of water consuming equipment to achieve a 45% betterment on industry standards. See appendix for details of example usages.
Mat 01	Environmental Impact	Requires provision of information to enable Life Cycle Assessment to be undertaken at RIBA Stage 2, RIBA Stage 4 and RIBA Stage 6.
Mat 04	Designing for Durability and Resilience	Requires protection measures to be integrated into the building's design and construction to minimise damage to building fabric and materials from accidental or malicious activity. This includes protection against wear from high occupancy areas (e.g. corridors, stairs and doors), impacts from vehicles or trolleys within 1 m of internal building fabric in storage, delivery, corridor and kitchen areas, and vehicle impacts to the external façade where parking, manoeuvring or delivery routes are within 1–2 m (e.g. bollards). Consideration should also be given to mitigating malicious damage in public and common areas where appropriate. A detailed assessment of element resilience is required, considering material degradation and environmental exposure. An access strategy for the roof and façade must also be provided to enable safe and cost-effective cleaning, maintenance, repair and replacement, together with evidence that the design prevents water ingress, water damage and detrimental ponding.
Wst 03 Req 1-2	Operational Waste	Requires a dedicated space, identified by clear signage, for the segregation and storage of operational recyclable waste. The space must: - Be clearly labelled for long-term durability, to assist with segregation, storage and collection of the recycle waste streams. - Accessible to occupants or facilities operators for the deposit of materials and collections by waste contractors. - Of a capacity appropriate to the building type, size and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates. For consistent and large amounts of operational waste generated, provide: - Static waste compactors or balers, situated in a dedicated waste management space. - Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility. - A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. For residential institutions with self-contained dwellings, the following is required:

Credit		Requirements
		- Provide three internal storage containers for each dwelling with: - A minimum total capacity of 30 litres - No individual container smaller than 7 litres - All containers in a dedicated non-obtrusive position (e.g. under the sink) - Storage containers for recycling in addition to non-recyclable waste storage.
Wst 05	Adaption to Climate Change	Produce a study into the effects, risk and mitigation strategies for accommodating Climate Change to the building fabric during Concept Design, RIBA Stage 2 & updated at RIBA Stage 4.
Wst 06	Functional Adaptability & Design for disassembly	Produce a compliant 'Design for Disassembly and Functional Adaptation Study' during Concept Design (RIBA Stage 2) that is updated and implemented at RIBA Stage 4.
LE 01 Req 1	Previously Occupied Land	Requires that at least 75% of the development's footprint (including building, hard landscaping, and temporary works) is on previously developed land. Where any alteration has occurred, the percentage must be recalculated using the final construction site plans.
LE 02- LE 05	Land use and Ecology	Requires attendance at coordination ecology workshops to discuss ecological issues associated with the design, construction, maintenance, and ongoing use of the landscape during Stage 2/4/5.

7.1.3. Civil & Structural Engineer's Issues (Ridge & Partners)

Table 6. Civil & Structural Issues

Credit		Requirements
Mat 01	Life Cycle Impacts	Requires input into the Life Cycle Impact analysis as requested.
Wst 05	Adaption to Climate Change	Requires input into the study into the effects, risk and mitigation strategies for accommodating Climate Change to the building fabric during Concept Design, RIBA Stage 2 & updated at RIBA Stage 4.
Wst 06	Functional Adaptability & Design for disassembly	Requires input into the 'Design for Disassembly and Functional Adaptation Study' during Concept Design (RIBA Stage 2) that is updated and implemented at RIBA Stage 4.
LE 02 – LE 05	Land use and Ecology	Requires attendance at coordination ecology workshops to discuss ecological issues associated with the design, construction, maintenance, and ongoing use of the landscape.

Credit		Requirements
Pol 03 Pre-requisite	Flood and Surface water management	Requires demonstration that an FRA & drainage design have been carried out by an appropriately qualified consultant.
Pol 03 Req 2	Low Flood Risk	Requires a site-specific Flood Risk Assessment which confirms the flood risk to the development is low for all types of flooding.
Pol 03 Pre-requisite & Req 6-9	Surface Water Run-Off – Rate	Requires that surface water run-off design solutions must be bespoke and consider specific site requirements. For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to watercourses shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events and account for climate change. Relevant maintenance agreements for the ownership, long term operation and maintenance for all specified SuDS must be in place.

7.1.4. MEP Consultant (Ridge & Partners) and M&E Subcontractor's Issues

Table 7. MEP Consultant and M&E Subcontractor's Issues

Credit		Requirements
Man 04 Req 1-5	Commissioning– Testing Schedule and Responsibilities	Requires a schedule of commissioning and testing to be prepared, which identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems, and for testing and inspecting building fabric testing. The schedule must also identify the appropriate standards against which all commissioning activities are to be conducted, and where applicable in accordance with current building regulations e.g. CIBSE/BSRIA. Where a BMS is specified, commission air and water systems once all control devices are installed, wired and operational. Include physical measurements such as room and off-coil temperatures in the commissioning results. The BMS must run in auto with satisfactory internal conditions, and all schematics and graphics must be fully installed and functional before handover. Provide full training to the occupier or facilities team on system operation.
Man 04 Req 6-7	Commissioning Role	An appropriate project team member (not involved) in general installation works for the building services system should be appointed with responsibility for the following: - Undertaking design reviews and giving advice on suitability for ease of commissioning.

Credit		Requirements
		- Providing commissioning management input to construction programming and during installation stages. - Management of commissioning, performance testing and handover or post-handover stages. For buildings with complex systems, a specialist commissioning manager must be appointed.
Man 05 Req 3	In-Use Commissioning	Once the building has become substantially occupied, over a minimum 12-month period a specialist commissioning manager should be appointed to: - Identify changes made by the owner or operator that might have caused impaired or improved performance. - Test all building services under full load conditions - Where applicable, carry out testing during periods of extreme (high or low) occupancy. - Interview building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. - Production of monthly reports comparing sub-metered energy performance to the predicted one - Identification of inefficiencies and areas in need of improvement. - Re-commissioning of systems (following any work needed to serve revised loads), and incorporation of any revisions in operating procedures into the operations and maintenance (O&M) manuals.
Hea 02 Req 1	Pre-requisite – Flicker	All lighting types should be designed to avoid flicker and stroboscopic effects, including across their full dimming and colour tuning range if applicable. This is applicable to all internal and external lighting (excludes emergency lighting).
Hea 02 Req 2-4	Internal and External Lighting Levels	Internal Lighting: Internal lighting in all relevant areas of the building is designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2022(2024) and any other relevant industry standard. Internal lighting should be appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. For areas where computer screens are regularly used, the lighting design must comply with CIBSE Lighting Guide 7 – Sections 2.5, 2.15 to 2.17, 2.22 and 6.10 to 6.20. External Lighting: All external lighting located within the construction zone is specified in accordance with BS 5489-1:2020(26) and BS EN12464-2:2024(27). External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night.

Credit		Requirements
Hea 02 Req 5-8	Zoning and Occupant Control	Internal lighting is zoned to allow for occupant control for relevant areas present within the building.
Hea 04 Req 1	Indoor Air Quality Plan	A site-specific indoor air quality plan has been produced in accordance with Guidance Note 6. This plan informs the design, specification, and installation to maximise improvement of indoor air quality during occupation. The plan should consider: - Removal of highly contaminating sources - Dilution and control of other contaminant sources - Procedures for pre-occupancy flush out and purge ventilation - Third party testing and analysis - Maintaining indoor air quality use - Any relevant local or national authority plans or policies
Hea 05 Req 1-4	Thermal Modelling – Current Climate	Requires full dynamic thermal modelling to be carried out in accordance with CIBSE AM11. The study will demonstrate that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A Table 1.5. In addition, for naturally ventilated buildings overheating meets the recommendations of TM52 or TM59. For air-conditioned buildings the PMV (predicted mean vote) and PPD (percentage people dissatisfied) is reported.
Hea 05 Req 5-8	Design for Future Thermal Comfort	The thermal modelling run for the current climate demonstrates that the relevant requirements are achieved for a projected climate change environment. Where not achieved, the project team must demonstrate how the building has been adapted or designed to be easily adapted in the future using passive design solutions. For air-conditioned buildings the PMV (predicted mean vote) and PPD (percentage people dissatisfied) is reported.
Hea 05 Req 9-11	Thermal Zoning and Controls	Requires the Thermal Modelling – Current Climate to be achieved, and it is assumed that the thermal modelling analysis has informed the temperature control strategy for the building.
Ene 01 Req 1	Energy and carbon performance for regulated energy uses	The Energy Performance Ratio (EPRNC) of the development is calculated using appropriate energy modelling software and an EPRNC >0.2 is achieved. BRUKL .inp file to be provided for upload to the BREEAM Platform.
Ene 02 Req 1	Energy Strategy	Requires an energy strategy to be produced for the building at concept design which describes quantitatively how the operational energy and carbon performance of the building will be minimised.
Ene 02 Req 2-4	Predictive Energy Modelling	Requires the production of an energy modelling report during the technical design stage which includes the following:

Credit		Requirements
		- Estimated unregulated energy uses and occupancy patterns for the building (based on CIBSE TM54:2022). - Sensitivity analysis and scenario modelling to explore the impact of key parameters and assumptions on energy consumption. The predicted annual operational energy consumption in use by fuel type for the building based on the scenario modelling.
Ene 02 Req 5-6	Risk Assessment and Mitigation	Requires the prediction of energy modelling credits above to be achieved. As an addendum to the energy modelling report highlight any significant design, technical, and process risks that might prevent the buildings achieving energy performance target and how these risks will be mitigated throughout the construction and commissioning process.
Ene 03 Req 1-5	Energy Monitoring by end-use	The energy sources that will be used by the building must be identified, and the annual energy consumption for these must be estimated. Additionally, energy meters should be installed so that at least 90% of the building's annual energy use for each source can be measured and broken down by end use e.g. lighting, heating, cooling. Renewable electricity generated on-site and exported from the building must also be separately monitored, and for buildings with a GIFA a ≥1000 m², the energy meters are connected to an energy monitoring and management system.
Ene 04 Req 1-2	Building Form Optimisation	An analysis of the site and proposed development is undertaken during concept design to explore the effect of building form on energy demand. Demonstrate that the analysis has informed in the building design and will lead to a reduction in building energy consumption in use.
Ene 04 Req 3-8	Fabric performance optimisation	An energy specialist must produce an analysis of the proposed development to explore the impact of alternative fabric specifications on the building's demand for heating and cooling. It must consider fabric insulation, thermal mass to store heat or coolth, airtightness and solar gains. The reduction in energy demand must be measured by comparing the demand for heating and cooling for the actual building compared to standard practice.
Ene 04 Req 9-11	Low and zero carbon energy generation technologies	Requires that one or more eligible LZC energy generation technologies have been installed by competent installers. For one credit: The energy generated by the installed LZC energy generation technologies meet the following targets: Where PV panels are the only LZC energy generation technology installed, the electricity generated must: - Be equal to, or exceed, that generated by reference PV panels covering 50% of the ground floor area. OR

Credit		Requirements
		- Account for ≥ 60% of the building's annual electricity consumption. - PV energy generated must be equal to, or exceed, 137kWh/year/m2 of ground floor area. OR - Meet ≥ 60% of the building's annual demand for the relevant energy source.
Ene 06 Req 1-4	Energy Efficient Systems	Requires contribution into the identification systems in the project specification (in-scope systems) that are users of unregulated energy The expected annual energy consumption will be estimated, and the ratio of in-scope unregulated energy used by systems for regulated energy use will be calculated to determine the credit performance.
Wat 02 Req 1	Water Sub Meters	Requires a water meter with a pulsed output or other open protocol output is installed on all portable water supplies entering the building.
Wat 02 Req 1-4	Water Sub Meters	Requires water consuming plant or building areas with significant water demand must be fitted with easily accessible sub-meters or have water monitoring equipment that is integral to the plant or area. For buildings with GIFA of ≥1000 m² the water meters are connected to a monitoring or management system. Additionally, those responsible for monitoring the building's water consumption must be able to clearly identify the water uses and areas covered by each meter.
Wat 03 Req 1	Leak Detection System	Requires a BREEAM compliant leak detection system is specified and installed on the buildings water supply. This needs to cover leaks between building utilities water supply, to detect any major leaks between the utilities supply and the building under assessment.
Wat 03 Req 2	Flow Control Devices	Requires flow control devices that regulate the supply of water to each WC area or facility according to demand are installed. Please note that for multi-residential buildings the specification of flow control devices in WC areas or facilities does not apply to ensuite facilities in residential areas. For example: ensuite facilities in individual private bedrooms and a single bathroom for a collection of individual private bedrooms in halls of residence.
Wat 05 Req 1	Predict operational water consumption	Requires input into the calculations and data sources used to confirm the overall estimated annual operational water consumption for the building, including both sanitary and non-sanitary water uses.
Wst 05	Adaption to Climate Change	Requires input into the study into the effects, risk and mitigation strategies for accommodating Climate Change to the building fabric during Concept Design, RIBA Stage 2 & updated at RIBA Stage 4.

Credit		Requirements
Wst 06	Functional Adaptability & Design for disassembly	Requires input into the 'Design for Disassembly and Functional Adaptation Study' during Concept Design (RIBA Stage 2) that is updated and implemented at RIBA Stage 4.
Pol 01 Req 2-3	Pre-requisite – Systems with refrigerants	All systems with electric compressors must comply with relevant safety standards for installing refrigerant systems (e.g. EN378-3:2016+A1:2020, ISO 5149:2014, ASHRAE15-2016, Safety Code of Practice for Ammonia Refrigerant R717). Additionally, the refrigerants used must have an ozone depletion potential of zero.
Pol 01 Req 4-5	Impact of Refrigerant	For one credit, requires systems using refrigerants to have an average direct effect life cycle (DELC) carbon dioxide equivalent (CO_2e) emission rate of <1000kgCO_2e per kW of cooling or heating capacity.
Pol 02	Local Air Quality	Three credits can be awarded where non-combustion systems supply all space heating and domestic hot water generation on-site.
Pol 04 Req 1-5	Reduction of Night-Time Light Pollution	Requires that the external lighting strategy has been designed to reduce obtrusive light. This includes both external lighting and internal lighting in spaces with glazed apertures. Additionally, a curfew must be established whereby all external lighting (excluding safety and security lighting) can be automatically switched off between 23:00 and 07:00, and lighting must be designed to minimise impacts on nocturnal wildlife.

7.1.5. Acoustician's Issues (TBC)

Table 8. Acoustician's Issues

Credit		Requirements
Hea 06 Req 3b	Indoor Ambient Noise Levels	Indoor ambient noise levels should comply with the design ranges given in Section 7 of BS 8233:2014. Additionally, a programme of pre-completion testing by a compliant test body in accordance with the acoustic testing and measurement procedures.
Hea 06 Req 3c	Room Acoustics	Achieve the requirements relating to sound absorption and within the common spaces of the building described in the relevant building regulations or building standards national guidance. Installation of a specification compliant with the relevant building described in the relevant building regulations or building standards national guidance demonstrates compliance. A site inspection by the developer or SQA is required to confirm that a compliant specification has been installed.

Credit		Requirements
Pol 05 Req 1-5	Reduction of Noise Pollution	Requires an assessment by a suitably qualified acoustician to produce a BS4142:2014-compliant Noise Impact Assessment where noise-sensitive receptors are located within 800 m of the site. The assessment must determine existing background noise levels and predicted noise levels from the proposed development at the nearest or most exposed noise-sensitive receptor. Predicted noise levels must be at least 5 dB below background levels during both day and night. Where this criterion is not met, appropriate mitigation measures must be implemented to attenuate noise at source to achieve compliance.

7.1.6. Landscape Architect's Issues (Layer Studio)

Table 9. Landscape Architect's Issues

Credit		Requirements
Hea 07 Req 7	Outside Space	Requires that there is an appropriately sized outside space providing building users with an external amenity area. The outside space must: - Be an outdoor landscaped area open to the sky - Have appropriate seating areas and be non-smoking - Be accessible to all building users - Away from areas which may cause noise pollution e.g. building services, car parks, busy roads and delivery areas - Be permanent and be away from roads or be visually screened. - Be on-site or in close proximity to the site (within 500m from the building entrance point).
Mat 04	Durability and Resilience	Requires protection to the building against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring e.g., bollards behind disabled spaces where there are drop kerbs.
Wat 04	Irrigation	Ensure that all external landscaping and planting relies solely on precipitation.
LUE 02-LE 05	Land use and Ecology	Requires attendance at coordination ecology workshops to discuss ecological issues associated with the design, construction, maintenance, and ongoing use of the landscape and to agree ecological outcomes and roles and responsibilities and consultations.

Credit		Requirements
LUE 05 Req 3	Landscape and ecology management plan (or similar) development	Requires a landscape & ecology management plan, developed to BS 42020:2013 covering at least the first five years after project, as well as a 25-year management strategy and must include: handover responsibilities; ecological value and condition of the site; opportunities for alignment with external activities; remedial actions for unforeseen impacts, monitoring procedures, risk register, maintenance and management plans, allocated roles and responsibilities.

7.1.7. Ecologist's Issues (United Environmental Services)

Table 10. Ecologist Issues

Credit		Requirements
LUE 02 Req 2-3	Ecological Survey & Evaluation	A suitably qualified ecologist (SQE) carries out a survey and evaluation for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions. The SQE's survey and evaluation determines the site's ecological baseline, including: - Current and potential ecological value and condition of the site and related areas within the zone of influence. - Direct and indirect risks to current ecological value from the project. - Capacity and feasibility for enhancement for the site's ecological value, and where relevant, areas within the zone of influence.
LUE 02 Req 6-9	Determining Ecological Outcomes	The ecologist collaborates with appropriate project team members (e.g. landscape architect, architect etc.), sharing relevant information and recommendations from the survey and evaluation to influence the project design as well as decisions regarding site preparation and construction works. Additionally, the ecologist with full support from the project team, collaborates with representative stakeholders early enough to influence key planning decisions. The ecologist identifies the optimal ecological outcomes for the site and identifies measures to achieve these outcomes within ecology workshops and in line with the mitigation hierarchy.
LUE 03 Req 2-3	Implementation of measures on-site	Requires handover between the design and construction team to be sufficiently structured to ensure that all planned ecological measures are communicated, understood and adhered to throughout construction. For the comprehensive route only, an ecologist will have been in place throughout planning and design. If an Ecological Clerk of Works

Credit		Requirements
		has been appointed for the construction and handover stages (RIBA Stages 5 & 6), there must be additional handover between the two ecologists (or can be extended appointment of ecologist). The measures required to achieve optimal ecological outcomes must be integrated with site preparation and construction processes. These must be measured and monitored throughout construction and handover (RIBA Stages 5 and 6)
LUE 03 Req 4-5	No Net Loss	In addition to achieving LUE 03 Req 2-3, requires a statement from the ecologist confirming there is no net loss of ecological value on site caused by construction and handover activities. Where appropriate, the Statutory Biodiversity Metric for the site can be used to support the ecologist's statement.
LUE 04 Req 3	Ecological Enhancement	Requires confirmation that measures have been implemented that enhance ecological value which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of 'Determining Ecological Outcomes' in LUE 02. Measures are implemented in the following order: 3a. On-site, and where this is not feasible. 3b. Outside of the site boundary, within the zone of influence.
LUE 04 Req 4	Ecological Enhancement	Requires that in addition collaboration with representative stakeholders, where potentially valuable, data is provided to the local environmental records centres nearest to, or relevant for, the site.
LUE 04 Req 5-6	Quantifying Change in Ecological Value	Requires a completed copy of the Statutory Biodiversity Metric tool, where based on results, up to 3 + 1 exemplary credit can be awarded.
LUE 05 Req 2	Handover to building owner or tenant	Requires input into collating a section on ecology and biodiversity information to be supplied to the building owner, to inform them about local ecological features and biodiversity associated with the site, including an as-built biodiversity metric calculation. The information should also include detailed management and maintenance plans and relevant handover information to minimise loss of planting during establishment phase.
LUE 05 Req 3	Landscape and ecology management plan (or similar) development	Requires input into a landscape & ecology management plan, developed to BS 42020:2013 covering at least the first five years after project as well as an additional 25-year management strategy, and must include: handover responsibilities; ecological value and condition of the site; opportunities for alignment with external activities; remedial actions for unforeseen impacts, monitoring procedures, risk register, maintenance and management plans, allocated roles and responsibilities.

7.1.8. Main Contractor Issues (TBC)

Table 11. Main Contractor Issues

Credit		Requirements
Man 03 Req 1 - 22	Responsible Construction Practices	Requires that any party, who at any stage, manages the construction site: - Ensure that all temporary site timber and timber-based products (excluding reused timber) used during the construction process of the project must be legal and sustainable timber. - Operates an EMS which is third party certified (e.g., ISO 14001). - Implements best practice pollution prevention policies (i.e. demonstrate compliance in line with PPG6). - Formally agrees performance targets relating to the BREEAM certification with the client to ensure performance targets are met. - Achieves two credits for 'Responsible Construction Management', including demonstrating clear and safe access in and around site at handover. (Average CCS score of 39 with all sections scoring 13 or greater). - Assigns responsibility to a named individual with appropriate authority and experience to set targets for, monitor, and reports construction site impacts including energy, water and transportation of construction materials and waste. Please note, material deliveries to site, and waste removal from site should be recorded separately. The principal contractor: - Undertakes driver and operator training for company vehicles, movable plant and equipment that is owned, hired or leased to promote safety - Ensures that any vehicular accidents, incidents or near misses in the vicinity of the site are recorded, investigated and analysed.
Man 04 Req 1-5	Commissioning – Testing Schedule and Responsibilities	The contractor accounts for commissioning, testing, responsibilities and standards within budget and programme of works.
Man 04 Req 8-10	Envelope Testing	Requires the Man 04 Req 1-5 credit to be achieved, and the contractor to instruct a suitably qualified professional to undertake air-tightness testing and a thermographic survey in accordance with the appropriate standard. Any defects identified during the post-construction testing and inspection must be rectified prior to building handover and close out.

Credit		Requirements
Man 04 Req 11-12	Handover	Prior to handover, two building user guides are developed a non-technical guide for building occupiers and a technical guide for FM. A draft copy is developed and discussed with users first, where building occupiers are known. Additionally, two training schedules are prepared, timed appropriately around handover and proposed occupation plans: one as a non-technical training schedule for the building occupiers, and a technical version for FM team.
Man 05 Req 1-2	Aftercare Support	Aftercare support must be provided to occupiers, including a pre or post occupation meeting to introduce available support, Building User Guides, training, and design intent, alongside on site FM training covering a building walk through and system operation. Initial aftercare support must be provided for at least one month, with ongoing support available for a minimum of 12 months. Systems must be in place to monitor energy and water consumption for at least 12 months following occupation, with aftercare data submitted to BRE where 13 months of occupation have elapsed.
Hea 04 Req 1	Indoor Air Quality Plan	Requires the IAQP to be implemented, with contractor input on construction and handover procedures for minimising build-up of pollutants, appropriate air quality testing, and flush procedures
Hea 04 Req 7-8	Emissions from Construction Products	Requires that three of the five product types (e.g. interior paints/coatings, flooring, ceilings, adhesives) meet the emission limits, testing requirements and any additional requirements listed in Table 5.6 and M2 of the BREEAM v7 manual. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.
Hea 04 Req 7-8	Emissions from Construction Products	Requires that three of the five product types (e.g. interior paints/coatings, flooring, ceilings, adhesives) meet the emission limits, testing requirements and any additional requirements listed in Table 5.6 and M2 of the BREEAM v7 manual. Where wood-based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum.
Hea 04 Req 9-15	Post Construction Indoor Air Quality Measurement	Requires the formaldehyde concentration in indoor air is measured post-construction (but pre-occupancy) and does not exceed 100 µg/m³, averaged over 30 minutes.

Credit		Requirements
Ene 06 Req 1-4	Energy Efficient Systems	Requires contribution into the identification systems in the project specification (in-scope systems) that are users of unregulated energy The expected annual energy consumption will be estimated, and the ratio of in-scope unregulated energy used by systems for regulated energy use will be calculated to determine the credit performance.
Wat 01 Req 1-3	Water Consumption	It is assumed that a 45% improvement in water consumption over the notional baseline will be achieved. Once specified, the contractor should provide details of the bathroom pods and manufacturer's literature outlining flow rates and flush volumes.
Mat 03 Pre-req	Responsible Sourcing	Requires that 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy (TPP).
Mat 03 Req 2	Enabling Sustainable Procurement	Requires that the contractor implements and evidences compliance with the Sustainable Procurement Plan
Mat 03 Req 3	Measuring Responsible Sourcing	Requires materials to be sourced with appropriate responsible sourcing certification (e.g., BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.) & 20% of available points achieved for Substructure, Superstructure, Internal Finishes and Hard Landscaping.
Wst 01 Req 3 – 5	Construction Resource Efficiency	Requires Resource Management Plan to prepared and followed, and that non-hazardous construction waste is less than 13.3m3 or 11.1 tonnes per 100m² GIFA.
Wst 01 Req 6-7	Diversion of resources from landfill	Requires that 70% (by volume) of non-hazardous waste generated by the project is diverted from landfill and that 80% (by volume) of non-hazardous demolition waste generated by the project is diverted from landfill.
Wst 03 Req 1-6	Operational Waste	Requires a dedicated space, identified by clear signage, for the segregation and storage of operational recyclable waste. The space must: - Be clearly labelled for long-term durability, to assist with segregation, storage and collection of the recycle waste streams. - Accessible to occupants or facilities operators for the deposit of materials and collections by waste contractors. - Of a capacity appropriate to the building type, size and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates. For consistent and large amounts of operational waste generated, provide:

Credit		Requirements
		- Static waste compactors or balers, situated in a dedicated waste management space. - Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility. - A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site. For residential institutions with self-contained dwellings, the following is required: - Provide three internal storage containers for each dwelling with: - A minimum total capacity of 30 litres - No individual container smaller than 7 litres - All containers in a dedicated non-obtrusive position (e.g. under the sink) - Storage containers for recycling in addition to non-recyclable waste storage. - Provide home composting facilities and a home composting information leaflet within the kitchen area or communal space for each self-contained dwelling.
LUE 02-05	Land use and Ecology	Requires attendance at coordination ecology workshops to discuss ecological issues associated with the design, construction, maintenance and ongoing use of the landscape and implementation of all recommended ecological solutions and monitoring of construction impacts.
LUE 02	Determining Ecological Outcome	Requires evidence showing installation of ecological protection measures in line with the ecologist's recommendations.
LUE 03 Req 3	Implementation of measures on-site	Appoints an Ecological Clerk of Works (EcoW) (can be ecologist) to monitor and advise on the protection of the site technology as agreed. Negative impacts from site preparation and construction works have been managed according to the hierarchy and there will be minimised loss in ecological value. The measures required to achieve optimal ecological outcomes must be integrated with site preparation and construction processes. These must be measured and monitored throughout construction and handover

7.2. Refurb and Fit Out – Octagon House

7.2.1. Client Issues (Octagon Project) / Project Manager & QS (Warrington Martin)

Table 12. Client Issues / Project Manager Issues

Credit		Requirements
Man 01 Req 1-4	Stakeholder Consultation (Project Delivery)	Requires the production of a Sustainability Brief and all project delivery stakeholders meet, identify and define roles, responsibilities & contributions during the key phases.
Man 01 Req 9-11	Sustainability Champion (Design)	A BREEAM AP is appointed during RIBA Stage 1 / 2 to provide advice during briefing period. Formally agreeing a BREEAM Target prior to the end of RIBA Stage 2.
Man 01 Req 12-13	Sustainability Champion (Monitoring Progress)	Appoint a BREEAM AP who will continue to provide support during RIBA Stage 2, 3, & 4. They will attend a meeting and provide reports prior to, during and on completion for each stage.
Man 05 Req 1-2	Aftercare	Requires commitment to collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied and systems to be adjusted accordingly.
Man 05 Req 4-5	Post Occupancy Evaluation	Requires a Post Occupancy Evaluation to be undertaken by an independent third party one year after building occupation, to gain building performance feedback and to disseminate this information via a case study in order to share good practice and lessons learned.
Tra 05	Transport Assessment & Travel Plan	Requires that during feasibility and design stages a BREEAM compliant Transport Assessment and draft travel plan will be produced.
Mat 01	Life Cycle Impacts	Requires the appointment of a basic Life Cycle Assessment using the Green Guide to Specification is undertaken by the architects with a statement on how this has influenced the design

7.2.2. Architectural Issues (Hodder & Partners)

Table 13. Architectural Issues

Credit	Requirements

Hea 01 Req 1-2	Glare Control	It is assumed that compliant glare control is present in all relevant areas, this is relevant to all rooms having windows or roof lights where close working is undertaken and includes sports halls.
Hea 06	Security of Site and Building	Requires implementation of all the recommendations identified in the Security Needs Assessment. Any deviation from the recommendations needs to be approved and justified with the SQSS.
Tra 03	Cycle Storage	BREEAM compliant storage at a rate of 1 space for every 10 users. At least two of the following are provided; BREEAM compliant staff showers, changing room, lockers or drying space.
Wat 01 Req 1-3	Water Consumption	Requires careful specification of water consuming items to achieve a 40% improvement in water consumption over the notional baseline.
Mat 01	Life Cycle Impacts	Requires input into the Life Cycle Impact analysis as requested.
Mat 04	Embodied Impact of Insulation	Requires all insulation products used in the external walls; ground floor; and roof will have a low embodied impact when compared to their thermal properties. To ensure that this credit is achieved, A+ rated insulation types, according to the BRE's Green Guide Online, will be selected.
Mat 05	Designing for Durability and Resilience	Requires appropriate protection to be specified on vulnerable internal and external areas and a study on durability & resilience of building fabric & structure.
Wst 03	Operational Waste	Ensure the provision of a dedicated recycling area, at least 2m2 per 1000m2 of net floor area for buildings <5000m2. Ensure a space is set aside for the installation of a compactor / baler by future tenants. Confirm waste storage for food compost will not be required based on reasonable expectation of future usages (i.e., no future canteen / commercial food prep kitchen).
Wst 05	Adaptation to Climate Change	Produce a compliant Adaptation to Climate change study during Concept Design (RIBA Stage 2).
Wst 06	Functional Adaptability	Produce a compliant 'Functional Adaptation Study' during Concept Design (RIBA Stage 2) that is updated and implemented at RIBA Stage 4.
LE 02 / LE 04	Protection of Ecological Features / Enhancing Ecological Value	Ensure ecologists recommendations are followed and that ecological features are protected prior to and during construction, and recommendations on enhancement are met.

7.2.3. Acoustician (TBC)

Table 14. Acoustician Issues

Credit	Requirements
Acoustic Performance (Sound Insulation) (Indoor Ambient Noise Levels)	Requires production of an acoustic report to demonstrate the airborne sound insulation values are at least 8dB higher and impact sound insulation values are at least 8dB lower than the performance standards in the relevant Building Regulations or Standards.
Noise Attenuation	Requires a noise impact assessment in compliance with BS 7445 and for noise levels to be no greater than 5dB higher than the background noise throughout the day and 3dB higher at night.

7.2.4. Landscape Architect's Issues (TBC)

Table 15. Landscape Architects Issues

Credit		Requirements
Wat 04	Irrigation	Ensure that all external landscaping and planting relies solely on precipitation.

7.2.5. Ecologist

Table 16. Ecologist Issues

Credit	Requirements
Protection of Ecological Features	Confirm ecological features of value and provide recommendations on adequate protections prior to and during construction
Ecologists Report and Recommendations	Produce an Ecology report based on site visit/survey with recommendations to enhance onsite ecology at RIBA Stage 2.
Long Term Impact on Biodiversity	Produce a 5-year management plan for site biodiversity. Advise on other good practice site procedures for maintaining ecology.

7.2.6. Main Contractor Issues (TBC)

Table 17. Main Contractor Issues

Credit		Requirements
Man 03 Req 1 – 19	Responsible Construction Practices	Requires that any contractor managing the construction site - - Main contractor operates a certified Environmental Management System. - Best practice pollution prevention policies and procedures will be implemented on site in accordance with PPG 6
Man 04 Req 1-5	Commissioning and Testing Schedule and Responsibilities	Requires that the commissioning, testing, responsibilities, and standards are identified within the budget and programme of works.
Man 04 Req 11-12	Handover	Requires production (prior to handover) of a building user guide covering all aspects described within the BREEAM 2014 Manual will be produced that is suitable for general building users as well as the facilities management team. A schedule of training will be identified for the occupiers at handover to cover all points set out within the BREEAM manual
Man 05 Req 1-2	Aftercare Support	Requires aftercare support to the building occupiers with: - A handover meeting covering BUG, training schedules, and key design information; - On site FM training; - Weekly attendance on site for the first 12 month - Longer term aftercare e.g., helpline
Hea 02 Req 1	Indoor Air Quality Plan	Requires the production and implementation of an indoor air quality plan.
Ene 06 Req 1	Energy Consumption	Instruct a BREEAM compliant vertical transport analysis and energy consumption report and install low energy lift specification including the use of regenerative units.
Ene 06 Req 2-4	Energy Efficient Features (Lifts)	The following three energy efficient features are specified: The lifts operate in a standby condition during off-peak periods. The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. - Where the use of regenerative drives is demonstrated to save energy, they are specified. - If a regenerative drive is not to be installed it needs to be proven with calculations that energy will not be saved.

Credit		Requirements
Ene 08	Energy Consumption	The building's unregulated energy consuming loads are identified and their contribution to the total annual unregulated energy consumption is estimated.
Wat 01 Req 1-3	Water Consumption	Requires careful specification of water consuming items to achieve a 40% improvement in water consumption over the notional baseline.
Wat 04	Irrigation	Ensure that all external landscaping and planting relies solely on precipitation.
Mat 03 Req 2	Sustainable Procurement Plan	Materials are sourced in accordance with a documented BREEAM compliant Sustainable Procurement Plan.
Mat 03 Req 3	Measuring Responsible Sourcing	Requires materials to be sourced with appropriate responsible sourcing certification (e.g., BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.) & 18% of available points achieved.
Mat 04 Req 1-2	Embodied Impact of Insulation	Requires all new insulation products to have a low embodied impact through the specification of A+ rated materials.
Wst 01 Req 5-6	Construction Resource Efficiency	Requires that a Resource Management Plan (RMP) is developed, and that non-hazardous construction waste is less than 11.3 m^3 or 3.5 tonnes per 100m^2 GIFA.
Wst 01 Req 7	Diversion of resources from landfill	Requires 85% by volume (90% by weight) of non-hazardous construction waste and 90% by volume (95% by weight) of demolition waste to be diverted from landfill.
Wst 03	Operational Waste	Ensure the provision of a dedicated recycling area, at least 2m2 per 1000m2 of net floor area for buildings <5000m2. Ensure a space is set aside for the installation of a compactor / baler by future tenants. Additionally for multi-resi buildings, For every 6 bedrooms, the following internal storage container provisions are installed: - A minimum total capacity of 30 litres - No individual container smaller than 7 litres - All containers in a dedicated non-obstructive position - The storage containers for recycling are provided in addition to non-recyclable waste storage - The recyclable storage in located in a dedicated non-obstructive position in either the communal kitchen, or where there are no communal kitchens, in a communal space such as lounges or utility areas - Home composting facilities and a home composting information leaflet are provided within the kitchen area or

Credit		Requirements
		communal spaces for each self-contained dwelling, bedsit, or communal kitchen.
LE 02	Protection of Ecological Features	Ensure ecologist's recommendations are followed and that ecological features are protected prior to and during construction.
LE 04	Ecologist's Report and Recommendations	Ensure that the ecologists' recommendations are followed in line with their Ecology report produced at RIBA Stage 2.
LE 05	Long Term Impact on Biodiversity	Ensure that a Biodiversity champion is appointed, training is provided to workforce to protect site ecology, monitor actions undertaken to protect ecology throughout construction, siteworks are programmed to minimise wildlife disturbance. Carry out the requisite BREEAM actions on site.
Pol 05	Reduction of Noise Pollution	Requires a noise impact assessment to BS 4142:2014 and for noise levels to be > 5dB lower than the background noise throughout the day and night.

7.2.7. MEP Consultant (Ridge & Partners) and M&E Subcontractor's Issues

Table 18. MEP Consultant and M&E Subcontractor's Issues

Credit		Requirements
Man 04 Req 1-4	Commissioning and Testing Schedule and Responsibilities	A 'schedule of commissioning' needs to be developed, with a commissioning monitor appointed.
Man 04 Req 5-6	Commissioning Building and Design	Requires appointment of a specialist commissioning manager to undertake design reviews, provide commissioning management to construction programme and management of commissioning during handover / post-handover stages.

Credit		Requirements
Man 05 Req 3	Seasonal Commissioning	Requires seasonal commissioning will be undertaken with completion over a minimum 12-month period, once the building becomes substantially occupied in accordance with the BREEAM requirements
Hea 01 Req 10-16	Internal and External Lighting Levels, Zoning and Control	Requires SLL & CIBSE compliant lighting design, and BREEAM compliant control & zones (manual switching required). External lighting will comply with BS5489-1:2013 & BS12464-2:2014 Part 2.
Hea 02 Req 1	Indoor Air Quality Plan	Requires the implementation of the indoor air quality plan which details the actions that minimise indoor air pollution during occupation of the building.
Hea 04 Req 1-5	Thermal Modelling	Requires a full dynamic thermal modelling study to be carried out in accordance with CIBSE AM11 to demonstrate compliance with CIBSE Guide A, Table 1.5 and PMV and PPD indices reported. A competent person must also assess the suitability of the existing building services and controls to identify any changes that may be required as a result of fit-out works.
Hea 04 Req 6-9	Thermal Modelling for a projected climate change scenario	Requires that the thermal modelling demonstrates that the relevant requirements set out in CIBSE Guide A are achieved for a projected climate change environment.
Hea 04 Req 10-12	Thermal Zoning and Controls	Ensure the thermal modelling analysis has informed the temperature control strategy for the building and its users, and that the strategy for proposed heating and cooling systems will address the full BREEAM scope.
Ene 01 Req 1	Energy Performance	It is assumed that an EPNR ≥ 0.50 will be achieved based on the improvement on the EPC as a result of the refurbishment.
Ene 02 Req 1-4	Sub-metering of Major Energy Consuming Systems	Requires that energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems and an accessible energy monitoring and management system.
Ene 03	External lighting efficiency	Requires all external lighting to be controlled via time clock/daylight sensor and have less than 60 lamp lumens per circuit watt plus PIRs to areas with intermittent pedestrian use. This must include all existing lighting within the construction zone.

Credit		Requirements
Ene 04 Req 7-8	LZC Feasibility	Requires a feasibility study to be undertaken by the end of Concept Design to establish the most appropriate recognised local low or zero carbon energy source for the building. An LZC technology must be implemented in line with the findings of the study which reduced CO2 emissions by >5%.
Wat 01	Water Consumption	Requires careful specification of water consuming equipment to achieve a betterment of 40% on current industry standards. An example specification of water restrictions is provided in the appendix.
Wat 02	Water sub meter	The main supply to the building will be fitted with a pulsed water meter and additional sub meters where applicable.
Wat 03 Req 2	Flow Control Devices	Flow control devices are installed to regulate the supply of cold water to each WC area/facility according to demand.
Mat 04	Embodied Impact of Insulation	Requires all insulation products used in building services will have a low embodied impact when compared to their thermal properties. To ensure that this credit is achieved, A+ rated insulation types, according to the BRE's Green Guide Online, will be selected.
Mat 01	Life Cycle Impacts	Requires input into the Life Cycle Impact analysis as requested.
Wst 05	Adaptation to Climate Change	Provide input for Adaptation to Climate change report.
Wst 06	Functional Adaptability	Provide input for the Functional Adaptability Study.
Pol 01	Buildings With Refrigerants Prerequisite	Ensure all systems comply with the requirements of BS EN 378:2008 (parts 2 & 3) and where refrigeration systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice.
Pol 01 Req 3-5	Impact of Refrigerants	Ensure that systems using refrigerants installed as part of the fit out have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of ≤ 100 kgCO2e/kW cooling/heating capacity.
Pol 04	Reduction of Night-Time Light Pollution	Requires that all Illuminated advertisements comply with ILP PLG05 and all external lighting with Table 2 ILP:2011. Additionally, lighting can be automatically switched off between 23:00 and 07:00, excluding for safety and security lighting which complies with the lower lighting levels in Table 2 ILP:2011.

7.2.8. Structural and Civil Engineer Issues (Ridge & Partners)

Table 19. MEP Consultant and M&E Subcontractor's Issues

Credit		Requirements
Mat 01	Life Cycle Impacts	Requires input into the Life Cycle Impact analysis as requested.
Wst 05	Adaptation to Climate Change	Requires input into Adaptation to climate change study during concept design.
Wst 06	Functional Adaptability	Requires input into functional adaptation study during concept design.
Pol 03 Req 7-8	Neutral Impact on Surface Water	Requires confirmation there will be no increase in the impermeable surfaces as a result of the works.

Appendix A provides a detailed summary of the issues and requirements related to achieving the targeted BREEAM rating for both the RFO and NC assessments for the scheme. This should be read in conjunction with the current BREEAM UK NC V7 and BREEAM UK RFO 2014 Technical manuals which set out the detailed criteria and assessment requirements.

The appendix highlights the following:

- Targeted credits and their weighting
- Mandatory credits required to achieve a BREEAM 'Very Good' certification.
- The party primarily responsible for providing evidence and ensuring that the development specification and drawings include the targeted BREEAM requirements.
- A traffic light risk indicator highlighting credits that may be challenging to achieve and will require careful management throughout the project.

8. SUMMARY, RECOMMENDATIONS AND NEXT STEPS

This report, based on the current Stage 2 proposals and discussions with the design team and the Client, has identified a feasible route to achieve a 'Very Good' BREEAM UK New Construction Version 7 and BREEAM Refurbishment & Fit-Out 2014 rating. The current targeted score for the NC Assessment is 62.91% (incl buffer of 7.91%) and 61.91% (incl buffer of 6.91%) for the RFO Assessment.

Section 6 above highlights the credits targeted for where there is a time constraint. A more detailed breakdown of each BREEAM target is provided in Appendix A.

It is recommended that each discipline review the suggested target and ensure as a minimum that the necessary elements are incorporated into the design documentation to achieve the BREEAM requirements.

Please note that for any particular rating there are also mandatory credits that need to be achieved for the various ratings within the targeted percentage score. Those appropriate for BREEAM Very Good are also highlighted in Appendix A

9. APPENDIX A – DETAILED ASSESSMENT REPORT

New Construction v7 – New Build Blocks

DRAFT

RIDGE

Octagon House Redevelopment - PBSA & Key Worker Accommodation - New Build BREEAM

PASS	30
GOOD	40
VERY GOOD	55
EXCELLENT	70
OUTSTANDING	85

Report Prepared By:	Alex Giles
Report Checked By:	James Lomas-Holt
Date:	01.05.26
BREEAM Registration	TBC

Results Summary			
Sector	**Total Available**	**Weighting**	**Very Good Pre-Assessment Score**
Management	21	11.0%	8.90%
Health & Wellbeing	22	15.0%	9.54%
Energy	45	16.5%	4.76%
Transport	12	8.5%	6.37%
Water	12	7.5%	4.37%
Materials	14	16.0%	10.28%
Waste	10	7.0%	4.90%
Land Use & Ecology	13	10.5%	7.26%
Pollution	13	8.0%	5.53%
Total Predicted Score			**61.91%**
Innovation	10	10.0%	**1.00%**
Total Score			**62.91%**
BREEAM Rating			**VERY GOOD**

Key to Responsibilities		
Role	Company	Ref
Client	Octagon House	**Client**
Consulation	Keeble Brown	**PC**
Project Manager / QS	Warrington Martin	**PM & QS**
Planning Consultant	Turley	**PC**
Architect	Hodder & Partners	**Architect**
M&E Consultant	Ridge & Partners	**M&E Consultant**
Structural & Civil Eng	Ridge & Partners	**Structures & Civils**
Acoustician	TBC	**Acoustician**
Ecologist	TBC	**Ecologist**
BREEAM Assessor & AP	Ridge & Partners	**BREEAM Assessor**
Main Contractor	TBC	**Contractor**
M&E Sub Contractor	TBC	**M&E Sub**

Notes: This document is to be read in conjunction with the current BREEAM NC Version 7 Manual available online, with gives full details of the credit requirements.

Shading Denotes Mandatory Credit

BREEAM V7 New Construction, Residential Institution (Long Term Stay)

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
MANAGEMENT							
Man01	**Project Brief and Design**						
Req 1-3	Project Delivery Planning	1	0.52	1. A clear brief is developed prior to completion of the **concept design,** to include input from all design team members and this information is shared with all relevant parties. This clear briefing document sets out the particular ambitions for the project: (please refer to the BREEAM V7 Manual for the briefing document requirements). 2. Prior to the completion of the **concept design**, the project team (Client, Design Team and Contractor) meet specifically to discuss, identify and define the roles, responsibilities and contributions for each key phase of the project. Please refer to the BREEAM V7 manual for list of items which must be considered. 3. The project team must demonstrate how the project delivery stakeholder's contributions and their input in the design process have influenced the following: 3a. Initial Project Brief 3b. Project Execution Plan 3c. Communication Strategy 3d. Concept Design 3e. Final Design	1	**Low**	**Client/ PM**
Req 4-7	Stakeholder Consultation	1	0.52	4. Prior to completion of the **Concept Design**, the design team consult with all interested parties on matters that covers the minimum consultation content (see M2 BREEAM V7 manual). 5. The project must demonstrate concisely how the interested party contributions and outcomes of the consultation exercise have influenced or changed the initial project brief and concept design, and these changes were implemented within the final design at post construction. 6. Prior to completion of the detailed design (**Technical Design or equivalent**), consultation feedback has been given to, and received by all relevant parties.	1	**Medium**	**Client/ PM**
Req 8	BREEAM AP (Concept Design)	1	0.52	A BREEAM Advisory Professional (AP) has been appointed to facilitate the setting and achievement of BREEAM Performance Targets for the project. Their involvement must be early in the design process (see M3.2) to: 8a. Work with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM, from their appointment and throughout **Concept Design.** 8b. Monitor progress against the agreed performance targets throughout all stages after their appointment where decisions critically impact BREEAM Performance. 8c. Proactively identify risks and opportunities related to the achievement of the agreed targets. 8d. Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 8e. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team. 9. The defined BREEAM performance targets have been formally agreed between the client and design / project team no later than the **Concept Design stage.** 10. To achieve this credit at the interim design stage assessment, the agreed BREEAM performance targets must be demonstrably achieved by the project design. This must be demonstrated via the assessors design stage assessment report.	1	**Low**	**Ridge / PM**
Req 11-13	BREEAM AP (Monitoring Progress)	1	0.52	11. Achieve the credit for BREEAM AP - Concept Design (Criteria 8 to 10). 12. A BREEAM AP has been appointed to monitor progress against the agreed BREEAM performance targets throughout the design process and formally report progress to the client and design team. They must: 12a. Work with the project team, including the client to consider the links between BREEAM issues and to assist them in maximising the project's overall performance against BREEAM throughout **Developed Design.** 12b. Monitor progress against the performance targets agreed throughout all stages where decisions critically impact the specification and tendering process and the BREEAM performance. 12c. Proactively identify risks and opportunities related to the achievements of the targets agreed under Criterion 9. 12d. Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 12e. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.	1	**Low**	**Ridge**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
				13. The BREEAM AP - Design must attend key project and design team meetings during the **concept design, developed design and technical design work stages**. Reporting must be carried out during and prior to completion of each stage, as a minimum.			
Man02	**Life Cycle Cost and Service Life Planning**						
Req 1-3	Elemental Life Cycle Cost Options Appraisal	2	0.52	1. A competent person carries out an outline, entire asset elemental life cycle cost (LCC) options appraisal (at least two) at the **Concept Design** stage in line with ISO 15686-5:2017 2. The Elemental LCC plan: 2a. Provides an indication of future replacement costs over an agreed period of analysis as required by the client (e.g. 20, 30, 50 or 60 years). 2b. Includes service life, maintenance and operation cost estimates. 3. Demonstrate, using appropriate examples provided by the design team, how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	TBC / Client
Req 4-5	Component Level LCC Options Appraisal	1	0.52	4. A competent person develops a component level LCC options appraisal (at least two)by the end of **Technical Design** stage in line with ISO 15686-5:2017, and includes the following component types (where present): 4.a Envelope, e.g. cladding, windows, or roofing 4.b Services, e.g. heat source, cooling source, or controls, also intelligent lighting controls against standard controls. 4.c Finishes, e.g. walls, floors or ceilings 4.d External spaces, e.g. alternative hard landscaping, boundary protection 5. Demonstrate, using appropriate examples provided by the design team, how the elemental LCC plan has been used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	TBC / Client
Req 6	Capital Cost Reporting	1	0.52	Report the capital cost for the building in (£/m²) of gross internal area (GIA) to the Assessor for reporting to the BRE.	1	Low	QS
Man03	**Responsible Construction Practices**			**Minimum standard: Req 8 for Excellent, Req 9 for Outstanding**			
Req 1	Pre-requisite: Legal and sustainable site timber			1. All temporary site timber and timber-based products (excluding reused timber) used during the construction process of the project must be legal and sustainable timber, in line with the UK Government Timber Procurement Policy (TPP).		Low	Contractor
Req 3-4	Environmental Management	1	0.52	3. All parties who manage the construction site at any stage must operate an EMS covering their main operations. This must be third party certified e.g. ISO14001 or an equivalent standard. 4. All parties who manage the construction site at any stage must implement best practice pollution prevention policies and procedures on site. To demonstrate compliance, the project team should complete the checklist (Table 4.2) showing how the intent of every section has been met, even if by different means than the actions suggested.	1	Medium	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 5-7	BREEAM AP (Site)	1	0.52	5. The client must formally agree with the contractor the performance targets relating to the BREEAM certification that have been set for the project. 6. A BREEAM AP must be involved in the project at an appropriate time and level to ensure that the agreed performance targets are met. Specifically, the AP must: 6a. Work with the project team, including the client to help them maximise performance against the agreed targets throughout construction, handover, and closeout. This support will include considering links between the criteria that need to be met across all project areas to be assessed by BREEAM, going beyond the design intent wherever possible. 6b. Monitors progress against the agreed performance targets throughout all stages of the construction, paying particular attention wherever decisions are made that could critically impact the BREEAM performance, and keeping all records needed as evidence for the assessment. 6c. Proactively identify risks and opportunities related to the procurement and construction processes and the achievement of the targets agreed under Criterion 5. 6d. Feedback promptly and regularly to the contractor and project team helping the project stay on track to meet its targets and supporting any necessary corrective actions. 6e. Where appropriate, coordinate and help the project team to provide the assessor with the necessary evidence to achieve the credits. 7. To achieve this credit at the final post-construction stage of assessment, the submitted assessor's report must show that a BREEAM AP was appointed and that the agreed performance targets have been demonstratable achieved by the project.	1	**Medium**	**Contractor**
Req 8	Responsible Construction Management - Credit 1	1	0.52	8. The contractor achieves the requirements of the ticked items within Table 4.1 of the BREEAM V7 manual **OR** Registers with the Considerate Constructors Scheme and achieves a minimum score of 27, with no section scoring less than 9 points AND demonstrates that clear and safe access in and around buildings is provided at the point of handover.	1	**Low**	**Contractor**
Req 9	Responsible Construction Management - Credit 2	1	0.52	In addition to achieving the credit above, the contractor achieves an additional 6 items from the items within Table 4.1 of the BREEAM V7 manual **OR** Registers with the Considerate Constructors Scheme and achieves a minimum score of 39, with no section scoring less than 13 points.	1	**Low**	**Contractor**
Req 10	Monitoring of Construction- Site Impacts- Pre-requisite			10. Assign responsibility for site monitoring to a named individual. This is a pre requisite for the award of any of the site monitoring credits set out below. The responsible individual must have the appropriate authority and experience to access the data required. They will be required to monitor, record and report energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing throughout the build programme. Report the project value.		**Low**	**Contractor**
Req 11 - 16	Monitoring Utility Consumption - Energy & Water	1	0.52	**Energy Consumption:** 11. Set targets at design stage for the site energy consumption in kWh (and where relevant, litres of fuel used) resulting from the use of construction plant, equipment (mobile and fixed) and site accommodation. 12. Monitor and record data for the energy consumption described in criterion 11 and show that the consumption targets have been achieved. 13. Report the total carbon dioxide emissions (total$kgCO_2e$ and energy consumption (electricity in kWh or litres of fuel) resulting from the construction process. **Water Consumption:** 14. Set targets at design stage for potable water consumption (m3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation. 15. Monitor and record data for potable water consumption described in criterion 14 and show that the consumption targets have been achieved. 16. Use the collated data to report the total net water consumption resulting from the construction process (m3) i.e. consumption minus any recycled water use.	1	**Low**	**Contractor**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 19-22	Monitoring Transport of Construction Materials and Waste	1	0.52	17. Set targets at design stage and monitor and record data relating to transport movements and other impacts resulting from delivery of the majority of construction materials to the site and removal of construction waste from site (see M4). As a minimum this must cover: 17a. Transport of materials from the point of supply to the building site, including any transport, immediate storage and point of supply. 17b. The scope of this monitoring must cover the materials used within the following as a minimum: 17bi. Superstructure 17bii. internal finishes 16biii. Substructure and Hard Landscaping 17biv. Core building services 17c. Transport of construction waste from the construction gate to waste disposal processing or recovery centre gate. Monitoring must cover the construction waste groups outlined in the project's resource management plan. 18. Using the collated data, report separately for materials and waste, the total transport related carbon dioxide emissions (kgCo2e), plus total distance travelled (km) and amount of fuel used (litres).	1	Low	Contractor
Man04	**Commissioning and Handover**			**Minimum Standard: Req 1-5 & 11 for Very Good & Above**			
Req 1-5	Commissioning - Testing Schedule and Responsibilities	1	0.52	1. Prepare a schedule of commissioning and testing. The schedule identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. 2. The schedule identifies the appropriate standards for all commissioning activities to be conducted, where applicable in accordance with current building regulations, BSRIA guidelines and CIBSE guidelines etc. 3. Where a BMS is specified, commission air and water systems once all control devices are installed, wired and operational. Include physical measurements such as room and off-coil temperatures in the commissioning results. The BMS must run in auto with satisfactory internal conditions, and all schematics and graphics must be fully installed and functional before handover. Provide full training to the occupier or facilities team on system operation. 4. Appoint an appropriate project team member to monitor and programme pre-commissioning, commissioning and testing. Where necessary includes re-commissioning activities on behalf of the client. 5.The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and the main programme of works. Allow the required time to complete all commissioning and testing activities prior to handover	1	Medium	M&E (Ridge) / M&E Sub / MC
Req 6-7	Commissioning Role	1	0.52	6. The above credit is achieved. 7. During the **design stage**, the client or the principal contractor appoints an appropriate project team member provided they are not involved in general installation works for the building services system, with responsibility for: 7a. Undertaking design reviews and giving advice on suitability for ease of commissioning. 7b. Providing commissioning management input to construction programming and during installation stages. 7c. Management of commissioning, performance testing and handover or post-handover stages. For a building with complex systems, a specialist commissioning manager must be appointed.	1	Low	M&E Sub
Req 8-10	Envelope Testing	1	0.52	8. Criteria 1-5 is achieved above. 9. Complete post-construction testing and inspection to quality-assure the integrity of the building fabric (through airtightness testing and a thermographic survey). A suitably qualified professional undertakes the survey and testing in accordance with the appropriate standard. 10. Rectify any defects identified during the post-construction testing and inspection prior to building handover and close out.	1	Low	Contractor
Req 11-12	Handover	1	0.52	11. Prior to handover, two building user guides are developed - a non technical guide for building occupiers and a technical guide for FM. A draft copy is developed and discussed with users first, where building occupiers are known. 12. Two training schedules are prepared, timed appropriately around handover and proposed occupation plans: one as a non-technical training schedule for the building occupiers, and a technical version for FM team.	1	Low	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Man05	**Aftercare**			**Minimum Standard: Req 3 for Excellent and Above**			
Req 1-2	Aftercare Support	1	0.52	1. Provide aftercare support to the building occupiers through having in place operational infrastructure and resources. This includes as a minimum: 1a. A meeting between the aftercare support team or individual, and the building occupier or management team prior to initial occupation or as soon as possible thereafter to: 1ai. Introduce the aftercare support available, including the content of the BUGs and training schedule. 1aii. Present key information about features of the building including the design intent and how to use the building to ensure it operates as efficiently and effectively as possible. 1b. On-site facilities management training including: 1bi. A walkabout of the building. 1bii. introduction to and familiarisation with the building systems, their controls and how to operate them in accordance with the design intent and operational demands. 1c. Provide initial aftercare support for at least the first month of building occupation e.g. weekly attendance to site and support building users and management. 1d. Provide longer term aftercare support for occupiers for at least 12-months from occupation e.g. a helpline, nominated individual or other appropriate system to support building users and management. 2. Establish operational infrastructure and resources to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is substantially occupied. This facilitates analysis of discrepancies between actual and predicted performance, with a view to adjusting systems and user behaviours accordingly (seeM1).	1	Low	Contractor
Req 3	In-use Commissioning	1	0.52	3. Complete the following commissioning activities over a minimum 12-month period, once the building has become substantially occupied: 3a. The specialist commissioning manager will: 3ai. Identify changes made by the owner or operator that might have caused impaired or improved performance. 3aii. Test all building services under full load conditions 3aiii. Where applicable, carry out testing during periods of extreme (high or low) occupancy. 3aiv. Interview building occupants (where they are affected by the complex services) to identify problems or concerns regarding the effectiveness of the systems. - Production of monthly reports comparing sub-metered energy performance to the predicted one - Identification of inefficiencies and areas in need of improvement. - Re-commissioning of systems (following any work needed to serve revised loads), and incorporation of any revisions in operating procedures into the operations and maintenance (O&M) manuals.	1	Low	M&E Sub
Req 4-7	Post Occupancy Evaluation	1	0.52	It is assumed that a Post Occupancy Evaluation will be undertaken by an independent third party one year after building occupation, to gain building performance feedback and to disseminate this information via a case study in order to share good practice and lessons learned. The client commits funds to pay for the POE in advance, evidence of appointment needed to award the credit. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Client

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
HEALTH & WELLBEING							
Hea01	**Natural Light**			**Minimum Standard: Req 1 for Outstanding**			
Req 1	Minimum Standard (Outstanding) - Natural Light			1. Achieve one of the following: 1a. At least 95% of all relevant building areas for daylight, have vertical and/or inclined windows with a glazed area ≥20% of the surrounding wall area. **OR** 1b. At least 80% of relevant building areas for daylight have a glazed area as a percentage of floor area ≥7%.			**Architect/ M&E**
Req 2-4	Glare Control	1	0.68	2. Identify areas at risk of glare using a glare control assessment. This should justify any areas deemed not at risk of glare. 3. Where risk has been identified within a relevant building area, a glare control strategy is used to design out the potential for glare. 4. The glare control strategy does not increase energy consumption used for lighting. This is achieved by: 4a. Maximising daylight levels in all weather (cloudy or sunny). **AND** 4b. Ensuring the use or location of shading does not conflict with the operation of lighting control systems. Relevant building area - Glare control: areas of the building where resultant glare could be problematic for users. This includes, but not exclusively: - Areas that have been designed to contain or use work stations or projector screens (such as offices, study bedrooms, libraries, facility management offices and reception desks). - Areas where people must spend time in fixed locations and cannot change their viewing direction. Assuming that occupants are generally elsewhere during daylight hours, lighting and resultant glare are not considered to be problematic for bedrooms in residential institution and multi-residential assessments. The only exception to this is where designated additional office working space is provided. In these circumstances it is the role of the assessor to determine if individual spaces should be determined as 'relevant building areas' in accordance with guidance provided. Glare control criteria apply to building areas such as study bedrooms or facility management offices, where work or study will be carried out and where glare would hinder such activities. It does not apply to other residential areas.	1	**Medium**	**Architect**
Req 5	Daylighting	2	0.68	Relevant building areas must meet good practice daylighting criteria as per Table 5.2 within the BREEAM V7 Manual. 5a. The relevant building areas meet good practice average and minimum point daylight illuminance criteria as outlined in Table 5.2. **OR** 5b. The relevant building areas meet any level of recommendation using the daylight illuminance criteria in EN17037:2018+a1:2021. **OR** 5c. The relevant building areas achieve at least 'nominally accepted' daylight sufficiency as per rIES LM-83-23.(21). This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	**Possible**	**Architect**
Req 6-7	Direct sunlight to windows	1	0.68	Credit **not** targeted. It would require - 6. Achieve at least one credit for 'Daylighting' (criterion 5). 7. All relevant units have at least one relevant area that receives at least 3 hours of direct sunlight at windows on equinox day (21 March or 21 September, as the average representation of annual conditions) assuming a cloudless sky.	0		
Req 8-9	View Out	1	0.68	8. At least 95% of the floor area in 95% of spaces for each relevant building area are within the distances of a window or permanent opening that provides an adequate view out, as outlined in Table 5.1 of the BREEAM V7 manual. Does not include bedrooms in multires. **OR** 9. At least 75% of the floor area in 95% of spaces for each relevant building area can meet both of the following criteria: 9a. Horizontal sight angle ≥28°AND 9b. The landscape layer and at least one additional layer (sky or ground) are visible through a permanent opening.	1	**Medium**	**Architect**
Hea02	**Artificial Light**						
Req 1	Pre-Requisite - Flicker			1. All lighting types should be designed to avoid flicker and stroboscopic effects (seeM1), including across their full dimming and colour tuning range if applicable. This is applicable to all internal and external lighting.		**Low**	**M&E / Lighting Designer**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 2-4	Internal and External Lighting Levels	1	0.68	Internal Lighting: 2. Internal lighting in all relevant areas of the building is designed to provide illuminance (lux) levels and colouring rendering index in accordance with the SLL Code for Lighting 2022(2024) and any other relevant industry standard. Internal lighting should be appropriate to the tasks undertaken, accounting for building user concentration and comfort levels. 3. For areas where computer screens are regularly used, the lighting design complies with CIBSE Lighting Guide 7 - Sections 2.5, 2.15 to 2.17, 2.22, and 6.10 to 6.20. External Lighting: 4. All external lighting located within the construction zone is specified in accordance with BS 5489-1:2020(26) and BS EN12464-2:2024(27). External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night.	1	Low	M&E
Req 5-8	Zoning and Occupant Control	1	0.68	5. Internal lighting is zoned to allow for occupant control in accordance with the criteria below for relevant areas present within the building, as applicable: 5.a Workstations adjacent to windows or atria and other building areas are separately zoned and controlled. 5.b In office areas where furniture layout is known, zones of no more than four workplaces. 5.c Seminar and lecture rooms: zoned for presentation and audience areas. 5.d Library spaces: separate zoning of stacks, reading and counter areas. 5.e Teaching space or demonstration areas. 5.f Whiteboard or display screen. 5.g Auditoria: zoning of seating, circulation space and lectern area. 5.h Dining, restaurant, cafe areas: separate zoning of servery and seating or dining areas. 5.i Retail: separate zoning of display and counter areas. 5.j Bar areas: separate zoning of bar and seating areas. 5.k Wards / bedded areas: zoned lighting control for individual bed spaces and control for staff over groups of bed spaces. 5.l Treatment areas, dayrooms, waiting areas, zoning of seating and activity areas and circulation space with controls accessible to staff. 6. Areas used for teaching, seminar or lecture purposes have lighting controls provided in accordance with CIBSE Lighting Guide 5. 7. Where automatic lighting controls are used for energy efficiency reasons, manual override must be provided. 8. In addition, the building type criteria in Table 5.4, where relevant.	1	Medium	M&E
Hea03	**Non-Visual Effects of Light**						
Req 1-4	Non-Visual Effects of Light	1	0.68	1. Achieve at least one credit for 'Daylighting' in Hea 01 Natural Light. 2. All relevant areas achieve one of the below, as applicable: 2a. Where occupant positions are known and fixed (see M1.1) All positions in relevant building areas receive a vertical illuminance of at least 250 lux melanopic EDI at occupant eyes for at least four hours during the daytime (beginning by noon at the latest). 2b. Where occupant positions are unknown or variable (seeM1.2): Cylindrical illuminance at eye height across each relevant building area corresponds to at least 250 luxmelanopic EDI for at least four hours during the daytime (beginning by noon at the latest). 3. Electric lighting systems and controls are in place to adjust the flux and spectral output of the emitted light overtime (colour tuning)so that melanopic EDI at occupant eye level can be reduced in the afternoon and evening, as relevant for each type of application. **Residential areas (Healthcare, Residential Institutions, Prisons and Hospitality)** 4. For residential areas within a building, systems and controls are in place to ensure that no more than 10 lux melanopic EDI for a period of three hours before bedtime and no more than 1 lux melanopic EDI during sleep time are achieved at occupant eye level in all relevant building areas where residential occupancy type is expected(see Definitions). This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	M&E/ Lighting Designer
Hea 04	**Indoor Air Quality**			**Minimum Standard: Req 1 for Very Good and above**			
Req 1	Indoor Air Quality Plan	1	0.68	1. A site-specific indoor air quality plan has been produced in accordance with Guidance Note 6 (GN06).This plan informs the design, specification, and installation to maximise improvement of indoor air quality during occupation.	1	Medium	M&E/ Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 2-6	Ventilation	1	0.68	The building would need to be designed to minimise the concentration and recirculation of pollutants as follows: 2 Provide fresh air into the building in accordance with one of the best practice standards of ventilation (see M1.1). 3 Ventilation pathways are designed to minimise the ingress and build-up of air pollutants inside the building (see M1.2). 4 Where present,HVACs systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 16798-3:2025 SectionB.4.2.(36) The specified filters should achieve supply air classification of at least SUP2. The level of filtration required is dependent on the quality of the outdoor air. 5. Occupied spaces have calibrated carbon dioxide(CO_2) or calibrated air quality sensors specified in accordance with Building Regulations ADF2(37)and: 5.a In mechanically ventilated buildings or spaces: sensors are lined to the mechanical ventilation system and provide demand-controlled ventilation to the space. 5.b In naturally ventilated buildings or spaces: sensors either have the ability to alert the building owner or manager when CO2 levels exceed the recommended set point or are linked to controls with the ability to adjust the quantity of fresh air i.e. automatic opening windows or roof vents. 5.c The total number of sensors, and the net internal area of relevant areas covered by sensors is reported via the BREEAM Platform. 6. The ventilation strategy provides adequate ventilation rates throughout the year, including sufficient airflow rates in summer to prevent overheating and maintain required thermal comfort conditions in accordance with: 6.a CIBSE AM10 (38) (for naturally ventilated buildings) 6.b CIBSE AM13 (39) (for mixed-mode buildings) This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	M&E/ Contractor
Req 7-8	Emissions from Construction Products	2	0.68	**One Credit:** 7. Three of the five product types meet the emission limits, testing requirements and any additional requirements listed in Table5.6 and M2.Where wood based products are not one of three selected product types, all wood-based products used for internal fixtures and fittings must be tested and classified as formaldehyde E1 class as a minimum(see CN2.2) **Two Credits:** 8. All the product types meet the emissions limits, testing requirements and any additional requirements listed in Table 5.6 and M2.	1	High	Architect/ Contractor
Req 9-15	Post Construction Indoor Air Quality Measurement	1	0.68	9. Criterion 1 has been achieved. 10. The formaldehyde concentration in indoor air is measured post-construction (but pre-occupancy)and does not exceed 100 µg/m³, averaged over 30 minutes. 11. The formaldehyde sampling and analysis is performed in accordance with ISO16000-2(41)and ISO16000-3(42)and Methodology M3. 12. The total volatile organic compound (TVOC) concentration in indoor air is measured post-construction (but pre occupancy)and does not exceed an 8-hour time-weighted average of 300 µg/m³.(43) 13. The TVOC sampling and analysis is performed in accordance with ISO 16000-5(44)and ISO16000-6(45) or ISO16017-1 (46) andMethodologyM3. 14. Where levels are found to exceed these limits, the project team confirms the measures that have or will be undertaken in accordance with the recommendations of the IAQ plan, to reduce the TVOC and formaldehyde levels to within the above limits. 15. The measured concentration levels of formaldehyde e (µg/m³) and TVOC (µg/m³)are reported via the BREEAM Platform.	1	Medium	Contractor
Hea 05	**Thermal Comfort**						
Req 1-4	Thermal Modelling	1	0.68	It is assumed that full dynamic thermal modelling will be carried out in accordance with CIBSE AM11. The study will demonstrate that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A Table 1.5. In addition for naturally ventilated buildings overheating meets the recommendations of TM52 or TM59. For air conditioned buildings the PMV (predicted mean vote) and PPD (percentage people dissatisfied) is reported.	1	Medium	M&E/ M&E Sub

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 5-8	Design for Future Thermal Comfort	1	0.68	Dynamic thermal modelling demonstrates compliance for the above criteria when run for a projected climate change environment (see Relevant definitions in the Manual). Where thermal comfort criteria are not met, a report must be produced demonstrating how the building has been or can be easily adapted in future using passive design solutions in order to meet the requirements above. For air conditioned buildings, the PMV and PPD indices based on the above modelling must be reported via the BREEAM assessment scoring and reporting tool.	1	Medium	M&E/ M&E Sub
Req 9-11	Thermal Zoning and Controls	1	0.68	It is assumed that the thermal modelling analysis has informed the temperature control strategy for the building and its users, addressing all of the issues below: 1. Zones within the building and how these could be efficiently heated and cooled. 2. The degree of occupant control required for these zones, based on discussions with the end user (or specific design guidance, case studies, feedback). This should consider: - User knowledge of building services - Occupancy type, patterns and room functions - How the user is likely to operate or interact with the system(s), - The user expectations and degree of individual control 3. If there are multiple systems, how they will interact with each other and how this will affect the thermal comfort of occupants. 4. The need for an accessible building user actuated manual override for any automatic systems	1	Medium	M&E/ M&E Sub
Hea 06	**Acoustic Performance**						
	Sound insulation 3 dB or 5dB better than Building regulations	2	0.68	**One Credit** Airborne sound insulation values are at least 3dB higher and impact sound insulation values are at least 3dB lower than the performance standards in the relevant Building Regulations or Standards. **Two Credits:** Airborne sound insulation values are at least 5 dB higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant building regulations or standards. A programme of pre-completion testing is carried out by a compliant test body based on the normal programme of testing described in the relevant Building Regulations or Standards for every group or sub-group of dwellings (houses, flats or rooms for residential purposes) this must demonstrate that the performance standards detailed above are achieved. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Acoustician
	Indoor ambient noise levels	1	0.68	Indoor ambient noise levels should comply with the design ranges given in Section 7 of BS 8233:2014 Carry out a programme of pre-completion testing by a compliant test body in accordance with the full BREEAM requirements (see guidance note for further details)	1	Medium	Acoustician
	Room Acoustics	1	0.68	Achieve the requirements relating to sound absorption and within the common spaces of the building described in the relevant building regulations or building standards national guidance. Installation of a specification compliant with the relevant building described in the relevant building regulations or building standards national guidance demonstrates compliance. A site inspection by the developer or SQA is required to confirm that a compliant specification has been installed.	1	Medium	Acoustician
Hea 07	**Safe and Accessible Design**						
Req 1-6	Safe Access	1	0.68	It is assumed that: - There are compliant dedicated cycle lanes from site entrance to any cycle storage. - Footpaths provide direct access from: i. Site entrance to building entrance ii. Car parks to building entrance iii. Building to outdoor space iv. Connecting off-site paths to on-site paths - Pedestrian drop-off areas are designed off, or adjoining to, the access road and should provide direct access to other footpaths - Delivery access does not cross pedestrian / cycle routes, amenity areas or pass through parking areas. - Where there are delivery areas there is a waiting area adequate turning and parking space for the appropriate delivery vehicles. - There is a dedicated waste storage area away from the delivery manoeuvring area or car parking. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Architect

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 7	Outside Space	1	0.68	There is an appropriately sized outside space providing building users with an external amenity area. The outside space must: - Be an outdoor landscaped area open to the sky - Have appropriate seating areas and be non-smoking - Be accessible to all building users - Away from areas which may cause noise pollution e.g. building services, car parks, busy roads and delivery areas - Be permanent and be away from roads or be visually screened. - Be on-site or in close proximity to the site (within500m from the building entrance point).	1	Low	Architect / Landscape Architect
Hea 08	**Security**						
Req 1-3	Security of Site and Building	1	0.68	It is assumed that: - 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). - The SQSS develops a set of security controls and recommendations for incorporation into the proposals. Those controls and recommendations shall directly relate to the threats and assets identified in the preceding SNA. - The controls and recommendations are incorporated into the proposals and implemented into the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	1	High	SQSS & Design Team
ENERGY							
Ene01	**Energy and Carbon Performance for Regulated Energy Uses**			**Minimum Standard: 4 Credits for Excellent, 6 for Outstanding**			
Req 1	Energy and carbon performance for regulated energy uses	9	0.37	The Energy Performance Ratio (EPRNC) of the development is calculated using appropriate energy modelling software and an EPRNC >0.1 is achieved. Credits are awarded based on achievement of the corresponding benchmarks within the BREEAM Manual. An EPRNC >0.4 (4 credits) is required for Excellent 2 credits are targeted for Very Good, 4 credits would need to be included for an uplift to Excellent	2	High	M&E
Ene 02	**Prediction of operational energy and carbon**			**Minimum Standard: Under Criterion 8, 3 Credits for Excellent, 5 for Outstanding**			
Req 1	Energy Strategy	1	0.37	1. Define an energy strategy for the building at the **concept design stage** that describes quantitatively how the operational energy and carbon performance of the building will be minimised. Energy strategy should outline the fabric performance specification and the energy servicing strategies and describe qualitatively how these will contribute to reducing operational energy consumption in use. The energy strategy should also demonstrate that the use of local low and zero carbon technologies have been considered and specified, where feasible. The energy strategy may be supported by early stage design models, tools and calculations. It should indicate any energy related performance targets that are set for the building at the concept design stage.	1	Medium	M&E / M&E Sub
Req 2-4	Predictive Energy Modelling	3	0.37	2. Estimate unregulated energy uses and occupancy pattens for the building (based on CIBSE TM54:2022). 3. Construct a detailed energy model during the **technical design stage** and undertake sensitivity analysis and scenario modelling to explore the impact of key parameters and assumptions on energy consumption. 4. Predict annual operational energy consumption in use by fuel type for the building based on the scenario modelling. The modelling must be updated at the **post-construction stage** to account for any changes to the building specification.	3	Medium	M&E / M&E Sub
Req 5-6	Risk Assessment and Mitigation	1	0.37	5. Achieve the predictive energy modelling credits. 6. Highlight any significant design, technical, and process risks that might prevent the buildings achieving energy performance target and how these risks will be mitigated throughout the construction and commissioning process.	1	Medium	M&E / M&E Sub
Req 7-8	Predicted Operational Energy Performance Score	7	0.37	7. Achieve the predictive energy modelling credits. 8. Credits are awarded based on the Operational Energy Performance score for the New Construction (OEPNC) as shown in the table below: The Operational Energy Performance (OEPNC) score of the development is calculated using appropriate energy modelling software and an OEPNC >0.1429 is achieved. Credits are awarded based on achievement of the corresponding benchmarks within the BREEAM Manual. OEPnc is a combination of EUI and carbon intensity (CI) performance. An OEPNC >0.4286 (3 credits) is required for Excellent Please note that minimum standards can be met here OR under Ene 01 Calculated Energy Performance.	0	Possible	M&E / M&E Sub

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Ene03	**Energy Monitoring**			**Minimum Standard: Req 1-5 (first credit) for Very Good and above**			
Req 1-5	Energy Monitoring by end-use	1	0.37	1. Identify the energy sources that will be used by the building and estimate the annual energy consumption for the following: Grid Supply electricity, Grid Supply gas, District heating, District cooling, Renewable electricity generated on-site. 2. Energy monitoring is installed that allows ≥90% of the estimated annual energy consumption for each energy source to be assigned to an end-use category. 3. Renewable electricity generated on-site and exported from the building must be separately monitored. 4. There is an energy metering system appropriate for the size of the building: 4a. For buildings with a GIFA a ≥1000 m², the energy meters are connected to an energy monitoring and management system. 4b. For buildings with a GIFA a<1000 m² the energy meters are either: 4bi. Connected to an appropriate energy monitoring and management system. OR 4bii. Are accessible meters with pulsed outputs or other open protocol communication outputs. 5. Those responsible for monitoring the building's energy consumption can clearly identify the end-use category covered by each meter.	1	Medium	M&E/ M&E Sub
Ene04	**Low Carbon Design**						
Req 1-2	Building Form Optimisation	1	0.37	1. The project team carried out an analysis of the site and proposed development during **Concept Design Stage** to explore the effect of building form on energy demand. 2. Demonstrate that the analysis has informed in the building design and will lead to a reduction in building energy consumption in use. The analysis must consider alternative design options that consider each of the following factors: 1. Building layout 2. Building orientation 3. Building form 4. Daylighting strategy 5. Ventilation strategy	1	Medium	M&E/ M&E Sub
Req 3-8	Fabric Performance Optimisation	2	0.37	**Analysis of alternative fabric specification** 3. The project team carried out an analysis of the proposed development to explore the impact of alternative fabric specifications on the building's demand for heating and cooling. **One credit - 5% reduction in building energy demand:** 4. Achieve criterion 3. 5. Implement fabric performance measures which reduce the overall building heating and cooling energy demand by ≥ 5% compared to minimum values set by building regulations. **OR: Two credits - 10% reduction in building energy demand** 6. Achieve criterion 3. 7. Implement fabric performance measures which reduce the overall building heating and cooling energy demand by ≥ 10% compared to minimum values set by building regulations. **OR: Two credits - Fabric performance has been optimised** 8. Demonstrate that the fabric specification has minimised the demand for heating and cooling.	1	High	M&E

<table>
<tr><th colspan="2">Assessment Issue</th><th>Credits Available</th><th>Weighted worth of 1 credit</th><th>Credit Information</th><th>Very Good Pre-Assessment Score</th><th>Risk</th><th>Responsibility</th></tr>
<tr><td>Req 9-11</td><td>Low and zero carbon energy generation technologies</td><td>2</td><td>0.37</td><td>One credit - Installation of LZC energy generation technologies
9. One or more eligible LZC energy generation technologies have been installed by competent installers.

One credit - Meeting LZC energy generation targets
10. Achieve Criterion 9.
11. The energy generated by the installed LZC energy generation technologies meet the following targets:
11a. Where PV panels are the only LZC energy generation technology installed, the electricity generated must:
11ai. Be equal to, or exceed, that generated by reference PV panels covering 50% of the ground floor area.

OR
11aii. Account for ≥ 60% of the building's annual electricity consumption.
11b. Where only LZC energy generation technologies other than PV panels are installed, the energy generated must:
11bi. Be equal to, or exceed, 137kWh/year/m2 of ground floor area.

OR
11bii. Meet ≥ 60% of the building's annual demand for the relevant energy source.
11c. Where the installed LZC energy generation technologies include both PV panels and other LZC energy generation technologies, selected generation targets as listed in 11.a and 11.b should be used in conjunction scaled proportionally to the amount of electricity generated by each technology.</td><td>1</td><td>Medium</td><td>M&E</td></tr>
<tr><td>Ene05</td><td colspan="7">Energy Efficient Equipment</td></tr>
<tr><td>Req 1-4</td><td>Energy Efficient Equipment</td><td>5</td><td>0.37</td><td>1. Identify items of equipment in the project specification (in-scope equipment) that are users of unregulated energy (see M1)

2. Estimate the expected annual energy consumption by the in-scope equipment identified in criterion 1.

3. Determine the ratio of in-scope unregulated energy use by equipment to regulated energy use to determine the number of credits available (see Table 6.5 and M3).
<table><tr><th>In-scope unregulated energy use by equipment / regulated energy use (%)</th><th>Credits available</th></tr><tr><td>No in-scope equipment
OR
Energy consumption of in-scope equipment is not significant</td><td>Issue filtered out</td></tr><tr><td>< 10%</td><td>1</td></tr><tr><td>≥ 10% and < 20%</td><td>2</td></tr><tr><td>≥ 20% and < 30%</td><td>3</td></tr><tr><td>≥ 30% and < 40%</td><td>4</td></tr><tr><td>≥ 40%</td><td>5</td></tr></table></td><td>0</td><td>Possible</td><td>M&E/ M&E Sub</td></tr>
<tr><td>Ene06</td><td colspan="7">Energy Efficient Systems</td></tr>
<tr><td>Req 1-4</td><td>Energy Efficient Systems</td><td>9</td><td>0.37</td><td>1. Identify systems in the project specification (in-scope systems) that are users of unregulated energy (see M1).

2. Estimate the expected annual energy consumption by in-scope identified in criterion 1 (see M2).

3. Determine the ratio of in-scope unregulated energy used by systems to regulated energy use to determine the number of credits available (see Table 6.7 and M3).
<table><tr><th>In-scope unregulated energy using systems / regulated energy use</th><th>Credits available</th></tr><tr><td>No in-scope equipment
OR
Energy consumption of in-scope systems is not significant</td><td>Issue filtered out</td></tr><tr><td>< 10%</td><td>1</td></tr><tr><td>≥ 10-20%</td><td>2</td></tr><tr><td>≥ 20-30%</td><td>3</td></tr><tr><td>≥ 30-40%</td><td>4</td></tr><tr><td>≥ 40-50%</td><td>5</td></tr></table><table><tr><th>In-scope unregulated energy using systems / regulated energy use</th><th>Credits available</th></tr><tr><td>≥ 50-60%</td><td>6</td></tr><tr><td>≥ 60-70%</td><td>7</td></tr><tr><td>≥ 70-80%</td><td>8</td></tr><tr><td>≥ 80%</td><td>9</td></tr></table></td><td>2</td><td>High</td><td>Client/ Contractor/ M&E</td></tr>
</table>

<table>
<tr><th colspan="2">Assessment Issue</th><th>Credits Available</th><th>Weighted worth of 1 credit</th><th>Credit Information</th><th>Very Good Pre-Assessment Score</th><th>Risk</th><th>Responsibility</th></tr>
<tr><td>Ene07</td><td colspan="2">Flexible Demand Response</td><td colspan="3">Minimum Standard: None</td><td></td><td></td></tr>
<tr><td>Req 1-2</td><td>Flexible Demand Response</td><td>2</td><td>0.37</td><td>1. Identify installed systems present on-site and their flexible demand response capability.

2. The number of credits awarded is based on the number of credits available and the percentage of flexible demand response points awarded (Table 6.14).

Table 6.14: Number of credits awarded
<table><tr><th>Points awarded</th><th>1 credit available</th><th>2 credits available</th></tr><tr><td>≥ 1% of available points</td><td>1 credit awarded</td><td>1 credit awarded</td></tr><tr><td>> 33% of available points</td><td>1 credit awarded</td><td>2 credits awarded</td></tr></table></td><td>0</td><td>Possible</td><td>M&E</td></tr>
<tr><td>Ene08</td><td colspan="2">Installed Controls</td><td colspan="3"></td><td></td><td></td></tr>
<tr><td>Req 1-3</td><td>Installed Controls</td><td>2</td><td>0.37</td><td>1. Determine the number of installed controls points available based on the installed HVAC services and relevant system details.

2. Determine the number of installed controls points achieved based on the functionality of the controls.

3. The number of credits awarded is determined by the proportion of available installed controls points that are achieved (see Table 6.17 and M1).

Table 6.17: Credits for installed controls
<table><tr><th>Percentage of available installed control points achieved</th><th>Number of credits</th></tr><tr><td>< 33%</td><td>0</td></tr><tr><td>≥ 33%</td><td>1</td></tr><tr><td>≥ 66%</td><td>2</td></tr></table></td><td>0</td><td>Possible</td><td>M&E</td></tr>
<tr><td colspan="8">TRANSPORT</td></tr>
<tr><td>Tra01</td><td colspan="2">Transport Assessment and Travel Plan</td><td colspan="3"></td><td></td><td></td></tr>
<tr><td>Req 1-3</td><td>Travel Plan</td><td>2</td><td>0.71</td><td>1. During Concept Design Stage (RIBA Stage 2) create a Draft travel plan based on a site specific travel assessment . Note that all the points under M1 need to be covered as minimum, including Public Transport Accessibility Index and Local Amenities - see BREEAM v7 NC Manual for more details.

2. Developed a site-specific travel plan following the transport assessment recommendations by the end of Concept Design stage (see M3).

3. Demonstrate that the travel plan can guide the appropriate implementation of sustainable transport measures during the design, construction, and occupancy stages and be supported by the building's management during operation.</td><td>2</td><td>Medium</td><td>SLR</td></tr>
<tr><td>Tra02</td><td colspan="2">Sustainable Transport Measures</td><td colspan="3"></td><td></td><td></td></tr>
<tr><td>Req 1</td><td>Pre-requisite</td><td></td><td></td><td>1. Complete a transport assessment and travel plan in line with Tra 01. If these documents are completed after Concept Design, they can still be used to meet this pre-requisite.</td><td></td><td>Medium</td><td>Client</td></tr>
<tr><td>Req 2</td><td>Sustainable Transport Measures</td><td>10</td><td>0.71</td><td>It is assumed that 7 points will be achieved by implementing Sustainable Transport Measures as per Table 7.3 and 7.4 within the BREEAM Manual.

2. Refer to the score given in the Public Transport Accessibility Index (PTAI) as calculated in Tra 01. This score will be used to weight the points awarded in Tra 02.
2b. Award points for the sustainable transport measures implemented in Tra 02, as per Table 7.3. (e.g. public & private transport measures, active travel measures).
2c. Use Table 7.4 to convert the number of points achieved for sustainable transport measures into credits as weighted by the PTAI score.

The currently targeted items are:
- existing AI of the site is 8 or greater (1 point)
- provision of compliant cycle racks (1 point) - need to clarify the no. of spaces required
- cycle facilities (1 point) - showers, lockers, changing space, drying space (2no of these, for staff only)
- existing amenities (1 point)
- new amenity (3 points) - cafe, outside space, gym etc would all class as new amenity</td><td>7</td><td>Medium</td><td>Client/ Contractor/ Architect</td></tr>
</table>

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
WATER							
Wat01	**Water Consumption**			**Minimum standard: 1 credit for Good and above; 2 credits for Outstanding**			
Req 1-3	Water Consumption	5	0.63	1. It is assumed that a 45% improvement in water consumption over the notional baseline will be achieved. Baseline performance levels for water consuming components are: ◦ WCs/ Toilets - 6.0 litres effective flush volume ◦ Washbasin taps - 10 litres/minute ◦ Shower - 12 litres/ minute ◦ Kitchen tap - 10 litres/ minute ◦ Dishwasher Domestic size - 17 litres/ cycle ◦ Washing machine (domestic) 90 litres/use ◦ Washing machine (commercial) 14 litres/kg 2. Determine the amount of recycled water expected from approved blackwater, greywater and rainwater systems.	3	High	Contractor/ Architect
Wat02	**Water Monitoring**			**Minimum standard: Criterion One Only for Good and Above**			
Req 1	Water Sub Meters			1. A water meter with a pulsed output or other open protocol output is installed on all portable water supplies entering the building.		Medium	M&E / M&E Sub
Req 2-4	Water Sub Meters	1	0.63	2. Water consuming plant or building areas with significant water demand must be fitted with easily accessible sub meters or have water monitoring equipment that is integral to the plant or area. 3. There is a water monitoring system that is appropriate for the size of the building. 3a. For buildings with GIFA of ≥1000 m² the water meters are connected to a monitoring or management system. 3b. For buildings with a GIFA <1000 m², the water meters are either: 3bi. Connected to an appropriate water monitoring and management system. 3bii. Accessible meters with pulsed outputs or other open protocol communication outputs. 4. Those responsible for monitoring the building's water consumption must be able to clearly identify the water uses and areas covered by each meter.	1	Medium	M&E/ M&E Sub
Wat03	**Water Leak Detection and Prevention**						
Req 1	Leak Detection System	1	0.63	1. Install a leak detection system capable of detecting a major water leak: 1a. On the utilities' water supply within the building, to detect any major leaks within the building. 1b. Between the building and the utilities' water supply, to detect any major leaks between the utilities' supply and the building under assessment.	1	Medium	M&E/ M&E Sub
Req 2	Flow Control Devices	1	0.63	2. Flow control devices that regulate the supply of water to each WC area or facility according to demand are installed. The credit for the specification of flow control devices in WC areas or facilities does not apply to ensuite facilities in residential areas. For example: ensuite facilities in individual private bedrooms and a single bathroom for a collection of individual private bedrooms in halls of residence, keyworker accommodation or sheltered accommodation. Would be applicable to communal WC e.g. ground floor.	1	Medium	M&E/ M&E Sub

<table>
<tr><th colspan="2">Assessment Issue</th><th>Credits Available</th><th>Weighted worth of 1 credit</th><th>Credit Information</th><th>Very Good Pre-Assessment Score</th><th>Risk</th><th>Responsibility</th></tr>
<tr><td>Wat04</td><td colspan="7">Water Efficient Equipment and Systems</td></tr>
<tr><td>Req 1-4</td><td>Water Efficient Equipment and Systems</td><td>3</td><td>0.63</td><td>1. Identify systems and equipment that use significant amounts of water for non-sanitary uses that are included in the project specification (see M1).

2. Determine the ratio of in-scope non-sanitary water consumption to sanitary water consumption to determine the number of credits available, see Table 8.4.

Table 8.4: Credits available in Wat 04
<table><tr><th>In-scope non-sanitary water consumption / sanitary water consumption (%)</th><th>Credits available</th></tr><tr><td>No in-scope equipment or systems OR
Water consumption of in-scope equipment and systems is not significant</td><td>0</td></tr><tr><td>< 20%</td><td>1</td></tr><tr><td>≥ 20%</td><td>2</td></tr><tr><td>≥ 40%</td><td>3</td></tr></table>
3. Demonstrate installed non-sanitary water using systems and equipment are water efficient (see M2).

4. Determine the number of credits awarded based on the % of non-sanitary water demands that are provided by the water efficient equipment See Table 8. 5.

Table 8.5: Credits awarded in Wat 04
<table><tr><th>Percentage of in scope non-sanitary water consumption that is provided by water efficient equipment</th><th>Percentage of available credits awarded</th></tr><tr><td>5–20%</td><td>20%</td></tr><tr><td>> 20–40%</td><td>40%</td></tr><tr><td>> 40–60%</td><td>60%</td></tr><tr><td>> 60–80%</td><td>80%</td></tr><tr><td>≥ 80%</td><td>100%</td></tr></table></td><td>0</td><td>Possible</td><td>Landscape Architect</td></tr>
<tr><td>Wat 05</td><td colspan="7">Prediction of operational water consumption</td></tr>
<tr><td>Req 1</td><td>Predict operational water consumption</td><td>1</td><td>0.63</td><td>1. Estimate the annual operational water consumption for the building.</td><td>1</td><td>High</td><td>Client / M&E / Arch</td></tr>
<tr><td colspan="8">MATERIALS</td></tr>
<tr><td>Mat01</td><td colspan="7">Building Life Cycle Assessment Crit 1 to 6 - Excellent, All LCA & Embodied Carbon Reporting - Excellent</td></tr>
<tr><td>Req 1-2</td><td>Early Design LCA and Embodied Carbon Reporting</td><td>2</td><td>1.14</td><td>1. Carry out an early design (concept design) phase LCA calculation from the materials that the project incorporates into the building. The LCA must:

1a. Meet the requirements for tools and scope given in M1.

1b. Include relevant options appraisals, including a baseline assessment. There are no requirements to carry out a specific number of options appraisals for the project.

1c. Be used as a basis for choosing design solutions and materials with the aim of achieving a low environmental impact. If an alternative solution with a lower environmental impact has not been chosen, this must be justified.

2. From the early design LCA results (criterion 1), report the embodied carbon emissions from materials used in the building. Results must be reported using the BREEAM platform (LCA must be completed and submitted to the BRE within 20 working days after the planning application has been submitted).</td><td>2</td><td>Medium</td><td>Client/ LCA Consultant/ Design Team</td></tr>
<tr><td>Req 3-4</td><td>Technical Design LCA and Embodied Carbon Reporting</td><td>1</td><td>1.14</td><td>3. Carry out a technical design phase LCA calculation from the materials that the project incorporates into the building. The LCA must:

3a. Meet the requirements for tools and scope given in M1.

3b. Include at least one assessment showing the evolving design and specification at technical design.

4. From the technical design LCA results (criterion 3), report the embodied carbon emissions from materials used in the building. Results must be reported using the BREEAM Platform. To ensure consistency follow the requirements in M2.</td><td>1</td><td>Medium</td><td>Client/ LCA Consultant/ Design Tea</td></tr>
</table>

<table>
<tr><th colspan="2">Assessment Issue</th><th>Credits Available</th><th>Weighted worth of 1 credit</th><th>Credit Information</th><th>Very Good Pre-Assessment Score</th><th>Risk</th><th>Responsibility</th></tr>
<tr><td>Req 5-6</td><td>Post Construction LCA and Embodied Carbon Reporting</td><td>2</td><td>1.14</td><td>5. Carry out a post-construction phase LCA calculation from the materials that the project incorporates into the building. The LCA must:

5a. Meet the requirements for tools and scope given in M1.

5b. Include as-built specification at post-construction.

6. From the post-construction LCA results (criterion 5), report the embodied carbon emissions from materials used in the building. Results must be reporting using the BREEAM Platform. To ensure consistency, follow the requirements in M2.</td><td>2</td><td>Medium</td><td>Client/ LCA Consultant/ Design T</td></tr>
<tr><td>Req 7</td><td>Embodied Carbon Benchmark Comparison</td><td>2</td><td>1.14</td><td>7. For relevant assessment and building types, compare the calculated embodied carbon emissions (modules A1-A5, B1-B5, C1-C4) against the benchmark (see Table 9.1). The comparison against the benchmark must use the latest embodied carbon calculation available.

Benchmark values in $kgCO_2e/m^2$ for each band and building type are provided in the BREEAM Platform.
Table 9.1: Number of credits achieved for each benchmark band
<table><tr><th>Benchmark band</th><th>Credits</th></tr><tr><td>A</td><td>2 credits + 1 exemplary credit</td></tr><tr><td>B</td><td>2 credits</td></tr><tr><td>C</td><td></td></tr><tr><td>D</td><td>1 credit</td></tr><tr><td>E</td><td></td></tr><tr><td>F</td><td>0 credits</td></tr><tr><td>G</td><td></td></tr><tr><td>Benchmark not applicable</td><td>Credits filtered out</td></tr></table></td><td>0</td><td>Possible</td><td>Client/ LCA Consultant/ Design Team</td></tr>
<tr><td>Mat02</td><td colspan="7">Environmental Product Declarations</td></tr>
<tr><td></td><td>Specification of products with a recognised environmental product declaration (EPD)</td><td>1</td><td>1.14</td><td>Specify construction products with an Environmental Product Declaration (EPD) to achieve a total EPD points score of at least 20.

Note that the EPDs must be:
- unexpired at the point of specification
- issued or registered by an ISO14025 compliant programme operator
- for products covered by the Construction Product Regulations, the EPD must have been generated using product category rules based on BS EN15804.</td><td>0</td><td>Possible</td><td>Contractor</td></tr>
<tr><td>Mat03</td><td colspan="3">Responsible Sourcing</td><td colspan="4">Minimum standard: Req 1 for all BREEAM assessments</td></tr>
<tr><td>Req 1</td><td>Pre Requisite</td><td></td><td></td><td>1. 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy (TPP).</td><td></td><td>Low</td><td>Contractor</td></tr>
<tr><td>Req 2</td><td>Enabling Sustainable Procurement</td><td>1</td><td>1.14</td><td>A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products before Concept Design (Stage 2).The following should be covered:

1. Sustainability aims, objectives and strategic targets to guide procurement activities. Note: targets do not need to be achieved for the credit to be awarded but justification must be provided for targets that are not achieved.

2. A requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible.

3. Details of procedures in place to check and verify the effective implementation of the sustainable procurement plan.

In addition, if the plan is applied to several sites or adopted at an organisational level it must:
4. Identify the risks and opportunities of procurement against a broad range of social, environmental and economic issues following the process set out in BS ISO 20400:2017</td><td>1</td><td>Medium</td><td>Client /Contractor</td></tr>
</table>

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 3	Measuring Responsible Sourcing	3	1.14	It is assumed that materials will be sourced suppliers with appropriate responsible sourcing certification (e.g. BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.). 1 credit - Superstructure (10% of available points achieved) 2 credits - Superstructure, internal finishes, substructure and hard landscaping (20% of available points achieved) 3 credits - Superstructure, internal finishes, substructure and hard landscaping (30% of available points achieved) Robust post-construction evidence to verify proof of purchase for all materials responsibly sourced such as delivery tickets, invoices, purchase orders, confirmation rom suppliers or site photographs. 2 credits are targeted for Very Good, but 3 credits would need to be included for an uplift to Excellent	2	High	Contractor
Mat04	**Designing for Durability and Resilience**						
Req 1-4	Durability and Resilience	1	1.14	1. Protection measures are incorporated into the building's design and construction to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring. These measures must provide projection against: 1a. Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.) 1b. Damage from any vehicle or trolley movements within 1 meter of the internal building fabric in storage, delivery, corridor and kitchen areas. 1c. External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 meter of the building facade, and where delivery areas or routes are within 2 meters of the facade i.e. specifying bollards or protection rails. 1d. Potential malicious damage to building materials and finishes in public and common areas where appropriate. **Protecting Exposed Parts of the building from Material Degradation:** 2. Key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through one of the following: 2a. The element or product achieving an appropriate quality or durability standard or design guide, see Table 9.13 in BREEAM v7 NC Manual either use BS 7543:2015 as the default appropriate standard or use relevant equivalent standards. **OR** 2b. A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. 3. Produce an access to the roof and facade strategy for cost-effective cleaning, replacement and repair in the buildings design. 4. Design the roof and façade to prevent water damage, ingress and detrimental ponding.	1	Medium	Architects
Mat05	**Material Efficiency**						
Req 1-3	Material Efficiency	1	1.14	At the following stages, set targets and report on opportunities and methods to optimise the use of materials. a. Preparation and Brief b. Concept Design c. Developed Design d. Technical Design e. Construction. Develop and record the implementation of material efficiency, see Table 9.14 below, during: a. Developed Design b. Technical Design c. Construction Report the targets and actual material efficiencies achieved.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
WASTE							
Wst01	**Construction Site Waste Management**			**Minimum Standard: Pre Demolition Audit or RMP Credit for Outstanding**			
Req 1-3	Pre-demolition audit	1	0.70	1. Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and to maximise the recovery of material for subsequent high grade or value applications. The audit must cover the consent of M1 in with BREEAM v7 Manual and: 1a. Be carried out at Concept Design stage (RIBA Stage 2) by a competent person prior to strip-out or demolition works. 1b Guide the design, consider materials for reuse and set targets for waste management 1c. Engage all contractors in the process of maximising high grade reuse and recycling opportunities 2. Be referenced in the RMP. 3. Compare actual waste arisings and waste management routes used with those forecast and investigate significant deviations from planned targets.	1	Medium	TBC
Req 3-5	Construction Resource Efficiency	3	0.70	It is assumed that: - 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. The RMP also covers accurate data records on waste arisings and waste management routes. - Non hazardous construction waste will be less than the following: 1 credit -13.3m³ or 11.1 tonnes 2 credits -7.5m³ or 6.5 tonnes 3 credits -3.4m³ or 3.2 tonnes per 100m² GIFA 1 credit is targeted for Very Good, 2 credits woud need to be included for an uplift to Excellent	1	Medium	Contractor
Req 6-7	Diversion of resources from Landfill	1	0.70	6. Meet, where applicable, the diversion from landfill benchmarks in Table 10.2 for non-hazardous construction waste and demolition and excavation waste generated. 7. Sort waste materials into separate key waste groups as per Table 10.3 either on-site or through a licensed contractor for recovery. - Construction- 70% by Volume or 80% by tonnage - Demolition - 80% by Volume or 90% by tonnage	1	Medium	Contractor
Wst02	**Use of Recycled and Sustainably Sourced Aggregates**						
Req 1	Pre-requisite			If demolition occurs on site, to encourage the reuse of site-won material on site, complete a pre-demolition audit of any existing buildings, structures or hard surfaces in accordance with Wst 01 Req 1.			
Req 2-6	Project Sustainable Aggregate Points	1	0.70	Achieve at least 3.5 points using the Wst 02 calculator, based on: - Identifying all aggregate uses and types on the project - The quantity in tonnes for each identified use and aggregate type. - The region in which the aggregate source is located. - The distance in kilometres travelled by all aggregates by transport type.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Wst03	**Operational Waste**			**Minimum standard: 1 credit for Excellent and Outstanding**			
Req 1	Dedicated space for recyclables	1	0.70	1. Provide a dedicated space, identified by clear signage, for the segregation and storage of operational recyclable waste. The space is: 1a. Clearly labelled for long-term durability, to assist with segregation, storage and collection of the recycle waste streams. 1b. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors. 1c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates.	1	High	Contractor
Req 2	Compactor / Baler / Composting			2. For consistent and large amounts of operational waste generated, provide: 2a. Static waste compactors or balers, situated in a service area or dedicated waste management space. 2b. Vessels for composting suitable organic waste OR adequate spaces for storing segregatef food waste and compostable organic material for collection and delivery to an alternative composting facility. 2c. A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site.			
Req 4-6	Additional Reqs for Muti Res:			**Additionally for residential institutions with self-contained dwellings or bedsits only:** 4. Provide three internal storage containers for each dwelling or bedsit with: 4a. A minimum total capacity of 30 litres. 4b. No individual container smaller than 7 litres. 4c. All containers in a dedicated non-obtrusive position. 4d. Storage containers for recycling in addition to non-recyclable waste storage. 5. Provide home composting facilities and a home composting information leaflet within the kitchen area or communal space for each self-contained dwelling or bedsit. **Additionally, for residential institutions with individual bedrooms and communal facilities only:** 6. Meet criteria 4a and 6b for self contained dwellings or bedsits for every 6 bedrooms. 7. Locate recyclable storage in a dedicated non-obtrusive position in communal kitchens or other appropriate communal space. 8. Provide home composting facilities and a home composting information leaflet within the kitchen area or communal space. 9. Provide a minimum of 10 litres of internal storage for compostable waste.			
Wst05	**Adaptation to Climate Change**						
Req 1-3	Resilience of structure, fabric, building services and renewables installation	1	0.70	Conduct a Climate Change Adaptation Strategy Appraisal using: 1. A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes: - Hazard identification - Hazard assessment - Risk estimation - Risk evaluation - Risk management 2 Develop recommendations or solutions based on the climate change adaptation strategy appraisal, before or during **Concept Design** (Stage 2), that aim to mitigate the identified impact. 3 Provide an update during **Technical Design** demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor.	1	Medium	Architect / Struct / M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Wst06	**Disassembly and Adaptability**						
Req 1-2	Design for disassembly and adaptability - Recommendations	1	0.70	1. Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios by the end of **Concept Design** (Stage 2). See full credit guidance within BREEAM v7 NC manual for the minimum considerations within the report. 2. Develop recommendations or solutions based on the study during or prior to **Concept Design** (Stage 2) that aim to enable and facilitate disassembly and functional adaptation.	1	Medium	Architect / Struct / M&E
Req 3-5	Design for disassembly and adaptability - Implementation	1	0.70	3. Achieve the above credit. 4. Provide an update, during **Technical Design**, on: - How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. - Changes to the recommendations and solutions during the development of the **Technical Design**. 5. Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	1	Medium	Architect / Struct / M&E
LAND USE & ECOLOGY							
LUE01	**Site Selection**						
Req 1	Previously Occupied Land	1	0.81	1. It is assumed that at least 75% of the development's footprint (including building, hard landscaping, and temporary works) is on previously developed land.	1	Low	Architect
Req 2-3	Contaminated land	1	0.81	2. A contaminated land professional undertakes a site investigation, risk assessment and appraisal, using ISO 18400 or equivalent, which deems that land within the development footprint to be affected by contamination. This report must identify: 2a. The degree of contamination 2b. The contaminant sources or types 2c. The options for remediating sources of contamination which present an unacceptable risk. 3. The client or principal contractor confirms that a remediation strategy will be implemented, in line with the report.	0		
LUE02	**Ecological Risks and Opportunities**						
Req 1-2	Pre-requisite			It is assumed that the client or contractor will confirm compliance is monitored against all relevant UK and EU or international legislation relating to the ecology of the site.		Medium	Ecologist/ Design Team
Req 2-3	Survey and Evaluation (Comprehensive Route)	1	0.81	2. A suitability qualified ecologist (SQE) carries out a survey and evaluation (see M3.1) for the site early enough to influence site preparation works, layout and, where necessary, strategic planning decisions (**typically preparation and brief stage**). 3. The SQE's survey and evaluation determines the site's ecological baseline, including: 3a. Current and potential ecological value and condition of the site and related areas within the zone of influence. 3b. Direct and indirect risks to current ecological value from the project. 3c. Capacity and feasibility for enhancement of the site's ecological value and, where relevant, areas within the zone of influence.	1	Medium	Ecologist/ Design Team

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 6-9	Determining Ecological Outcome	1	0.81	6. Achieve criteria 2-3. 7. The ecologist collaborates with appropriate project team members (e.g. landscape architect, architect etc.), sharing relevant information and recommendations from the survey and evaluation to influence the project design as well as decisions regarding site preparation and construction works (see M3.2). 8. The ecologist, with full support from the project team, collaborates with representative stakeholders early enough to influence key planning decisions (**concept design stage**). 9. The ecologist identifies optimal ecological outcomes for site and measures to achieve these outcomes in line with: - The collaborations undertaken as part of criteria 7 and 8 - The mitigation hierarchy for the comprehensive route - Avoidance - Protection - Reduction or limitation of negative impacts - On-site Compensation - Enhancement, considering the capacity and feasibility within the site or where this is not viable, off-site.	1	Medium	Ecologist/ Design Team
LUE03	**Managing impacts on ecology**						
Req 1	Pre-requisite - Ecological Risks and Opportunities			1. Whether a project is using the foundation route or comprehensive route, the criteria in Lue02 for 'Survey and Evaluation' and 'Determining Ecological Outcomes' must have been met to achieve any credits in this issue.		Medium	Ecologist
Req 2-3	Implementation of measures on-site	2	0.81	**Comprehensive route:** 2. For both routes, handover between the design and construction teams must be sufficiently structured and thorough to ensure that all planned ecological measures are communicated, understood and adhered to throughout construction. 2a. For the comprehensive route only, an ecologist will have been in place throughout planning and design. If an Ecological Clerk of Works has been appointed for the construction and handover stages (RIBA Stages 5 & 6), there must be additional handover between the two ecologists. 3. The measures required to achieve optimal ecological outcomes must be integrated with site preparation and construction processes. These must be measured and monitored throughout construction and handover (RIBA Stages 5 and 6) as follows: **Comprehensive Route**: An Ecological Clerk of Works will have been appointed by the contractor to monitor and advise on the protection of site ecology as agreed. If the ECoW requires the input of an additional ecological specialist at any given point, the contractor must provide for such services as required.	1	Medium	Ecologist
Req 4-5 (Route 2)	No Net Loss	1	0.81	4. Criteria 2-3 have been achieved. 5. There is no net loss of ecological value on site caused by construction and handover activities. This must be confirmed at project handover by the ecologist.	1	High	Ecologist
LUE04	**Ecological Change and Enhancement**						
Req 1-2	Pre-requisite			1. Achieve criteria 2 and 3 in LUE 03.		Medium	Ecologist
Req 3-4 (Route 2)	Ecological enhancement	1	0.81	3. Measures have been implemented that enhance ecological value, which are based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of 'Determining Ecological Outcomes' in LUE 02. Measures are implemented in the following order: 3a. On-site, and where this is not feasible. 3b. Outside of the site boundary, within the zone of influence. 4. Data collated are analysed and where potentially valuable, provided to the local environmental records centres nearest to, or relevant for, the site.	1	Medium	Ecologist

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 5-6 (Route 2)	Quantifying Change in Ecological Value	3	0.81	5. Up to three credits are available based on the scale in Table 11.4 below. The enhancement measures that contribute to the score for biodiversity net gain should be implemented in the following order: 5a. On-site within the boundary, and where this is not feasible 5b. Enhancements within the zone of influence/ wider development area, and where this is not feasible, 5c. Off-site units following the rules of the Statutory Biodiversity Metric, subject to the following: 5ci. The SQE confirms that better outcomes for nature can be achieved off-site and/ or off-site enhancement would be more effective than what can be done solely in the development boundary/ zone of influence. 5cii. There has been no net loss of biodiversity on site. 5ciii. There are arrangements in place for the on-going maintenance of the enhanced land to ensure the habitat is safeguarded over a 30-year period. Credits are awarded based on the output from the Statutory Biodiversity Metric Tool: Table 11.4 ≥10% 1 credit ≥ 20% 2 credits ≥ 30% 3 credits ≥ 40% 3 credits + 1 exemplary 1 credit is targeted for Very Good, 2 credits would need to be included for an uplift to Excellent	1	High	Ecologist
LUE05	**Long Term Ecological Management**						
Req 1	Pre-requisite			1. Achieve at least one credit in Lue04.		Medium	Ecologist/ Contractor
Req 2	Handover to building owner or tenant	1	0.81	2. A section on ecology and biodiversity has been included as part of the information supplied to the tenant or building owner. This information must be in a separate document from the landscape and ecology management plan (which is covered by criterion 3) and: 2a. Inform the building owner or tenant about local ecological features and biodiversity associated with the site (see M1) including an as-built biodiversity metric calculation (where relevant). 2b. Include detailed management and maintenance plans and relevant handover information to minimise loss of planting during establishment phase (see M1).	1	Medium	Ecologist/ Contractor
Req 3	Landscape and ecology management plan	1	0.81	A landscape and ecology management plan, or similar, will be developed in accordance with BS 42020:2013 covering at least the first five years after project, as well as an additional 25-year management strategy. The whole plan should cover a period of 30 years in total. It should cover the broader management of habitats and other ecological features on site, not just those specific to the BNG measures. The plan includes: - Actions and responsibilities, prior to handover, to give to relevant individuals - The ecological value and condition of the site over the development life. - Procedures to monitor and review the on-going implementation and effectiveness of measures, incorporating an adaptive management approach. - Risk register, including trigger for action and remedial measures with consideration on how these feed into monitoring requirements. - Maintenance and management plans for the trained, enhanced and created habitats, as well as any features for protected species. This should include a detailed work schedule outlining relevant maintenance on a monthly basis for the first five years after completion. - Identifying opportunities for ongoing alignment with activities external to the asset. - Clearly defined responsibilities and competencies of those delivering the plan.	1	Medium	Ecologist/ Landscape Architect

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
POLLUTION							
Pol01	**Impact of Refrigerants**			**Minimum Standard: For outstanding, achieve 1 credit under Requirements 3-5**			
Req 2-3	Prerequisite - Systems with refrigerants			2. All systems with electric compressors must comply with relevant safety standards for installing refrigerant systems (see M2.1). 3. The refrigerants used must have an ozone depletion potential of zero (see M2.2).		Medium	M&E/ M&E Sub
Req 4-5	Impact of Refrigerant	2	0.62	**One Credit:** 4. Systems using refrigerants must have an average direct effect life cycle (DELC) carbon dioxide equivalent (CO_2e) emission rate of <1000kgCO_2e per kW of cooling or heating capacity. **Two Credits:** 5. Systems using refrigerants must either: 5a. Have an average direct effect life cycle (DELC) carbon dioxide equivalent (CO_2e) emission rate of <100kgCO_2e per kW of cooling or heating capacity. **OR** 5b. Use a refrigerant with a global warming potential (GWP) of <10 kgCO_2e/kg.	1	Medium	M&E/ M&E Sub
Req 6-7	Leak Detection System	1	0.62	All systems are hermetically sealed **OR** refrigerant charge volume is <500 tCO2e OR all systems only use environmentally benign refrigerants **OR** A permanent automated refrigerant leak detection system that is capable of continuously monitoring for leaks is installed **OR** an inbuilt automated diagnostic procedure for detecting leakage is enabled. In the event of a leak, the leak detection system must be capable of automatically isolating and containing the remaining refrigerant charge to limit loss. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	M&E/ M&E Sub
Pol02	**Local Air Quality**						
	Local Air Quality	3	0.62	All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity. **OR** Up to two credits - Low-emission combustion plant: 2. Emissions from all installed combustion plant that provide space heating or domestic hot water do not exceed the levels set in Table 12.2 within the BREEAM v7 Manual.	3	Medium	M&E/ M&E Sub
Pol03	**Flood and Surface Water Management**						
Req 1	Pre-requisite - Appropriate Consultant			1. An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with all the criteria.		Low	Structures
Req 2	Low Flood Risk	2	0.62	It is assumed that a site specific Flood Risk Assessment will be produced which confirms that the building is situated in a low flood risk area for all of the following: - Fluvial - Tidal - Surface Water - Groundwater - Sewers - Reservoirs, canals or other artificial sources.	2	Low	Structures & Civils
Req 5	Pre-requisite			5. Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed in the Methodology must be followed (see M16: Surface water run-off management), with justification given by the appropriate consultant where water is allowed to leave the site.		Medium	Structures & Civils

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Req 6-9	Surface Water Run-Off - Rate	1	0.62	6. For brownfield sites, drainage measures are specified so that the peak rate of fun-off from the site to the watercourses shows a 30% improvement for the developed site compared with the pre-developed site. This should comply at the 1-year and 100-year return period events. 7. For greenfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events. 8. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. 9. Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance.	1	Medium	Structures & Civils
Req 9-16	Surface Water Run-Off - Volume	1	0.62	10. Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); **EITHER** 11. Drainage design measures ensure that the post development run-off volume, over the development lifetime, is no greater than it would have been prior to the development for the 100-year 6-hour event adjusted for climate change, timing the event at the end of the development's expected life. 12. Any additional predicted run-off is prevented from leaving the site using infiltration or other (SuDS) techniques. **OR (only where the above cannot be achieved):** 13. Justification from the Appropriate Consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. 14. Drainage design measures are specified to ensure that the post development peak rate of run-off is reduced to the limiting discharge. This is defined as the highest flow rate from the following options: a. The pre-development 1-year peak flow rate; b. The mean annual flow rate Qbar c. 2L/s/ha. For the one-year peak flow rate, the one-year return period event criterion applies. 15. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. 16. For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Structures & Civils
Req 17-24	Minimising water course pollution	1	0.62	It is assumed that - 17. A suitably qualified professional will confirm that there will be no discharge from the site for up to 5mm of rainfall. 18. In areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. 19. Areas with a high risk of contamination or spillage of substances, such as petrol and oil, have separators installed in surface water drainage systems. 20. Chemical or liquid gas storage areas have a means of containment fitted to the site drainage system (i.e. shut-off valves). This is to prevent the escape of chemicals to natural watercourses in the event of a spillage or bunding failure. 21. All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as the SuDS manual and other relevant industry best practice. They must be bespoke solutions taking account for the specific site requirements and natural or man-made environment of and surrounding the site. 22. A comprehensive and up to date drainage plan of the site will be made available for the building or site occupiers. 23. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place. 24. All external storage and delivery areas are designed and detailed in accordance with the current best practice planning guidance. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Structures & Civils

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Pol04	**Reduction of Night Time Light Pollution**						
Req 1-5	Reduction of Night Time Light Pollution	1	0.62	1. External lighting pollution has been eliminated through effective design that removes the need for artificial lighting at night without adversely affecting the safety and security of the site and its users. OR alternatively, where the building does have external lighting 2. The external lighting strategy has been designed to reduce obtrusive light. This includes both external lighting and internal lighting in spaces with glazed apertures. 3. A curfew is established for all external lighting (except for safety and security lighting), which is automatically switched off between 23:00 and 07:00. 4. Illuminated advertisements are designed to control brightness and minimise visual disturbance during night time hours. 5. Lighting is designed to minimise impacts on nocturnal wildlife.	1	Medium	M&E/ M&E Sub
Pol05	**Reduction of Noise Pollution**						
Req 1-5	Reduction of Noise Pollution	1	0.62	1. There are no noise-sensitive areas or buildings within 800m radius of the assessed site **OR** 2. Where there are, a noise impact assessment compliant with BS 4142:2014 is commissioned. Noise levels must be measured or determined for: 2a. Existing background noise levels: 2a.i. At the nearest or more exposed noise-sensitive development to the proposed assessed site. 2aii. Including existing plant on a building, where the assessed development is an extension to the building. 2b. New noise level from the assessed building 3. The noise impact assessment must be carried out by a suitably qualified acoustic consultant. 4. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development must be at least 5dB lower than the background noise throughout the day and night. 5. If the noise sources from the assessed building are greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with criterion 4.	1	Medium	Acoustician
INNOVATION CREDITS							
Man 03 Req 23	Responsible Construction Management	1	1.00	All requirements in Table 4.1 are achieved. **OR** Register with the Considerate Constructors Scheme and achieve a minimum score of 39, with no section scoring less than 13 points **AND** The principal contractor: - undertakes driver and operator training for company vehicles, movable plant and equipment that is owned, hired or leased to promote safety - ensures that any vehicular accidents, incidents or near misses in the vicinity of the site are recorded, investigated and analysed.	1	Medium	Contractor
Man 05 Req 8	Aftercare - Zero Carbon Transition Planning	1	1.00	8. Where net zero carbon benchmarks are not met for operational performance and/ or fossil fuels are being used on-site, a competent person develops a Zero Carbon Transition Plan demonstrating how the asset will achieve net zero carbon in operation by 2050 at the latest (see M2)	0		
Hea 01 Req 10-11	Evaluating Glare from Daylight	1	1.00	10. Achieve the credit for 'glare control' (criteria 2-4) 11. An evaluation has been undertaken to demonstrate compliance with either of the following and M6: 11a. The Daylight Glare Probability (DGP) does not exceed 0.40 over more than 5% of annual operating hours at all workstations in all relevant building areas. **OR** 11b. Annual Sunlight Exposure ASE1000,250 ≤10% of an occupied space. This means no more than 10% of the occupied space in all relevant building areas can receive a daylight illuminance of ≥ 1000 lux for ≥ 250 hours per year.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Hea 01 Req 12	Daylighting	1	1.00	12. Daylighting criteria have been met using one of the following options: 12a. Relevant building areas meet exemplary criteria for average and minimum point daylight illuminance as outlined in Table 5.3. **OR** 12b. Relevant building areas meet the highest rating in EN 17037:2018+A1:2021 OR IESLM-83-23 and the relevant criteria in Table 5.3.	0		
Hea 02 Req 9-10	Artificial Light - Lighting Control	1	1.00	9. Lighting in each control zone with an occupied space can be manually dimmed by occupants down to no more than 20% of the maximum light output using lighting control interfaces positioned in accessible locations. 10. Lighting in each control zone with an occupied space can be colour tuned over a correlated colour temperature range from 2700K to 4000K or more, with automatic controls set to limit the correlated colour temperature in the afternoon and evening to 2700K or less.	0		
Hea 04 Req 16-17	Emissions from Construction Products	2	1.00	**One exemplary credit:** 16. At least four of the five product types listed in Table 5.7 meet the emission limits, testing requirements and any additional requirements listed in Table 5.7 and M2. **Two exemplary credits:** 17. All product types meet the emission limits, testing requirements and any additional requirements listed in Table 5.7 and M2.	0		
Hea 08 Req 4	Security rating scheme	1	1.00	4. A compliant risk-based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	0		
Ene 01 Req 2-3	Beyond Zero Net Regulated Carbon	3	1.00	2. The building regulation modelling results demonstrate that at least 100% of the building's service energy requirements are met by eligible low and zero carbon (LZC) technologies. 3. The number of BREEAM credits awarded is based on the percentage of operational energy use that is met by LZC sources (see Table 6.2). 1 exemplary credit: ≥ 100% regulated energy use 2 exemplary credits: ≥ 100% regulated energy use AND ≥ 50% unregulated energy use 3 exemplary credits: ≥ 100% regulated energy use AND ≥ 100% unregulated energy use	0		
Ene 02 Req 9	Disclosing an in-use energy performance target	1	1.00	9. An in-use energy performance target has been disclosed to stakeholders and has been made publicly available prior to practical completion. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Client
Ene 02 Req 10	Third party validation of predictive energy modelling	1	1.00	10. The predicted energy consumption modelling results have undergone third party validation.	0		
Ene 02 Req 11-12	Preparing for in-use measurement of energy consumption	1	1.00	11. Achieve maximum available credits in Ene 03 Energy Monitoring. 12. The energy modelling outputs include a breakdown of the energy use by sub-meter that aligns with the energy monitoring strategy for the building. This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Client / MEP
Ene 02 Req 13	Commitment to measure energy consumption in-use	1	1.00	13.The client or building occupier commits funds to pay for the in-use energy consumption to be measured by a suitably qualified energy assessor once the building reaches the occupancy threshold (see M5).	0		
Wat 01 Req 1-3	Water Consumption	1	1.00	It is assumed that the building will not achieve a reduction in water consumption by 85% over the notional baseline.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
Wat 05	Disclosing an in-use water performance target and commitment to measure water consumption in-use	1	1.00	Achieve the 'predict operational water consumption' (Wat 05) credit and the 'water monitoring' (Wat 02) credit. An in-use water performance target has been disclosed to stakeholders and been made publicly available prior to practical completion. The client or building occupier commits funds to pay for the in-use water consumption to be measured and reported by a suitably qualified individual once the building is occupied.	0		
Mat01 Req 7	Embodied Carbon Benchmark Comparison	1	1.00	The building achieves an A rating when the latest calculated embodied carbon emissions (Modules A1-A5, B1-B5, C1-C4) are compared against the relevant benchmark.	0		
Mat01 Req 8	Third party verification	1	1.00	8. A suitably qualified third party verifies the building LCA work. They must: - Produce a report describing how the LCA accurately represents the designs at **early design, technical design and (where relevant) post-construction stages.** - Itemise the checks made for each LCA option, covering the minimum quality requirements - Include details of their relevant skills, experience and declaration of third-party independence from the client and design team	0		
Mat01 Req 10	Embodied carbon public data disclosure	1	1.00	10. For each project phase where an LCA has been conducted, submit the LCA or carbon results and data to a relevant publicly available LCA or carbon database. If suitable local or national options are not available, submit to the Built Environment Carbon Database (BECD). This credit is not targeted for Very Good, but would need to be included for an uplift to Excellent	0	Possible	Client / EC Consultant
Mat 03 Req 3	Measuring Responsible Sourcing	1	1.00	It is assumed that manufacturers with appropriate responsible sourcing certification will be used. Superstructure, internal finishes, substructure, hard landscaping and core building services will be assessed (50% of available points must be achieved)	0		
Wst 01 Req 8-11	Construction Waste Management	1	1.00	As per criteria for Wst 01 Construction Resource Efficiency and Diversion of Resources from Landfill, the following benchmarks are achieved: 8. Non hazardous construction waste will be less than 1.6m³ or 1.9 tonnes per 100m² GIFA. 9. Diversion from landfill: - Construction - 85% by Volume or 90% by tonnage - Demolition - 85% by Volume or 90% by tonnage - Excavation - 95% by Volume or 90% by tonnage 10. Additionally all key waste groups in Table 10.3 for diversion from landfill are covered in the RMP. 11. Waste data obtained from licensed external waste contractors is reliable and verifiable, by using data from EA/SEPA/EA Wales/NIEA Waste Return Forms or from a PAS 402:2013 compliant company.	0		
Wst 02 Req 7	Project Sustainable Aggregate Points	1	1.00	7. Achieve at least 6 points using the Wst 02 calculator, based on: - Identifying all aggregate uses and types on the project - The quantity in tonnes for each identified use and aggregate type. - The region in which the aggregate source is located. - The distance in kilometres travelled by all aggregates by transport type.	0		
Wst 05 Req 4-5	Responding to Climate Change	1	1.00	4. Criteria 1 to 3 of Wst 05 are achieved. 5. The following credits is achieved: - Hea 05 - Thermal modelling -Future climate - Ene 01 - A minimum of 6 credits - Wat 01 - A minimum of 3 credits - Mat 04 - Criteria 2-4 - Pol 03 - 1 credit for flood resilience plus 2 credits for surface water run-off	0		
LUE 02 Req 10-12	Wider Site Sustainability	1	0.81	10. Achieve criteria 4 to 5 (foundation route) or 6 to 9 (comprehensive route). 11. When determining the optimal ecological outcome for the site consider the wider site sustainability-related activities and the potential for ecosystem service related benefits. For a list of the minimum areas for consideration, see M4. 12. Incorporate at least one measure into the design that would demonstrate an ecosystem service related benefit.	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Very Good Pre-Assessment Score	Risk	Responsibility
LUE 04 Req 5-6	Quantifying Change in Ecological Value	1		An exemplary credit is awarded where project biodiversity change is >40%, based on output from the Statutory Biodiverstiy Metric tool. Off-site units can only be considered where the ecologist confirms better outcomes for nature can be achieved off-site and/or would be more effective than what can be achieved solely within the site boundary or Zone of Influence.	0		
Unlisted, BRE Approved Innovations		10	1.00	One innovation credit can be awarded for each innovation application approved by BRE Global, where the building complies with criteria defined within an approved innovation application form.	0		

Refurb and Fit Out – Octagon House

DRAFT

RIDGE

Octagon House Redevelopment - PBSA & Key Worker Accommodation - Refurbishment BREEAM

BREEAM UK RFO 2014 - Refurbishment and Fit Out (Parts 1-4)

PASS	**30**
GOOD	**45**
VERY GOOD	**55**
EXCELLENT	**70**
OUTSTANDING	**85**

Report Prepared By:	Alex Giles
Report Checked By:	James Lomas-Holt
Date:	01.05.26
BREEAM Registration	TBC

Results Summary			
Sector	**Total Available**	**Weighting**	**Pre-Assessment Score**
Management	21	13.74%	10.46%
Health & Wellbeing	20	15.61%	7.02%
Energy	26	17.14%	8.57%
Transport	7	4.69%	4.69%
Water	9	6.87%	4.58%
Materials	13	14.66%	7.89%
Waste	11	7.33%	3.33%
Land Use & Ecology	4	9.38%	9.38%
Pollution	13	10.83%	4.99%
Total Predicted Score			**60.91%**
Innovation	10	10.0%	**1.00%**
Total Score			**61.91%**
BREEAM Rating			**VERY GOOD**

Key to Responsibilities

Role	Company	Ref
Client	Octagon House	**Client**
Consulation	Keeble Brown	**PC**
Project Manager & QS	Warrington Martin	**PM & QS**
Planning Consultant	Turley	**PC**
Architect	Hodder & Partners	**Architect**
M&E Consultant	Ridge & Partners	**M&E Consultant**
Structural & Civil Eng	Ridge & Partners	**Structures & Civils**
Acoustician	TBC	**Acoustician**
Ecologist	TBC	**Ecologist**
BREEAM Assessor & AP	Ridge & Partners	**BREEAM Assessor**
Main Contractor	TBC	**Contractor**
M&E Sub Contractor	TBC	**M&E Sub**

Notes:

1) **Shading Denotes Mandatory Credit**

2) This document is to be read in conjunction with the current BREEAM Manual available online, which gives full details of credit requirements - *https://www.breeam.com/BREEAMUK2014SchemeDocument/*

BREEAM V7 New Construction, Residential Institution (Long Term Stay)

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
MANAGEMENT							
Man01	**Project Brief and Design**			**Minimum standard: None**			
Req 1-4	Stakeholder Consultation (Project Delivery)	1	0.65	It is assumed that the elements below can be demonstrated by the pre tender team: Prior to the end of RIBA Stage 1, produce a Sustainability Brief including project budget, programme, constraints, appointments and sustainability targets. Prior to the end of RIBA Stage 2 the project delivery stakeholders (all of the following - client/developer, contractor, architect, structural engineer, services engineer, QS, Environmental Consultant and project manager) meet, identify and define roles responsibilities & contributions during the key phases. Project delivery stakeholder contributions have influenced or changed the Initial Project Brief.	1	Low	Client/ PM
Req 5-7	Stakeholder Consultation (Third Party)	1	0.65	It is assumed that the following credit is able to be achieved; Prior to the end of RIBA Stage 2 consultation has occurred with all relevant stakeholders. The consultation has influenced/changed the design. And prior to the end of RIBA Stage 4 consultation feedback has occurred	0	Possible	Client/ PM
Req 9-11	Sustainability Champion (Design)	1	0.65	It is assumed that the following credit can be achieved: At RIBA Stage 1 a BREEAM AP has been appointed to provide advice during the briefing period. And the BREEAM target has been formally agreed between the Client & Design team prior to the end of RIBA Stage 2.	1	Low	Ridge / PM
Req 12-13	Sustainability Champion (Monitoring Progress)	1	0.65	It is assumed that the following credit is able to be achieved: A BREEAM AP is appointed to provide support during RIBA stage 2, 3 & 4. They must attend a meeting and provide reports prior to, during and on completion for each stage.	1	Low	Ridge
Man02	**Life Cycle Cost and Service Life Planning**			**Minimum standard: None**			
Req 1-2	Elemental Life Cost	2	0.65	It is assumed that the following credit could be achieved; Prior to the end of **RIBA Stage 2**, it is assumed that an **elemental life cycle costing analysis** together with elemental options appraisals will be carried out in accordance with PD 156865:2008. The LCC should show structure & envelope scenarios based on 20,30 & 50+ years, plus fabric & service strategy with component & fit out options over a 15 year period as an 'elemental LCC Plan'.	0	Possible	TBC / Client
Req 3	Component Level LCC Plan	1	0.65	It is assumed the following could be achieved**:** Prior to the end of **RIBA Stage 4** a **component level LCC plan** has been developed in line with PD 156865:2008 & includes: envelope (Part 1), services (Parts 2 & 3), finishes (Parts 1-4) & external hard landscaping & boundary protection where in the scope of the assessment.	0	Possible	TBC / Client
Req 4	Capital Cost Reporting	1	0.65	Report the capital cost for the building via the BREEAM Spreadsheet in £k/m2	1	Low	QS
Man03	**Responsible Construction Practices**			**Minimum standard: None**			
Req 1	Pre-requisite: Timber			It is assumed that all timber and timber based products used on the project will be 'Legally harvested and traded timber'.		Low	Contractor
Req 2-3	Environmental Management	1	0.65	It is assumed that the following will be achieved by any contractor managing the construction site - - Main contractor operates a certified Environmental Management System. - Best practice pollution prevention policies and procedures will be implemented on site in accordance with PPG 6	1	Medium	Contractor
Req 4-6	Sustainability Champion (Construction)	1	0.65	It is assumed that during **RIBA Stages 5 & 6** a Sustainability Champion is appointed to monitor; ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s). The Sustainability Champion will be site based or visit . They will carry out spot checks, monitor site activities & report on progress at relevant project team meetings.	1	Medium	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Req 7-8	Considerate Construction	2	0.65	It is assumed that the contractor will comply with the Considerate Constructors Scheme and will achieve a score of at least 35 with no section scoring below 11. (Note - the innovation credit is also targeted which requires a score of 39 and no section scoring below 13)	2	Medium	Contractor
Req 9	Monitoring of Construction-Site Impacts- Pre-requisite			It is assumed that responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data throughout the build programme.		Low	Contractor
Req 10-15	Monitoring of Construction-Site Impacts (Energy and Water)	1	0.65	It is assumed that the contractor's nominated individual will monitor and report data on energy & water consumption on site.	1	Low	Contractor
Req 16-19	Monitoring of Construction-Site Impacts (Transport)	1	0.65	It is assumed that the contractor will monitor and report data for CO2 emissions for transport of construction materials and waste separately. Litres of fuel and km travelled will also need to be reported.	1	Medium	Contractor
Man04	**Commissioning and Handover**			**Minimum Standard: Criterion 9 Building User Guide for Excellent and Outstanding**			
Req 1-4	Commissioning and Testing Schedule and Responsibilities	1	0.65	It is assumed that: - there is a 'Schedule of commissioning' which identifies systems and standards to which all elements should be commissioned - The client appoints a 'Commissioning Monitor' to ensure systems are planned & commissioned appropriately. - The contractor allows sufficient and appropriate time and funds for all systems to be commissioned.	1	Medium	Ridge (M&E) / M&E Sub / Contractor
Req 6-7	Commissioning Building and Design	1	0.65	It is assumed that: For buildings with complex building services and systems, a specialist commissioning manager will be appointed during the design stage with responsibility for: a. Undertaking design reviews and giving advice on suitability for ease of commissioning. b. Providing commissioning management input to construction programming and during installation stages. c. Management of commissioning, performance testing and handover/post-handover stages. Where there are simple building services, this role can be carried out by an appropriate project team member, provided they are not involved in the general installation works for the building services system(s).	1	Medium	M&E Sub
Req 7-8	Testing and Inspecting Building Fabric	1	0.65	It is assumed that thermographic survey and air tightness testing will be carried out by a suitably qualified professional, plus site inspection to prove adequate construction of the building fabric. Any remedial works identified are to be rectified prior to the building handover and close out. Credit not targeted	0		
Req 9-10	Handover	1	0.65	It is assumed that: - a simple, standalone building user guide covering all aspects described within the BREEAM 2014 Manual will be produced that is suitable for general building users as well as the facilities management team. - A schedule of training will be identified for the occupiers at handover to cover all points set out within the BREEAM manual	1	Low	Contractor

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Man05	**Aftercare**			**Minimum Standard: One Credit Seasonal Commissioning for Excellent and Above**			
Req 1-2	Aftercare Support	1	0.65	It is assumed that: -There will be a meeting programmed to occur with the building occupier/management (prior to initial occupation) to explain the aftercare support, including the Building User Guide and training schedule AND Present building information. -There will be On-site facilities management training, including building walkabout and familiarisation with the building systems, controls and operation. -Initial aftercare frequent support will be provided for at least the first month of building occupation, followed by longer term support for at least the first 12 months from occupation. -There will be collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied and systems adjusted accordingly.	1	Low	OH / Contractor
Req 3	Seasonal Commissioning	1	0.65	It is assumed that seasonal commissioning will be undertaken: - completed over a minimum 12-month period, once the building becomes substantially occupied. -includes complex and simple systems . - It must take place under part load conditions (spring/autumn) and during periods of extreme (high or low) occupancy. -requires occupant feedback and recommissioning and revisions to O&M Manuals.	1	Low	M&E Sub
Req 4-5	Post Occupancy Evaluation	1	0.65	It is assumed that a Post Occupancy Evaluation will be undertaken by an independent third party one year after building occupation, to gain building performance feedback and to disseminate this information via a case study in order to share good practice and lessons learned.	1	High	Client
HEALTH & WELLBEING							
Hea01	**Visual Comfort**			**Minimum Standard: None**			
Req 1-2	Glare Control	1	0.78	It is assumed that compliant glare control is present in all relevant areas using either building integrated measures, occupant controlled blinds (<0.1% transmittance), bioclimatic design, external shading or brise soleil This is relevant to all rooms having windows or roof lights where close working is undertaken and includes sports halls.	1	Medium	Architect
Req 3-5	Daylighting	3	0.78	It is assumed that the below can **not** be achieved: - 60% of the kitchens / living rooms / dining rooms / studies / communal occupied spaces of the building will comply with the following daylighting requirements: - Daylight factor of 2% AND EITHER - 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 in Table - 12. 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 in Table - 12 OR - At least 80% of the room has a view of sky from desk or table top height (0.7m) AND The room depth criterion d/w +d/HW < 2/(1-RB) is satisfied., where: d = room depth w = room width HW = window head height from floor level RB = average reflectance of surfaces in the rear half of the room	0	Possible	Architect
Req 6-9	View Out	2	0.78	It is assumed that the below can **not** be achieved: a) 80/95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out. b) 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	0	Possible	Architect

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Req 10-14	Internal Lighting Levels, Zoning and Control	1	0.78	It is assumed that the below can be achieved: For Internal lighting: -All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts. -It is assumed that it will be specified in accordance with the appropriate maintained Illuminance levels (in LUX) recommended by SLL Code for Lighting 2012. -Areas with computer screens complies with CIBSE G7 sections 3.3,4.6-4.9. -Areas are zoned and occupant controlled appropriate for their use and location see credit criteria For External Lighting: -All external lighting located within the refurbishment/fit-out zone is specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas & BS EN 12464-2:2014 Light and lighting - Lighting of work places - Part 2: Outdoor work places	1	Medium	Ridge (M&E) / M&E Sub
Hea02	**Indoor Air Quality**			**Minimum Standard: None**			
Req 1	Indoor Air Quality Plan	1	0.78	An indoor air quality plan will be produced, detailing actions that minimise indoor air pollution during design, construction, and occupation of the building.	1	Medium	Contractor / M&E Sub
Req 2-5	Ventilation	1	0.78	It is assumed that the building **may** be designed to minimise the concentration and recirculation of pollutants by: 1. Providing fresh air into the building in accordance with the criteria of the relevant standard for ventilation 2. Designing ventilation pathways to minimise build-up of air pollutants as follows: a. In air conditioned and mixed mode buildings, the air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution. OR the air intakes and exhausts location are designed in accordance with BS EN 13779:2007 Annex A2. b. In naturally ventilated buildings: openable windows/ventilators are over 10m from sources of external pollution. 3. HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779:2007 Annex A3. 4. Areas subject to large/unpredictable/variable occupancy patterns have carbon dioxide (CO2) or air quality sensors specified and: a. In mechanically ventilated buildings/spaces: sensor(s) are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space. b. In naturally ventilated buildings/spaces: sensors either alert the building owner/manager when CO2 levels exceed the recommended set point, or are linked to controls to adjust the quantity of fresh air, i.e. automatic opening windows/roof vents.	0	Possible	M&E / M&E Sub
Req 6-7	VOC Emission Levels (Products)	1	0.78	It is assumed that the buildings will meet the following standards: emissions of VOCs from paints and varnishes and at least 5 of 7 other key internal finishes and fittings, as detailed within table 20 of the BREEAM 2014 R&FO Manual will comply with testing & emission requirements. This requires careful specification at the design stage, plus formal confirmation from manufacturers at the post construction stage, which can be onerous.	0		
Req 8-12	VOC Emission Levels (Post Construction)	1	0.78	To achieve this credit pre occupation testing of formaldehyde concentration and VOC emissions will need to be undertaken post construction and results must be below the limits detailed within the BREEAM guidance. If results are above the limits remedial action is taken to bring down the levels	0		

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Req 13-14	Potential for Natural Ventilation	1	0.78	It is assumed that occupied spaces are **not** designed to be capable of providing fresh air entirely via a natural ventilation strategy: 1. For a strategy with opening windows, room depths are in accordance with CIBSE AM10 (section 2.4) . The openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate. There is adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates. 2. For a strategy without openable windows, or with spaces with a plan depth >15m, the design must demonstrate that the ventilation strategy can provide adequate cross flow of air to maintain the required thermal comfort conditions and ventilation rates. 3. For fit out projects (Part 3 assessments), local services are designed to provide fresh air via a natural ventilation strategy and are appropriately designed according to room depth in accordance with CIBSE AM10. The natural ventilation strategy is capable of providing at least two levels of user-control on the supply of fresh air to the occupied space. Any opening mechanisms must be easily accessible and provide adequate user-control over air flow rates to avoid draughts.	0		
Hea04	**Thermal Comfort**			**Minimum standard: None**			
Req 1-5	Thermal Modelling	1	0.78	It is assumed that full dynamic thermal modelling will be carried out in accordance with CIBSE AM11. The study will demonstrate that the building design and services strategy can deliver thermal comfort levels in accordance with the criteria set out in CIBSE Guide A table 1.5. For naturally ventilated areas also that overheating meets the recommendations of TM52. For air conditioned buildings the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices are to be provided.	1	**Medium**	**Ridge (M&E) / M&E Sub**
Req 6-9	Adaptability- for a Projected Climate Change	1	0.78	It is assumed that the following will be achieved: The thermal modelling above also demonstrates compliance when run for a projected climate change environment (see Relevant definitions in the BREEAM 2014 Manual). Where thermal comfort criteria are not met, demonstrates how the building can be easily adapted in future using passive design solutions in order to meet the requirements above. For air conditioned buildings, the PMV and PPD indices based on the above modelling must be reported via the BREEAM assessment scoring and reporting tool.	1	**Medium**	**Ridge (M&E) / M&E Sub**
Req 10-12	Thermal Zoning and Controls	1	0.78	It is assumed that the thermal modelling analysis has informed the temperature control strategy for the building and its users, and that the strategy for proposed heating and cooling systems will address all of the issues below: 1. Demonstrate that zones within the efficiently and appropriately heat or cool these areas. e.g. consider the different requirements for the central core vs. the external perimeter adjacent to the windows. 2. The degree of occupant control required for these zones, based on discussions with the end user (or specific design guidance, case studies, feedback) considers: i. User knowledge of building services ii. Occupancy type, patterns and room functions iii. How the user is likely to operate or interact with the system(s), iv. The user expectations (this may differ in the summer and winter) and degree of individual control (i.e. balance between occupant preferences, e.g. fresh air vs. drafts). 3. How will multiple systems interact with each other and how this affects occupants thermal comfort. 4. The need for an accessible building user actuated manual override for any automatic systems	1	**Medium**	**Ridge (M&E) / M&E Sub**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Hea05	**Acoustic Performance**			**Minimum standard: None**			
	Sound insulation and internal indoor ambient noise levels 3 db better than Building regulations	1	0.78	It is assumed that the following will be achieved - airborne sound insulation values are at least **3dB** higher and impact sound insulation values at least **3dB** lower than the performance standards in the relevant Building Regulations or Standards. A programme of pre-completion testing is carried out by a compliant test body based on the normal programme of testing described in the relevant Building Regulations or Standards for every group or sub-group of dwellings (houses, flats or rooms for residential purposes) this must demonstrate that the performance standards detailed above are achieved.	0	**Possible**	**Acoustician**
	Sound insulation and internal indoor ambient noise levels 5 db better than Building regulations	2	0.78	It is assumed the following will be achieved: Airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant Building Regulations or Standards. A programme of pre-completion testing is carried out by a compliant test body based on the normal programme of testing described in the relevant Building Regulations or Standards for every group or sub-group of dwellings (houses, flats or rooms for residential purposes) this must demonstrate that the performance standards detailed above are achieved.	1	**Medium**	**Acoustician**
	Sound insulation and internal indoor ambient noise levels 8 db better than Building regulations	1	0.78	The below is assumed to be achieved: Airborne sound insulation values are at least 8dB higher and impact sound insulation values are at least 8dB lower than the performance standards in the relevant Building Regulations or Standards. A programme of pre-completion testing is carried out by a compliant test body based on the normal programme of testing described in the relevant Building Regulations or Standards for every group or sub-group of dwellings (houses, flats or rooms for residential purposes) this must demonstrate that the performance standards detailed above are achieved.	1	**Medium**	**Acoustician**
Hea06	**Safety and Security**			**Minimum standard: None**			
	Security of Site and Building	1	0.78	A Suitably Qualified Security Specialist (Crime Prevention Design Advisors (CPDA), Architectural Liaison Officers (ALO) or Counter Terrorism Security Advisor (CTSA)) will conduct a Security Needs Assessment based on local knowledge of the site or a site visit. Note that this should ideally be carried out at **Stage 2**. The recommendations from the SNA must be implemented in the final design.	1	**High**	**Architect / SQSS**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
ENERGY							
Ene01	**Reduction of Energy Use and Carbon Emissions**			**Minimum standard: Five Credits for Excellent, Eight for Outstanding**			
Req 1	Energy Performance	15	0.66	It is assumed that an EPNR ≥ **0.50** will be achieved based on the improvement on the EPC as a result of the refurbishment.	5	**Medium**	**Ridge (M&E) / M&E Sub**
Ene02	**Energy Monitoring**			**Minimum standard: One Credit- First Sub-metering Credit for Very Good and Above**			
Req 1-4	Sub-metering of Major Energy Consuming Systems	1	0.66	It is assumed that: - Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. - The energy consuming systems are metered using an appropriate energy monitoring and management system if the floor area is over 1000m2. (Not applicable if building is Mult-residential) - The end energy consuming uses are identifiable to the building users, for example through labelling or data outputs.	1	**Medium**	**Ridge (M&E) / M&E Sub**
Ene03	**External Lighting**			**Minimum standard: None**			
Req 1-3	External Lighting	1	0.66	It is assumed that: - The building has been designed to operate without the need for external lighting (which includes on the building, signs and at entrances). OR where the building has external lighting, - 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 lights have daylight sensors and **PIRs in areas of intermittent pedestrian traffic.**	1	**Medium**	**Ridge (M&E) / M&E Sub**
Ene04	**Low Carbon Design**			**Minimum standard: None**			
Req 1-3	Passive Design Analysis	1	0.66	Is is assumed that the team will carry out a Passive Design Analysis (PDA) during **Concept Design stage (RIBA Stage 2**) which identifies opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services by greater than 5%. Plus the first Hea 04 credit is achieved.	0	**Possible**	**M&E / M&E Sub**
Req 5-6	Free Cooling	1	0.66	It is assumed that the following credit **can not** be achieved: - The PDA includes an analysis of free cooling and identifies opportunities for the implementation of free cooling solutions. - The building uses ANY of the free cooling strategies listed below: 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 or surface water cooling 5. Evaporative cooling, direct or indirect 6. Desiccant dehumidification and evaporative cooling, using waste heat 7. Absorption cooling, using waste heat 8. The building does not require any significant form of active cooling or mechanical ventilation.	0		
Req 7-8	Low Zero Carbon Feasibility Study	1	0.66	It is assumed the following will be achieved: - A feasibility study has been carried out by the completion of the **Concept Design stage (RIBA Stage 2)** by an energy specialist to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source(s) for the building/development. - Local LZC technology have been specified in line with the recommendations of the feasibility study and this method of supply results in a >5% reduction in regulated carbon dioxide (CO2) emissions	1	**Medium**	**M&E / M&E Sub**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Ene06	**Energy Efficient Transportation Systems**			**Minimum Standard: None**			
Req 1	Energy Consumption	1	0.65	It is assumed that where lifts, escalators and/or moving walkways 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 transport systems. - The energy consumption has been calculated in accordance with BS EN ISO 25745 Part 2 and/or Part 3 - Energy calculation and classification for escalators and moving walks. - The analysis includes one of the following: i. At least two types of system (for each transportation type required); ii. An arrangement of systems (e.g. for lifts, hydraulic, traction, machine room-less); iii. A system strategy which is 'fit for purpose'. - The use of regenerative drives should be considered, where it produces an energy saving greater than the additional standby energy used to support the dives. - The transportation system with the lowest energy consumption is specified.	1	Medium	Contractor
Req 2-4	Energy Efficient Features	2	0.66	It is assumed that **two** of the following **three** energy efficient features are specified: a. The lifts operate in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b. The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. c. The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. **Additionally -** 4. Where the use of regenerative drives is demonstrated to save energy, they are specified.	2	Medium	Contractor
Ene08	**Energy Efficient Equipment**			**Minimum Standard: None**			
Req 1-3	Energy Consumption	2	0.66	It is assumed that the following credit may be achieved: - The building's unregulated energy consuming loads are identified and their contribution to the total annual unregulated energy consumption is estimated. Examples of significant contributors are: Small Power & Plug-in equipment Communal Laundry Residential areas with white goods - For the systems/ processes that use a significant proportion of the total annual unregulated energy consumption , demonstrate a meaningful reduction in the total annual unregulated energy consumption by design, specification or operation.	2	High	Contractor
Ene09	**Drying Space**			**Minimum Standard: None**			
	Drying Space	1	0.65	It is assumed that the following could be achieved: For self-contained dwellings: An adequate internal or external space with posts and footings, or fixings capable of holding: a. One to two bedrooms: 4m+ of drying line AND The space (internal or external) is secure. 4m line doesnt need to be one contiuous line	0	Possible	Contractor
TRANSPORT							
Tra01	**Sustainable Transport Solutions**			**Minimum Standard: None**			
Req 1-2	Accessibility Index	3	0.67	Based on the bus and train links to the site, a public transport accessibility index of ≥ 8 has been achieved therefore 3 credits can be awarded.	3	Low	Ridge

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Tra02	**Proximity to Amenities**			**Minimum Standard: None**			
	Proximity to Amenities	2	0.67	It is assumed that the building will be within 500m of at least 2 AND 1000m of a further 2 of the following services including at least 2 core services: Core services: - A food outlet, (Morrisons Daily 850m) -Access to Cash (cash point 700m) - Outdoor open Space (e.g. park) (Quay meadow 300m) - Leisure/sports/fitness centre (Lancaster cricket and sports club 500m)	2	Low	Ridge
Tra03	**Cyclist Facilities**			**Minimum Standard: None**			
	Cycle Storage	1	0.67	Is it assumed that compliant (covered, well lit & in a prominent position) cycle racks will be provided at a rate of 1 space for every 4 residents AND 1 for every 20 staff (assuming 3/3 credits achieved for Tra 01) Please note that if cycle storage is not in a prominent location, signage will be required indicating their location to users.	1	Low	Architect
Tra05	**Travel Plan**			**Minimum Standard: None**			
Req 1-4	Travel Plan	1	0.67	It is assumed that a BREEAM compliant travel plan, based on a transport assessment/statement has been prepared as part of the **feasibility & design stages** and that the recommendations within this will be incorporated into the design.	1	Medium	Transport consultant
WATER							
Wat01	**Water Consumption**			**Minimum standard: 1 credit for Good and Above; 2 credits for Outstanding**			
Req 1-3	Water Consumption	5	0.76	It is assumed that a 40% improvement in water consumption over the notional baseline will be achieved through the specification water consuming facilities. An example of compliant specification to achieve 3 credits is given below: - WCs incl disabled WCs (4 Litres/min) - Wash Hand Basin tap (4.5 Litres/min) - Kitchenette taps (5 Litres/min) - Showers (6 Litres/min) - currently specified at 10 Litres/min, will only achieve 2 credits if this stays the case - No Baths - No kitchen pre-rinse nozzles - No domestic dishwashers - No commercial dishwashers - No grey water / rainwater system	3	Medium	Architect / Contractor/ Sub M&E
Wat02	**Water Monitoring**			**Minimum standard: Criterion One Only for Good and Above**			
Req 1-5	Water Sub Meters	1	0.76	It is assumed that: -A water meter with a pulsed output will be specified on the mains water supply to the building AND water sub-meter with a pulsed output fitted to any water consuming plant or building areas consuming 10% or more of the building's total water consumption -The meters will be connected to any proposed BMS	1	Medium	M&E / M&E Sub
Wat03	**Water Leak Detection and Prevention**			**Minimum Standard: None**			
Req 1	Leak Detection System	1	0.76	It is assumed the following will **may** be achieved**;** that a BREEAM compliant leak detection system will be specified or installed on the building's water supply. This will detect leaks between the site boundary and within the building.	0	Possible	M&E / M&E Sub

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Req 2	Flow Control Devices	1	0.76	It is assumed that any of the following flow control devices will be connected to each WC area / facility: a. A time controller i.e. an automatic time switch device to switch off the water supply after a predetermined interval. b. A programmed time controller i.e. an automatic time switch device to switch water on and/or off at predetermined times. c. A volume controller i.e. an automatic control device to turn off the water supply once the maximum pre-set volume is reached. d. A presence detector and controller i.e. an automatic device detecting occupancy or movement in an area to switch water on and turn it off when the presence is removed. e. A central control unit i.e. a dedicated computer-based control unit for an overall man-aged water control system, utilising some or all of the types of control elements listed above. - Not required for private residential ensuite facilities.	1	Medium	M&E / M&E Sub
Wat04	**Water Efficient Equipment**			**Minimum Standard: None**			
Req 1-2	Water Efficient Equipment	1	0.76	It is assumed that 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 a meaningful reduction in the total water demand of the building can be demonstrated. Some examples would be: 1. Reclaimed/recovered water from a rainwater collection or waste water recovery system, with appropriate storage, i.e. grey water collection from building functions or processes that use potable water, e.g. vehicle wash, training water in fire stations, sanitary facilities, irrigation etc. 2. External landscaping and planting that relies solely on precipitation, during all seasons of the year. Credit is scoped out of the scheme if there are no unregulated water demands (this includes soft landscaping)	1	Low	Landscape Arch / Contractor
MATERIALS							
Mat01	**Life Cycle Impacts**			**Minimum Standard: None**			
Req 8-10	Life Cycle Impacts	6	1.13	A basic Life Cycle Assessment using the Green Guide to Specification is undertaken by the architects with a statement on how this has influenced the design (3 credits assumed).	3	High	Ridge
Mat03	**Responsible Sourcing**			**Minimum standard: Criterion One Only for Pass and Above**			
Req 1	Pre Requisite			It is assumed that all timber used within the project will be legally harvested and traded timber.		Low	Cont'
Req 2	Sustainable Procurement Plan	1	1.13	It is assumed that: The principal contractor sources materials for the project in accordance with a documented Sustainable Procurement Plan which sets out a clear framework for the responsible sourcing of materials for both procurement and specification of construction materials. It covers: 1. Risks and opportunities are identified (BS 8902:2010 can be used as a guide). 2. Aims, objectives and targets to guide sustainable procurement activities. 3. The strategic assessment of sustainably sourced materials available locally and nationally. 4. Procedures to check and verify that the plan is being implemented/adhered to	1	Low	Contractor
Req 3	Responsible Sourcing	3	1.13	It is assumed that at least **18%** of the available points will be achieved, through the sourcing of materials within major elements from suppliers with appropriate certification (e.g. BES6001 / ISO14001 / FSC / CSA / MTCC / PEFC / SFI etc.).	1	High	Contractor
Mat04	**Insulation**			**Minimum Standard: None**			
Req 1-2	Embodied Impact of Insulation	1	1.13	It is assumed that all insulation products used in the external walls; ground floor; roof and building services will have a low embodied impact when compared to their thermal properties. To ensure that this credit is achieved, A+ rated insulation types, according to the BRE's Green Guide Online, will be selected.	1	High	Architect / Contractor / M&E Sub

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Mat05	**Designing for Durability and Resilience**			**Minimum Standard: None**			
Req 1-5	Designing for Durability and Resilience	1	1.13	It is assumed that following will be achieved: 1. The building incorporates suitable durability/ protection measures/ designed features/solutions to prevent damage to vulnerable parts of the internal and external building and landscaping, including: a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.).note this may require upgrade of some corridor walls to severe duty b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. Note: this may require additional bump rails and corner protection to some corridors. c. Protection against, or prevention from, any potential vehicular collision where vehicular parking & manoeuvring occurs within 1m of the external building facade for all car parking areas and within 2m for all delivery areas Note this may require additional bollards to protect wall adjacent to the turning head. 2. Environmental factors have been identified that are relevant to the site location (e.g. solar radiation, wind, precipitation) 3. Existing applicable building elements that are exposed to any relevant environmental factors have been identified 4. Design and specification measures will be developed to repair and protect existing elements to limit degradation, where feasible. 5. Newly specified materials / constructed elements will incorporate appropriate design and specification measures to limit degradation due to environmental factors.	1	**Medium**	**Architect**
Mat06	**Material Efficiency**			**Minimum Standard: None**			
Req 1-2	Material Efficiency	1	1.13	It is assumed that the following can **not** be achieved: 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.	0		
WASTE							
Wst01	**Project Waste Management**			**Minimum standard: One Credit for Outstanding**			
Req 1	Pre-refurbishment audit	1	0.67	It is assumed that a pre-refurbishment audit has **not** been carried out during RIBA Stage 2, by an independent competent person who has appropriate knowledge of buildings, waste and options for the reuse and recycling of different waste streams.	0	**Possible**	**Consultant**
Req 2-4	Reuse and direct recycling of materials	2	0.67	It is assumed that the following can **not** be achieved: At least 50%/75% of the total available points for the relevant waste materials that are present on the project based on the material are either directly re-used on-site or off-site or are sent back to the manufacturer for closed loop recycling. Relevant materials would be: inert; metal; composite; plasterboard; furniture; Timber products; mineral fibre ceiling tiles /panels; vinyl floor coverings; carpet tiles ; insulation board, fixtures & fittings & Packaging materials.	0		
Req 5-6	Construction Resource Efficiency	3	0.67	It is assumed that a Resource Management Plan (RMP) will be developed and that the non-hazardous waste relating to on-site refurbishment or fit-out, and dedicated off-site manufacture or fabrication processes generated by the building's design and construction will be no greater than **11.3m3 or 3.5 tonnes** per 100m2 gross internal floor area.	1	**Medium**	**Contractor**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Req 7	Diversion of waste from Landfill	1	0.67	It is assumed that the following percentages of refurbishment waste (on-site and off-site manufacture/fabrication in a dedicated facility), generated by the project will be diverted from landfill: - Refurbishment/ Fit-Out - 85% by Volume or 90% by tonnage - Demolition -90% by Volume or 95% by tonnage	1	Low	Contractor
Wst02	**Recycled Aggregates**			**Minimum Standard: None**			
Req 1-3	Recycled Aggregates	1	0.67	It is assumed the following will **not** be achieved: The total amount of recycled or secondary aggregate specified is greater than 25% of the total high grade aggregate specified for the project. Recycled or secondary aggregate is either construction, demolition and excavation waste obtained on-site or off-site or secondary aggregate obtained from a non-construction post consumer industrial product source. Please note - the recycled levels in each material used to make up the 25% must comply with Table 67.	0		
Wst03	**Operational Waste**			**Minimum standard: 1 credit for Excellent and Outstanding**			
Req 1	Dedicated space for recyclables	1	0.67	It is assumed the following will be achieved: A dedicated recycling area, will be provided to serve the development. This space would need to demonstrate that the provision of waste management facilities for the assessed building is adequate given the building type, operational function and likely waste streams and volumes to be generated. The following guide for minimum storage space provision should be used: 1. At least 2m²per 1000m²of net floor area for buildings <5000m² 2. A minimum of 10m²for buildings ≥ 5000m² 3. An additional 2m² per 1000m² of net floor area where catering is provided The net floor area should be rounded up to the nearest 1000m². Additionally for multi-resi buildings, For every 6 bedrooms, the following internal storage container provisions are installed: a. A minimum total capacity of 30 litres b. No individual container smaller than 7 litres c. All containers in a dedicated non-obstructive position d. The storage containers for recycling are provided in addition to non-recyclable waste storage AND e. The recyclable storage in located in a dedicated non-obstructive position in either the communal kitchen, or where there are no communal kitchens, in a communal space such as lounges or utility areas f. Home composting facilities and a home composting information leaflet are provided within the kitchen area or communal spaces for each self-contained dwelling, bedsit, or communal kitchen.	1	Medium	Architect / Contractor
Req 2	Compactor / Baler / Composting			It is assumed the following will be achieved: Where relevant: It is assumed that a static compactor / baler will be provided in a dedicated waste management space AND a compliant vessel for composting organic waste will be provided.		Medium	Architect / Contractor
Wst05	**Adaptation to Climate Change**			**Minimum standards - none**			
Req 1	Adaptation to Climate Change	1	0.67	It is assumed the following will be achieved: A Climate Change Adaptation Strategy Appraisal has been prepared for structural and fabric resilience by the end of Concept Design **(RIBA Stage 2)**. The appraisal: - Must be a systematic (structural and fabric resilience specific) risk assessment. - Will identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change. - Will, where feasible, mitigate against these impacts. - Will cover: Hazard identification. Hazard assessment; Risk estimation; Risk evaluation &. Risk management.	1	Medium	Architect / Struct / M&E

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Wst06	**Functional Adaptability**			**Minimum standards - none**			
Req 1-2	Functional Adaptability	1	0.67	A building-specific functional adaptation strategy study has been undertaken by the client and design team by Concept Design **(RIBA Stage 2)**, which includes recommendations for measures to be incorporated to facilitate future adaptation. Provide an update during Technical design **(Stage 4)** on how recommendations have been implemented.	1	**Medium**	**Architect / Struct / M&E**
LAND USE & ECOLOGY							
LE02	**Protection of Ecological Features**			**Minimum standard: None**			
Req 1-2	Protection of Ecological Features	1	2.35	It is assumed that all existing features of ecological value within and surrounding the refurbishment or fit-out zone and site boundary area are adequately protected from damage during clearance, site preparation and refurbishment or fit-out activities in line with BS42020: 2013. The contractor constructs ecological protection recommended by the Suitably Qualified Ecologist (SQE), prior to any preliminary site refurbishment, fit-out or preparation works (e.g. erection of temporary site facilities).	1	**Low**	**Ecologist / Contractor**
LE04	**Ecological Enhancement**			**Minimum standard: None**			
Req 1-3	Ecological Enhancement	1	2.35	It is assumed that: - A suitably qualified ecologist (SQE) has been appointed by the end of the Preparation and Brief stage **(RIBA Stage 1)** to advise on enhancing the ecology of the site at an early stage. - The SQE has provided an Ecology Report (based on a site visit/survey) with recommendations for the enhancement of the site's ecology at Concept Design stage **(RIBA Stage 2)**. - The recommendations of the Ecology Report will be implemented.	1	**Medium**	**Ecologist / Contractor**
LE05	**Long Term Impact on Biodiversity**			**Minimum standard: None**			
	Long Term Impact on Biodiversity	2	1.13	It is assumed that a suitably qualified ecologist will be appointed prior to the commencement of site works, will be able to confirm adherence to all relevant EU and UK legislation and will produce a 5 year management plan for site biodiversity. Furthermore, it is assumed that FOUR of the additional requirements, where applicable, outlined within Guidance Note LE5 will be incorporated into the design / planting.	2	**Low**	**Ecologist / Contractor**
POLLUTION							
Pol01	**Impact of Refrigerants**			**Minimum standard: None**			
Req 2	Buildings With Refrigerants Prerequisite			All systems (with electric compressors) must comply with the requirements of BS EN 378:2008 (parts 2 & 3) and where refrigeration systems containing ammonia are installed, the Institute of Refrigeration Ammonia Refrigeration Systems Code of Practice.		**Medium**	**M&E / M&E Sub**
Req 3-5	Impact of Refrigerants	2	0.83	Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of <1000 kgCO2e/kW cooling/heating capacity.	1	**Medium**	**M&E / M&E Sub**
Req 6-7	Leak Detection	1	0.83	It is assumed the following will **may** be achieved For installations of small multiple hermetic systems only where the refrigerant charge in each unit is less than **6kg** each **OR** Where systems using refrigerants have a permanent automated refrigerant leak detection system installed; **or** where an inbuilt automated diagnostic procedure for detecting leakage is installed. In all instances a robust and tested refrigerant leak detection system must be installed and capable of continuously monitoring for leaks The system must be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident.	0	**Potential**	**M&E / M&E Sub**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Pol02	**NOx Emissions**			**Minimum standard: None**			
Req 1-2	NOx Emissions	3	0.83	It is assumed that, the space heating and hot water will **not** deliver less than: 1 Credit - 100mg/kWh 2 Credits - 70mg/kWh 3 Credits - 40mg/kWh Also must report NOx emissions for cooling. Or for Industrial only: 1 credit - Offices & associated areas <70mg/kWh 1 credit - Operational areas< 70mg/kwh	0		
Pol03	**Surface Water Run-Off**			**Minimum standard: None**			
Req 1-2	Flood Risk	2	0.83	It is assumed that The Environment Agency's flood maps confirm that the site is is within a Low Flood Zone.	2	**Low**	**Structures & Civils**
Req 9	Pre-requisite			An Appropriate Consultant is appointed to carry out, demonstrate and/or confirm the development's compliance with the following criteria:		**Medium**	**Structures & Civils**
Req 7-8	Surface Water Run-Off - Neutral Impact on Surface Water	1	0.83	It is assumed there will not be an increase in the impermeable surfaces, therefore the credit can could be achieved	1	**Medium**	**Structures & Civils**
Req 10	Surface Water Run-Off - Reducing Run-Off	1	0.83	It is assumed that there will **not** be a decrease of >50% in impermeable area. OR i. The peak rate of run-off as a result of the refurbishment for the 1 in 100 year event has been reduced by 50% from the existing site. ii. The total volume of run-off discharged into the watercourses and sewers as a result of the refurbishment, for a 1 in 100 year event of 6 hour duration has been reduced by 50%. iii. An allowance for climate change must be included for all of the above calculations; this should be made in accordance with current best practice planning guidance.	0	**Possible**	**Structures & Civils**
Req 11-14	Minimising water course pollution	1	0.83	It is assumed that the following is **not** achievable: - A suitably qualified professional will confirm that there will be no discharge from the site for up to 5mm of rainfall. - Pollution prevention measures are put in place for different sources of pollution - a petrol interceptors will be provided for high contamination risk areas -SUD's/source control systems will be used for low risk areas -All design measures to PPG3, SUD'S Manual or PPG25 and Ear's PPGA - For Chemical/liquid gas storage areas, shut off valves are fitted -For vehicle washing areas, pollution prevention systems must be in accordance with PPG 13 - Relevant maintenance agreements for the ownership , long term operation and maintenance of all specified SUDs must be in place	0	**Possible**	**Structures & Civils**
Pol04	**Reduction in Light Pollution**			**Minimum standard: None**			
	Reduction in light pollution	1	0.83	It is assumed that: - The external lighting strategy has been designed in compliance with Table 2 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. - Any safety or security lighting which is used between 23:00 & 07:00, complies with the lower levels of lighting recommended in Table 2 of the ILP's Guidance notes. -Illuminated advertisements must be designed in compliance with ILE Technical Report 5. Any existing illuminated signage or external lighting which is within the refurbishment zone will need to comply	1	**Medium**	**M&E / M&E Sub**

Assessment Issue		Credits Available	Weighted worth of 1 credit	Credit Information	Target Score	Risk	Responsibility
Pol05	**Noise attenuation**			**Minimum standard: None**			
Req 2-5	Noise attenuation	1	0.83	It is assumed that there are noise sensitive areas or buildings within 800m radius of the site and the following will be met: - A noise impact assessment in compliance with BS 7445 will be 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 and membership of an appropriate professional body -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. -Where the noise source(s) from the proposed site/building is greater than above, measures have been installed to attenuate the noise at its source to a level where it will comply with the above.	1	**Medium**	**Acoustician**
INNOVATION CREDITS							
Man 03 Req 20	Responsible Construction Practices	1	1.00	It is assumed that the contractor will achieve a score of at least 39 in the Considerate Construction Scheme with no section scoring less than 13.	1	**Medium**	**Contractor**
Man 05 Req 6	Aftercare	1	1.00	It is assumed that there will be operational infrastructure and resources in place to co-ordinate the following activities at quarterly intervals for the first three years of building occupation: a. Collection of occupant satisfaction, energy consumption and water consumption data. b. Analysis of the data to check the building is performing as expected and make any necessary adjustments to systems controls or to inform building user behaviours. c. Setting targets for reducing water and energy consumption and monitor progress towards these. d. Feedback any 'lessons learned' to the design team and developer for use in future projects. e. Provision of the actual annual building energy, water consumption and occupant satisfaction data to BRE.	0		
Hea 01	Visual Comfort	1	1.00	It is assumed that exemplary daylight factors will NOT be met.	0		
Hea 02	Indoor Air Quality	2	1.00	It is assumed that VOC levels will NOT met the exemplary requirements.	0		
Ene 01	Reduction of Energy Use and Carbon Emissions	5	1.00	Only available if Option 1 is chosen, therefore credit CANNOT be achieved	0		
Wat 01	Water Consumption	1	1.00	It is assumed that the building will NOT achieve a reduction in water consumption by 65% over the notional baseline.	0		
Mat 01	Life Cycle Impacts	1	1.00	Credit would be achieved if full LCA methodology carried out	0		
Mat 03	Responsible Sourcing of Materials	1	1.00	It is assumed that 70% of the available responsible sourcing points will NOT be achieved.	0		
Wst 01	Construction Waste Management	2	1.00	It is assumed that the waste generated by the development will NOT achieve the exemplary level requirements.	0		
Wst 02	Recycled Aggregates	1	1.00	It is assumed that the percentage of high grade aggregate specified per application will NOT meet the exemplary level requirements.	0		
Wst 05	Adaptation to Climate Change	1	1.00	It is assumed that this credit is NOT achievable.	0		
Unlisted, BRE Approved Innovations		10	1.00	It is assumed that this credit is NOT achievable.	0		