Sustainability Statement and BREEAM & HQM Pre-assessments

Battersea Park Road

Revision S2F, January 2024

Document information

Report title:	Sustainability Statement and BREEAM & HQM Pre-assessments
Project name:	Battersea Park Road
Project number:	6892
Digital file name:	6892 Sustainability Statement and BREEAM&HQM Pre-assessments 2023.01.22 Rev S2F
Digital file location:	V:\6892 Battersea Park Road\12. A10 Reports\Stage 2 Concept Design\Sustainability Statement

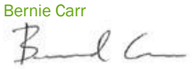
Prepared

Prepared by: Kasia Kozlowska
Signed:

Date: 22.01.2024

Checked

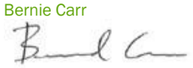
Checked by: Bernie Carr
Signed:



Date: 22.01.2024

Approved

Approved by: Bernie Carr
Signed:



Date: 22.01.2024

Revisions

No	Date	Approved
DRAFT	22.03.2023	Bernie Carr
S2A	12.04.2023	Bernie Carr
S2B	28.04.2023	Bernie Carr
S2C	04.05.2023	Bernie Carr
S2D	05.06.2023	Bernie Carr
S2E	16.01.2024	Bernie Carr
S2F	22.01.2024	Bernie Carr

Atelier Ten
226 West George Street
Glasgow G2 2PQ
United Kingdom
T +44 (0) 141 333 0499

Contents

Executive summary

Sustainability is a fundamental aspect of the Battersea Park Road development with the proposals developing towards net zero carbon, circular economy, biodiversity enhancement, health & wellbeing and green travel infrastructure.

By implementing the strategies outlined in this report, the development complies with the sustainability policies of the Wandsworth Local Plan 2023 -2038 (July 2023) and the London Plan 2021.

The sustainability measures outlined within this report will provide healthy, enjoyable and productive environment for people to live and work, while also treading lightly on the environment.

Purpose of the Report

This Sustainability Statement, as well as BREEAM and Home Quality Mark Pre-assessments have been prepared to support the planning application for a mixed-use development of Battersea Park Road. The proposal comprises affordable residential units and student accommodation with associated amenity spaces alongside a mix of commercial and local community spaces.

The sustainable strategies outlined in the statement demonstrate compliance with National Planning Framework, the London Plan, Wandsworth Council Local Plan and the supporting documents and guidance. The strategies are related to the following areas:

- Health and Wellbeing
- Energy
- Transport
- Water
- Materials
- Waste
- Land Use and Ecology
- Pollution

Health and Wellbeing

Measures will be implemented to provide a development positively contributing to the health and wellbeing of the community. The development will be characterised by a high-quality design, with enhanced visual and thermal comfort, indoor air quality and acoustics. The proposed shared amenity spaces and landscaped public realm will provide an inclusive and safe space for everyone to enjoy. It is also considered that the proposal will promote outdoor activities and improve wellbeing by contact with nature.

Energy

The development will meet the energy and CO_2 emissions targets in accordance with New London Plan and Wandsworth Local Plan, with the target of a minimum 35% on-site carbon reduction over Part L 2021 exceeded (46% achieved sitewide). The proposed design is focused on a low carbon design strategy that maximises passive measures through enhanced U-values and air tightness while considering balancing good natural daylight and passive solar heating.

Transport

The proposed development has good transport links, which is reflected in the PTAL 5. The development will be designed as car-free, with the adequate number of Blue Badge spaces. The proposal will also benefit from cycle parking spaces to promote sustainable transport and improve mobility.

Water

Water consumption and monitoring, as well as the incorporation of water efficient equipment have been considered. To minimise the consumption of potable water in sanitary applications, water efficient fixtures and fittings will be installed throughout the building.

Materials

The proposed development will be designed and constructed to conserve resources, increase efficiency and use sustainably sourced materials. The quantities and type of materials used will be assessed through the whole life carbon assessment and monitored throughout the design stages.

Waste

The opportunities to design out waste will be applied as the design progresses. Adequate dedicated storage space for non-recyclable and recyclable waste generated by the buildings' occupants will be provided.

Land Use and Ecology

The development is on a brownfield site. The proposal will positively contribute to restoring and enhancing biodiversity by incorporation of green links and play space opportunities. The proposal has potential to provide biodiversity net gain and an urban greening factor of 0.39.

Pollution

Measures will be implemented to minimise the amount of pollution. This will include using refrigerants with a low GWP where feasible, lowering the impact on local air quality by proposing a car-free, all electric development, minimising surface water run-off by implementing Sustainable Drainage Systems, reduction of night-time light pollution by incorporating appropriate external lighting fixtures and reducing the impact of external noise from the building.

BREEAM Pre-assessment and HQM Pre-assessment

To address the wider sustainability issues, the development is targeting a BREEAM Outstanding certification for the student accommodation, the retail units, office and community spaces against the BREEAM New Construction 2018 scheme. The BREEAM pre-assessment is provided in section 4 and Appendix A of this report for student accommodation, Appendix B for retail units, Appendix C for office spaces and appendix D for the community space. They detail the credits targeted to achieve the ratings.

The BREEAM pre-assessments have been completed for the student accommodation, the retail units, the office and community spaces. They have demonstrated that a BREEAM Outstanding rating is achievable, with minimum 85% required for Outstanding:

- 90.5% for student accommodation
- 86.2% for retail units
- 88% for office spaces
- 88.5% for community space.

Additionally, the development is targeting a Home Quality Mark 4-star rating for the residential units. The HQM pre-assessment is provided in section 5 and Appendix E of this report. It has demonstrated that a HQM ONE 4-star rating is achievable with an overall targeted score of 50% (48% required for 4 stars).

By implementing these standards and certifications within the design, the Battersea Park Road development will be in compliance with Policy LP10 (Responding to the Climate Crisis) of the Wandsworth Local Plan 2023 - 2038.

1 Introduction

1.1 Context

With the UK Government declaring a climate change emergency, it is important that built environment responds to reducing greenhouse gas emissions while also addressing the wider sustainability issues that affect the environment, economy, and society. It is this reason why low carbon design and sustainability feature high on the agenda in the proposed development.

This report covers the strategies related to health and wellbeing, energy and CO_2 emissions, transport, water, materials, waste, land use, ecology and pollution. It also outlines the approach taken to BREEAM and Home Quality Mark certification and summarises the measures to be taken to achieve the targeted ratings.

This report aims to respond to the energy and sustainability policies of the Wandsworth Local Plan 2023 - 2038 (July 2023), the London Plan (adopted 2021), and supporting guidance.

1.2 Planning Policies

The following policy documents have been considered:

- National Planning Policy Framework (December 2023)
- The London Plan (March 2021)
- GLA Energy Assessment Guidance (June 2022)
- Wandsworth Local Plan 2023 -2038 (July 2023)
- Wandsworth Environment and Sustainability Strategy 2019-2030

1.3 Development Site

1.3.1 Location

The site is approximately 0.8ha. It is located in the Nine Elms area, to the southeast of Battersea Power Station. The site is located with the Battersea Park Road to the north, New Covent Market to the east, railway tracks to the south and new developments on Sleaford Street to the south and to the west. It is currently occupied by the former Bookers Cash and Carry and the former BMW Car Service Garage, which are to be demolished.

The sites currently occupied by the buildings of the New Covent Garden Market are a part of the wider regeneration scheme, including 5 development areas:

- New Covent Garden Market
- Nine Elms Grove
- Nine Elms Gardens
- Thessaly Road
- Nine Elms Square.

The Elms Gardens, proposed for the site opposite of the site of Battersea Road development, will form a western gateway to the new Linear Park to provide strong links through Nine Elms.

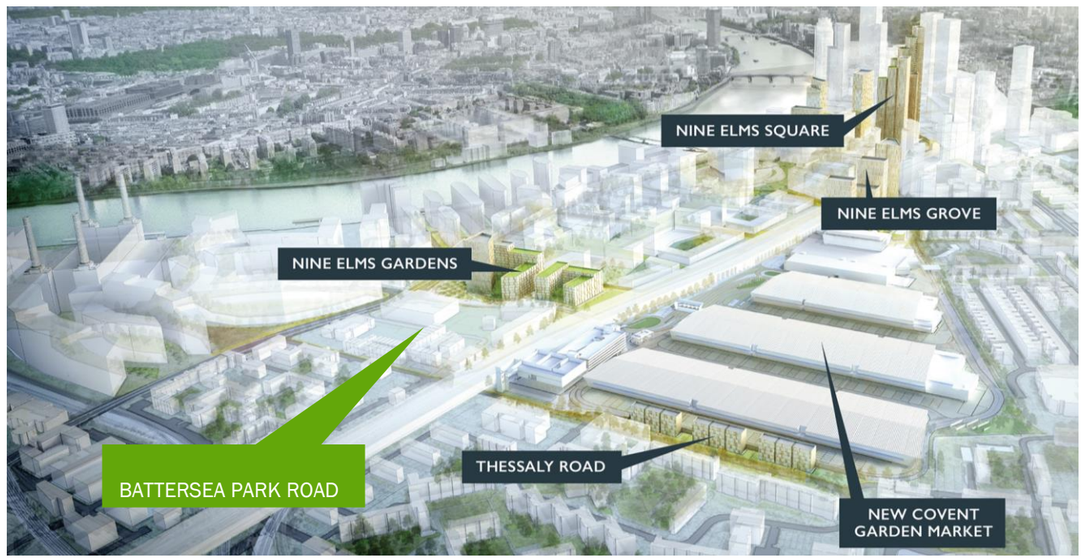


Figure 1.1 New Covent Garden Sites[1]

1.3.2 Proposed Scheme

The proposal includes demolition of the existing building and construction of three new buildings comprising affordable residential units (Use Class C3) and student accommodation (Sui Generis) along with commercial, business and service areas (Use Class E) and local community spaces (Class F). Associated works include hard and soft landscaping, car parking and new vehicular access and servicing. The development is divided as follows:

- Building 1 – Affordable Residential.
- Building 2 – Student Accommodation.
- Building 3 – Student Accommodation.

The proposal comprises 762 student accommodation units with amenity spaces, such as landscape terrace, student lounge, cycle hub and study spaces (Building 2 and Building 3) and 55 affordable apartments (Building 1).

The proposal is to be car-free, with the exception of disabled parking spaces along Sleaford Street, including:

- 1 x Car Club space
- 1 x Student Accommodation space
- 1 x Commercial space
- 2 x Residential spaces on Sleaford Street from outset
- further 4 x residential spaces if demand arises
- 1 x loading bay on Sleaford St
- 1 x loading bay on NCGMAR.

[1] New Covent Garden Sites

2 Planning Policy

2.1 Introduction

There are several planning policies that are relevant to the proposed development. This section of the report summarises the pertinent carbon and sustainability policies that apply to the development that have been addressed within this report. These are namely the National Planning Policy Framework, the London Plan, and the Wandsworth Local Plan 2023 - 2038.

2.2 National Planning Policy Framework (December 2023)

The National Planning Policy Framework (NPPF) is a key part of Government reforms to make the planning system less complex and more accessible, to protect the environment and to promote sustainable growth. It sets out the Government's planning policies for England and how these are expected to be applied. The NPPF replaces the current suite of national Planning Policy Statements, Planning Policy Guidance Notes and some Circulars.

Section 2 Achieving Sustainable Development (Paragraphs 7 to 14) of NPPF 2023 sets out the strategic strategies to deliver sustainable developments. This is centred around three overarching objectives as summarised below. The Environmental Objective specifically refers to climate emergency.

- An Economic Objective – to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;
- A Social Objective – to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and
- An Environmental Objective – to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy.

2.3 The London Plan (March 2021)

The mayor's London Plan was adopted in March 2021. The new plan sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20-25 years.

The following other London Plan's policies are considered relevant for this Sustainability Statement:

- Policy GG3 Creating a healthy city
- Policy GG4 Delivering the homes Londoners need
- Policy GG6 Increasing efficiency and resilience
- Policy G1 Green infrastructure
- Policy D7 Accessible housing
- Policy D14 Noise
- Policy G4 Open space
- Policy G5 Urban greening
- Policy G6 Biodiversity and access to nature
- Policy SI1 Improving air quality
- Policy SI2 Minimising greenhouse gas emissions
- Policy SI3 Energy infrastructure
- Policy SI4 Managing heat risk
- Policy SI5 Water infrastructure
- Policy SI7 Reducing waste and supporting the circular economy
- Policy SI8 Waste capacity and net waste self-sufficiency
- Policy SI10 Aggregates
- Policy SI12 Flood risk management
- Policy SI13 Sustainable drainage
- Policy T1 Strategic approach to transport
- Policy T2 Healthy Streets
- Policy T4 Assessing and mitigating transport impacts
- Policy T5 Cycling
- Policy T6 Car parking

In terms of sustainability, Chapter 9 Sustainable Infrastructure sets out the mayor's vision and policy criteria for moving towards a zero-carbon city by 2050.

Policy SI2 (Minimising Greenhouse Gas Emissions) and Policy SI3 (Energy Infrastructure) set the mayor's objectives with regards to reducing greenhouse gas emissions from major development and the opportunity for energy masterplans and communal heating systems.

Policy SI2 requires major development to be net zero carbon. This means reducing carbon dioxide emissions from construction and operation as well as minimising both annual and peak energy demand in accordance with the energy hierarchy. Where net-zero carbon cannot be achieved a minimum 35% beyond Building Regulation Carbon emission standards is required with any shortfall in achieving net zero carbon paid into the local borough carbon offset fund.

Policy S13 requires developers to engage with local boroughs and Energy Service Companies (ESCos) to explore the opportunities for communal heating at the early stages. Major development proposals within identified Heat Network Priority Areas should implement a communal heating system/ scheme.

The London Plan mandates Whole Life Carbon Assessment and Circular Economy Statement.

2.4 Wandsworth Local Plan 2023 - 2038 (July 2023)

The Wandsworth Local Plan 2023 - 2038 set outs the Council's planning policies and guidance for the development of the borough over the period of 2023 to 2038. It sets out the Council's proposed vision, objectives and spatial strategy. It includes area strategies, policies and site allocations which will support their delivery. It identifies where development will take place and how places within the borough will evolve through the application of placemaking principles to guide change and support Inclusive growth over the next 15 years. Whilst facilitating the management of development, the Local Plan will also protect and enhance what is good and special about Wandsworth, including its culture, sense of community, heritage, neighbourhood character, open spaces, quality parks, schools and community facilities, and thriving small businesses.

Since sustainability is an overarching ethos of the local plan, it is included within numerous planning policies that cover a wide range of policy objectives including the following.

- LP10 Responding to the Climate Emergency
- LP11 Energy Infrastructure
- LP12 Water and Flooding
- LP13 Circular Economy, Recycling and Waste Management
- LP14 Air Quality, Pollution and Managing Impacts of Development
- LP15 Health and Wellbeing
- LP55 Biodiversity
- LP57 Urban Greening Factor

A key aspect of the Local Plan is the requirement for new non-residential developments to achieve BREEAM Outstanding certification and for residential developments to achieve BRE Home Quality Mark (HQM) certification.

3 Holistic Sustainability Strategy

Building Energy Efficiency

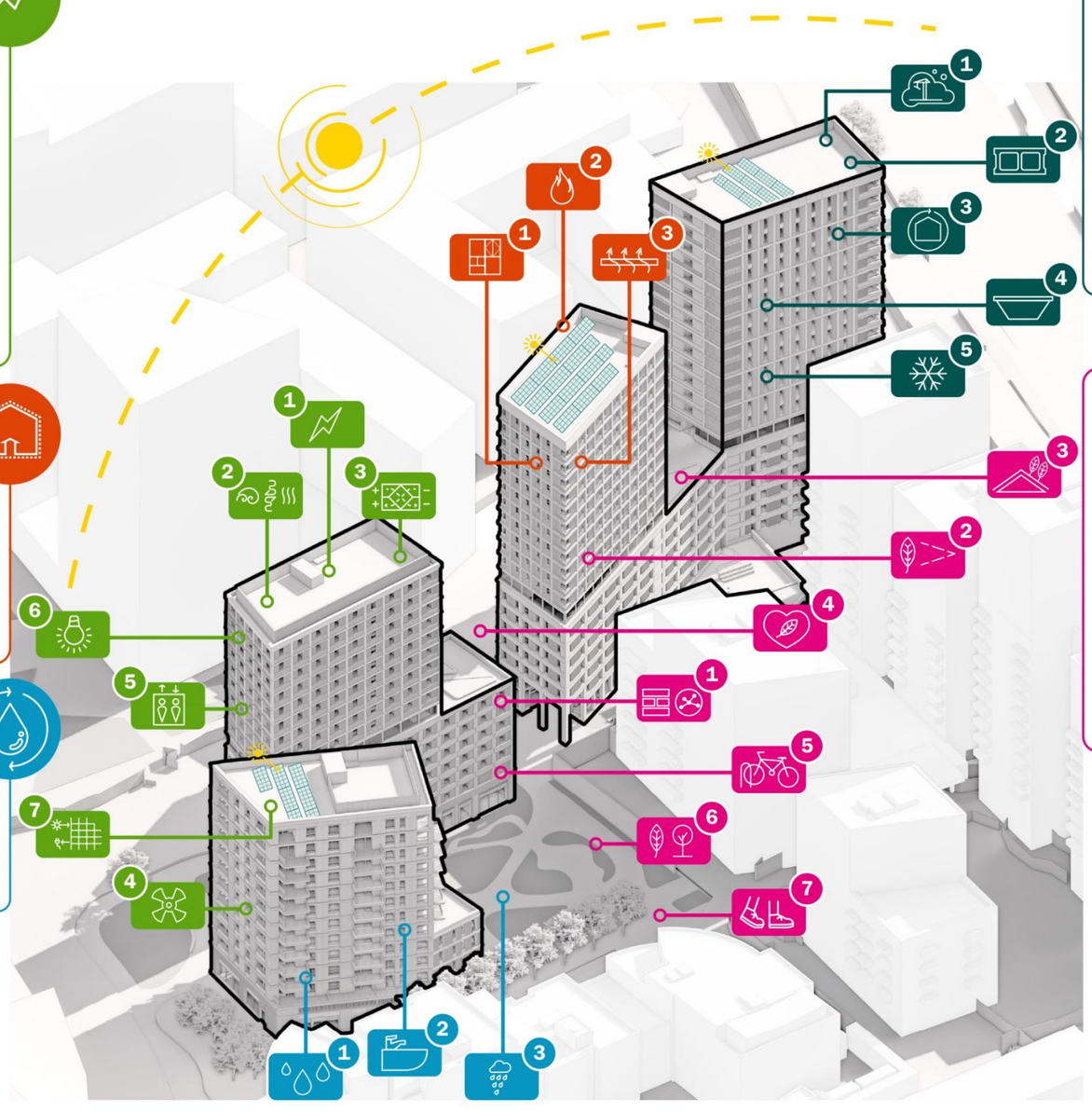
1. All-Electric Servicing Strategy
2. ASHP Heating and Hot Water
3. Heat Recovery Ventilation
4. Demand controlled ventilation within amenity areas
5. Energy Efficient Lifts
6. LED lighting and intelligent controls
7. PV Arrays maximised at roof level

Fabric Efficiency

1. Window-Wall Ratios optimised for each elevation
2. Space Heating Target <15 kWh/m2.yr (LETI)
3. Best Practice U-Values and g-values

Water Management

1. Low water use fixtures
2. Water Efficient Equipment
3. Stormwater Attenuation



Sustainable Material Management

1. Low Embodied Carbon Materials
2. Low Carbon Concrete (High GGBS)
3. Design for reuse and recovery
4. Waste recycling facilities
5. Low GWP Refrigerants

Health & Wellbeing

1. Low VOC Materials
2. Views out
3. Communal roof terraces
4. Biophilic landscaping
5. Integrated cycle storage and facilities
6. Pedestrian and cycle routes
7. Design for active travel

Figure 3.1 Sustainability Strategy for Battersea Park Road

3.1 Health and Wellbeing

The policies in both the London Plan and the Wandsworth's Local Plan highlight the importance of the health and wellbeing of the population. A holistic approach will be taken with the proposed new development to ensure it is inclusive, secure and of high quality, with good transport links and access to amenities.

The internal environment of proposed development will be designed to enhance the occupant experience. This includes providing living accommodation that promotes health and wellbeing through good quality design, visual comfort, indoor air quality, thermal comfort, acoustic performance, security and safe and healthy surroundings.

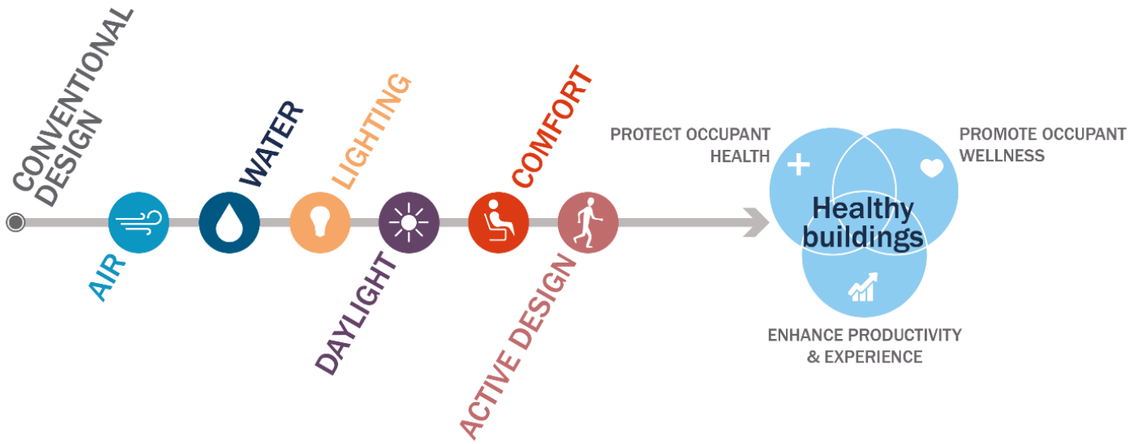


Figure 3.2 Healthy Buildings

3.1.1 Good Quality Design

Refer to Design and Access Statement for more details.

3.1.2 Visual Comfort

The proposal aims to comply with BRE best practise on daylight and sunlight to ensure that the sufficient amount is provided, especially for the proposed residential units. Internal and external lighting will be designed in line with best practice for visual performance and comfort.

3.1.3 Thermal Comfort

Overheating within the development will be minimised in accordance with CIBSE TM59 by implementing passive cooling measures such as natural ventilation and solar controls through glazing specification and optimised shading. To avoid overheating, MVHR ventilation with separate purge fans will be implemented to aid in colling the exposed concrete ceiling at night. Natural ventilation openings are provided throughout but are not relied on for overheating mitigation in the bedrooms and studios (due to Part O acoustic constraints) but are used for overheating mitigation in the living/kitchen areas.

3.1.4 Indoor Air Quality

Materials with low Volatile Organic Compound emissions will be specified to reduce indoor air formaldehyde levels.

3.1.5 Acoustics

Sound insulation will be incorporated, and acoustic performance testing will also be deployed to ensure best practice standards of acoustic comfort. An acoustician will be providing advice on methods to comply with BREEAM and HQM acoustic criteria. Coordination with acoustic consultants with regards to noise breaking through open windows has formed a key component of the thermal comfort study.

3.1.6 Security

The architecture and security system will ensure that residents are protected from crime. A security consultant will be providing input on the design to ensure safety measures are appropriate.

3.1.7 Safe and Healthy Surroundings

Landscaped green space will be provided, not only to enhance the character of the development and the local area, but to attract the occupants to spend more time outdoors and promote a healthier lifestyle. The design of the external space is to be safe, inclusive and accessible to all.

It is considered that the inclusion of outdoor green spaces will not only enhance biodiversity and ecological value of the site, but also positively contribute to the well-being of the occupants and introduce them to the concept of biophilia.

Refer to Landscape Strategy for more details.

3.2 Energy and CO_2 Emissions

The development will meet the energy and CO_2 emissions targets in accordance with New London Plan and Wandsworth Local Plan, with the target of a minimum 35% on-site carbon reduction over Part L 2021 exceeded (46% achieved sitewide). The proposed design is focused on a low carbon design strategy that maximises passive measures through enhanced U-values and air tightness while considering balancing good natural daylight and passive solar heating. To comply with the CO_2 emissions targets set in the New London Plan, heating and hot water will be provided via air source heat pumps. Photovoltaic panels will also be installed.

As outlined in Policy SI 2 of the London Plan and Policy LP10 of the Wandsworth Local Plan 2023 - 2038, these policies require major developments to meet a minimum of at least 35% on-site reduction beyond 2021 Building Regulations in order to achieve the London Plan's zero carbon requirements.

Part L compliance modelling has been completed in accordance with the London Plan energy hierarchy process which demonstrates a 46% site-wide carbon improvement over 2021 emission standards. The Be Lean requirements set out in Policy SI 2 have shown to be exceeded (21% domestic and 19% non-domestic).

Major developments are required to achieve a minimum 35% on-site carbon reduction over Part L 2021. The results from the Part L modelling demonstrate that the Battersea Park Road development achieves an aggregate 46% carbon improvement compared to 2021 standards which significantly exceeds this 35% target. An additional benchmark has been set for residential developments of 50%; as this development is a mix of PBSA, residential and commercial rather than purely residential, the additional benchmark for residential can be relaxed slightly when looked at sitewide, but has been significantly exceeded for the domestic element of the development (a 63% improvement).

The non-domestic elements of the site achieve a 33% improvement which falls slightly below the requirements of Policy SI 2. However, as detailed within the supporting Energy Statement, if the non-domestic elements of this development were assessed under Part L 2013 with the old version of the GLA Carbon Reporting Spreadsheet, a 54% improvement would have been achieved. Furthermore, the GLA acknowledges that non-residential developments may find it more challenging to achieve significant on-site carbon reductions beyond Part L 2021 to meet both the energy efficiency target and the minimum 35% improvement (see "15th June 2022 - Note to accompany GLA Energy Assessment Guidance 2022").

To achieve this level of carbon reduction the building's energy demand has been reduced through the implementation of energy efficiency measures such as high standards of fabric thermal performance, airtight construction, heat recovery systems and low energy lighting and controls. By implementing these strategies, an impressive site-wide carbon reduction on baseline Part L performance of 46% has been achieved, as well as the wider sustainability credentials.

By applying the energy strategy detailed within the supporting Energy Statement, the Battersea Park Road development demonstrates a significant commitment to reducing carbon emissions while also achieving the Committee on Climate Change recommendations for all electric buildings. Furthermore, with the national grid becoming decarbonised, the operational carbon emissions of the Battersea Park Road development will continue to reduce each year as a result of its all-electric heating strategy.

3.2.1 Lighting

High efficiency LED lighting and occupancy control switching will be applied throughout the development to minimise energy demands. Automatic presence detection controls in circulation, landlord and shared living spaces will be provided. Lighting controls to the studio apartments will be via manual switches.

All external space light fittings and security light fittings will be controlled through occupancy sensors, daylight cut-off sensors or a time switch to prevent operation during daylight hours.

3.2.2 Space Heating, Cooling and Ventilation

The space heating strategy will be based on communal ASHP. The apartments and student accommodation dwellings will be heated via radiators (with heat generated by ASHP) and ventilated via MVHR and natural ventilation through louvre panels. The communal spaces will be served by VRF. Domestic hot water will be provided to the building via air source heat pumps, heat interface units with thermally installed distribution pipework.

3.2.3 Metering

Domestic smart utility metering shall be provided in all apartments. Smart metering technologies will have the capability for remote monitoring of the apartment meters by the landlord. This function shall be restricted for viewing energy consumption data only. All metering shall comply with the current Building Regulations.

3.3 Transport

The policies in both the Local Plan and the London Plan emphasise the importance of sustainable transport.

The proposed development has good transportation links, as well as walking and cycling opportunities, which is reflected in its PTAL of 5. The site is proposed to be car-free, with the exception of the disabled car parking spaces. In accordance with Transport Assessment and associated Travel Plan, disabled parking spaces will be provided along Sleaford Street as follows:

- 1 x Car Club space
- 1 x Student Accommodation space
- 1 x Commercial space
- 2 x Residential spaces on Sleaford Street from outset
- further 4 x residential spaces if demand arises
- 1 x loading bay on Sleaford St
- 1 x loading bay on NCGMAR.

In line with the London Plan, the developments should incorporate 20% active and 80% passive electric vehicle charging facilities. To comply with this requirement, all proposed parking spaces will include active EV charging points.

In addition to considering the Healthy Streets design approach as part of the landscaping and public realm improvement works at the site, a series of Active Travel Zone (ATZ) routes have been considered within the Transport Assessment in accordance with TfL's guidance.

For more information refer to the Transport Assessment and associated Travel Plan.

3.4 Water

To minimise the consumption of potable water in sanitary applications, water efficient fixtures and fittings will be installed throughout the building. This will include low flush toilets and low flow taps. Water metering will also be installed to encourage the monitoring and benchmarking of water consumption while the building is in operation.

To achieve 3 credits under BREEAM WAT01, sanitaryware flow rates shall be limited to the following:

- WC - Flush volume 3.75L
- WHB taps - 5l/min
- Showers - 6L/min
- Baths - 140 litres
- Urinal - 2l/bowl/hour
- Kitchenette tap - 6l/min
- Kitchen taps - pre-rinse nozzle - 7.3l/min
- Domestic sized dishwashers - 12 l/cycle
- Domestic sized washing machines - 40 litres/use Commercial sized dishwashers - 5l/rack
- Commercial sized washing machines - 7.5l/kg.

In line with HQM requirements, 110 litres per person per day or less should be targeted.

3.5 Materials

The proposed development will be designed and constructed to conserve resources, increase efficiency and use sustainably sourced materials. Embodied carbon forms a key component of the strategy, and it will be reduced through the use of low carbon materials. The project will be targeting the GLA WLC benchmarks for residential properties:

- stages A1-A5 – 850 kg CO_2e/m^2
- stages A, B and C (excluding B6 and B7) - 1200 kg CO_2e/m^2.

The quantities and type of materials used will be assessed through the whole life carbon assessment and monitored throughout the design stages. Lean design principles will be applied to reduce the amount of waste by focusing on quality, durability and adaptability. Robust materials will be specified and installed to minimise the requirement for replacement over the building's life cycle. This includes the use of materials that are resilient to climate change.

Responsibly sourced materials for key building elements, including thermal insulation materials, and finishing elements will be specified. Materials that have a low embodied carbon and recycled content will be applied. Manufacturers that hold Environmental Product Declarations will be specified where possible. Additionally, all timber used on the project will be legally and sustainably sourced in line with the UK Government's Timber Procurement Policy (e.g., FSC certified). The intent of the project is to select suppliers who can provide an environmental management system (EMS) certificate (e.g., BES6001 /ISO14001 certificates).

3.5.1 Circular Economy

The design has been assessed against the core principles for circular economy including conserving resources and sourcing sustainably, designing to eliminate waste and managing waste sustainably.

These principles include:

Core Principle 1: Conserve resources, increase efficiency and source sustainably
- Minimising the quantities of material used
- Minimising the quantities of other resources used
- Specify and source material and other resources responsibility and sustainably

Core Principle 2: Design to eliminate waste (and for ease of maintenance)
- Design for longevity, adaptability or flexibility and reusability or recoverability
- Design out construction, demolition, excavation, and municipal waste arising

Core Principle 3: Manage waste sustainable and at the highest value
- Manage demolition waste
- Manage excavation waste
- Manage construction waste
- Manage municipal waste (and industrial waste, if applicable)

Key circular economy commitments, targets and opportunities for this scheme are:

- To divert 95% of non-hazardous demolition waste from landfill, with retention onsite where possible
- and reuse.
- To divert 95% of non-hazardous excavation waste from landfill, with retention onsite where possible.
- To divert 95% of construction (new build) waste from landfill with an emphasis on reuse and high
- value recycling where possible.
- Proportion of materials with a reused or recycled content to be at least 20%.
- Other materials to be responsibly sourced as per the Sustainable Procurement Policy.
- To maximise the recycling of operational waste from the student accommodation and commercial
- spaces.

An analysis of each building layer against the circular economy commitments has been carried out which includes identified challenges with counter-actions and plans to verify. Refer to Circular Economy Statement and Whole Life Carbon Assessment for more details.

3.6 Waste

3.6.1 Design

The opportunities to design out waste will be applied as the design progresses.

3.6.2 Demolition and Construction

Pre-demolition audit has been carried out for the buildings that are to be demolished to identify the amount and type of materials that can be re-used. 95% of the demolition waste is to be diverted from landfill in accordance with the London Plan. Where possible, the materials are to be retained on site and re-used. In regard to construction waste, 95% is to be diverted from landfill, with the emphasis on high value recycling and re-use. During construction the contractor will implement a Resource Management Plan to minimise construction waste in accordance with best practice benchmarks.

3.6.3 Operation

Adequate dedicated storage space for non-recyclable and recyclable waste generated by the building's occupants will be provided. This will enable appropriate management of waste disposal during the building's operation.

Refer to Operational Waste Management Plan.

3.7 Land Use and Ecology

The site can be categorised as brownfield. Due to the previous site uses, some levels of soil and groundwater contamination have been found.

As outlined in the Preliminary Ground Investigation Report, the following measures should be implemented as a part of remediation strategy:

- Removal and verification of any previously unidentified areas of contamination, where required;
- Removal, crushing and screening of all oversized material and obstructions in the ground;
- Bulk earthworks to achieve the proposed development levels, including with fill materials compacted in
- accordance with a recognised specification, such as Specification for Highways Works Series 600;
- All earthworks and groundworks to be conducted in accordance with the Control of Asbestos Regulations (CAR) 2012;
- Backfill of resultant excavations with suitable material;
- Laboratory chemical testing and risk assessment of all imported materials; and,
- Installation of a minimum 600mm clean cover system underlain by a geotextile membrane in soft landscaped areas to act as a growing medium and physical barrier between impacted Made Ground soils and the end-users.

Refer to Preliminary Ground Investigation Report for more details.

The design has been developed with consideration to 'mitigation hierarchy', which prioritises the avoidance of ecological impacts, where possible, followed by implementation of mitigation measures, and compensation if impacts cannot be avoided. The development is designed to avoid and retain the most important ecological features to ensure they can be managed long-term to maximise their biodiversity potential. Where this is not possible, new habitats are proposed to compensate for habitat losses, to deliver overall biodiversity gain.

The ecological value of the site will be maximised by introduction of landscaped outdoor spaces. Native flora and plant species will be used to preserve and restore the biodiversity. It will also be reinforced through enhanced wildlife friendly landscaping, invertebrate habitat features and integration of the bird and bat boxes within the building or hung from the trees. The proposal has a potential to provide a net gain for biodiversity and an urban greening factor to comply with the requirements of the London Plan.

The development is expected to deliver a net gain of 1.33 biodiversity units, which corresponds to a net increase of 170.31% in ecological value. This is through the provision of the following:

- Creation of a variety of landscape typologies with the objective to host different plant and wildlife communities.
- Bird and bat boxes will be incorporated into the building where appropriate.
- Plant species selected that are proven to be a good source of nectar for pollinators, as well as planting that retains seedheads to prolong foraging.
- Additional roof enhancements can include rope coils, sandy piles, log piles, rock piles.
- Invertebrate habitat features such as bee posts and bug hotels have been included in the scheme.

The proposal reaches the urban greening factor of 0.39, which is close to reaching the target of 0.4 required for residential projects. This is achieved through the incorporation of the following features:

- Semi-natural vegetation (e.g. trees, woodland, species-rich grassland)
- Trees planted in tree pits
- Intensive and extensive green roofs
- Permeable paving
- Amenity grassland and groundcover planting.

Refer to Landscape Strategy and Ecology Report for more details.

Figure 3.3 Illustrative Landscape Plan (from Landscape Strategy)

3.8 Pollution

3.8.1 Impact of Refrigerants

Insulating materials and refrigerants with a low Global Warming Potential (GWP) will be used where technically feasible. BREEAM credit Pol 01 is to be complied with. This will involve the refrigerant systems being hermetically sealed.

3.8.2 Air Pollution

Negative effects on local air quality are being minimised as the proposed development will be all electric. In regard to transport emissions, the development will be designed as car-free with an adequate number of Blue Badge spaces. Electric vehicle charging points will be provided to encourage the use of electric cars and reduce the amount of pollution. Due to the chosen approach to building systems and transport, the proposal can be considered air quality neutral.

Refer to Air Quality Assessment.

3.8.3 Flood risk

The site is located within Flood Zone 3a and therefore has a 'high probability' of fluvial/tidal flooding. However, it is located within the area benefiting from flood defences. In accordance with the Flood Risk Assessment the proposed development would be operated with minimal risk from flooding and will not increase flood risk elsewhere. It is compliant with the requirements of the National Planning Policy Framework.

To manage and reduce flood risk, the following mitigation strategies will be implemented:

- the residential units will be located above flood breach levels;
- robust materials will be used;
- sealants will be applied to windows and doors;
- electrical wiring, switches and meters will be located min. 450mm above finished floor level;
- ground floor levels will be profiled to fall away from the building;
- safe access and egress routes should be maintained;
- Flood Risk Management Plan will be developed.

Refer to Flood Risk Assessment for more details.

3.8.4 Surface Water Run-off

The use of Sustainable Drainage Systems (SUDs) is encouraged through the Wandsworth Local Plan 2023 - 2038 and the London Plan 2021. As outlined in Drainage Strategy Report, green roofs, tree pits and permeable paving will be incorporated in the design to allow for water retention as a part of climate resilience strategy. The proposal will also include a geo-cellular storage to accommodate the required attenuation volumes from site.

Refer to Drainage Strategy Report and Landscape Strategy for more details.

3.8.5 Night-time Light Pollution

Night-time light pollution will be minimised through the appropriate location and selection of external luminaires and light controls during detailed design. Luminaires with suitable photometric optics to minimise light spill will be installed.

All lighting shall comply with planning requirements and the London Plan Policy D9: Tall Buildings for Plot A1 where section 3.9.9 states:

Any external lighting for tall buildings should be minimal, energy efficient and designed to minimise glare, light trespass and sky glow and should not negatively impact on protected views, designated heritage assets and their settings, or amenity of nearby residents.

3.8.6 Noise

The noise can be a critical factor impacting the health and wellbeing of the occupants. Therefore, measures will be taken to ensure that the proposed development will comply with the British Standards and WHO guidelines. An acoustician has been appointed to advise on the best acoustic design. The specification for glazing, ventilation and building façade elements have been considered to meet the internal noise level requirements of good practice guidance given in the BS8233:2014 Guidance on Sound Insulation and Noise Reduction for Buildings.

Refer to Environmental Noise and Vibration Assessment for more details.

3.8.7 Construction

During construction, the main contractor will achieve performance against the Considerate Constructor Scheme and will implement pollution prevention measures associated with air quality and water course pollution. A sustainability champion will be employed to ensure measures are being enforced.

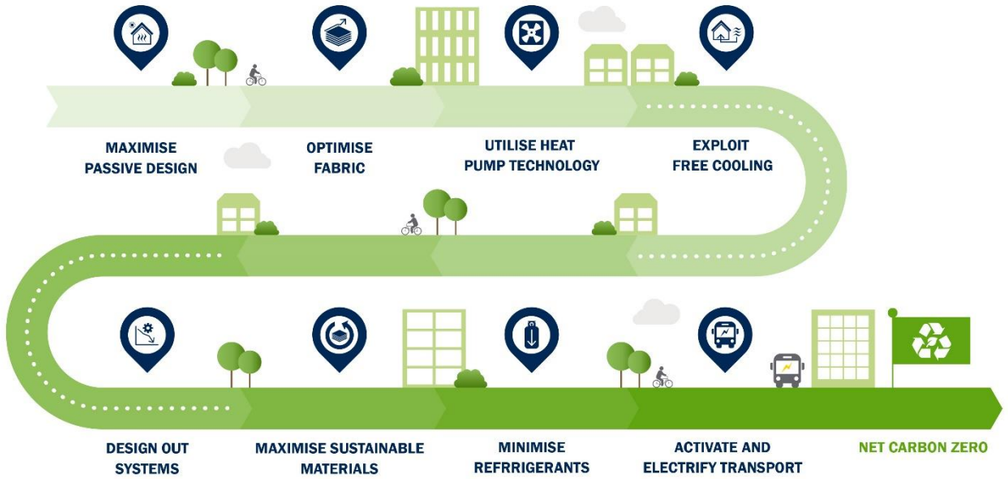


Figure 3.4 Route to Net Zero Carbon

4 BREEAM Pre-assessment

4.1 BREEAM Overview

4.1.1 Introduction

BREEAM is arguably the most recognised environmental benchmarking scheme applied in the UK Construction Sector with over 600,013 buildings certified since its inception in 1990. The scheme can be applied to both refurbishment and new construction developments.

The scheme provides a system to measure the environmental impact of any construction project on a simple single scale of PASS to OUTSTANDING. This simple rating draws together a comprehensive environmental assessment process that considers the following aspects of construction: management; energy; transport; health and well-being; water; materials; land use; the ecological value; and pollution.

Under each sustainability heading, there are a range of specific sustainability criteria where compliance results in credits being awarded. The overall BREEAM certification level is based on the number of credits achieved, where the more credits awarded, the higher the overall BREEAM certification achieved.

4.1.2 Project BREEAM Target

The development is targeting a BREEAM Outstanding rating for the student accommodation and BREEAM Excellent for the shell and core retail units, office and community space. To accomplish an Outstanding rating, an overall BREEAM assessment score of at least 85% must be achieved including minimum standards.

In order to secure an Outstanding rating, Atelier Ten recommend that a margin of at least 5% over the required score is targeted to allow for potential credit loss during the further design and construction stages of the project.

The development will be assessed against the BREEAM UK 2018 New Construction Scheme as:

- a multi-residential, fully fitted, long term stay for student accommodation - targeted score of 90.5%
- shell and core for retail units - targeted score of 86.2%
- shell and core for office spaces - targeted score of 88%
- shell and core for community centre - 88.5%.

4.1.3 BREEAM 2018

BREEAM UK 2018 scheme was launched in March 2018 to supersede the BREEAM 2014 scheme. This scheme aims to further push UK construction sustainability agenda with more onerous criteria and standards. In addition, BREEAM 2018 aims to align with other benchmarking schemes that have emerged focused around healthy buildings, particularly the WELL Building Standard.

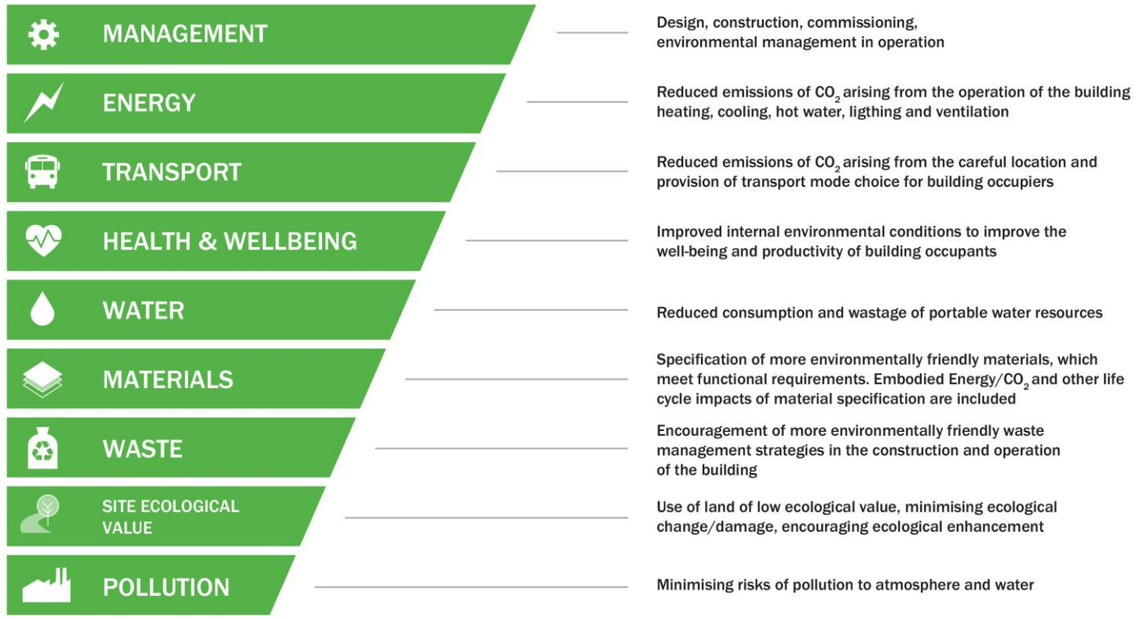
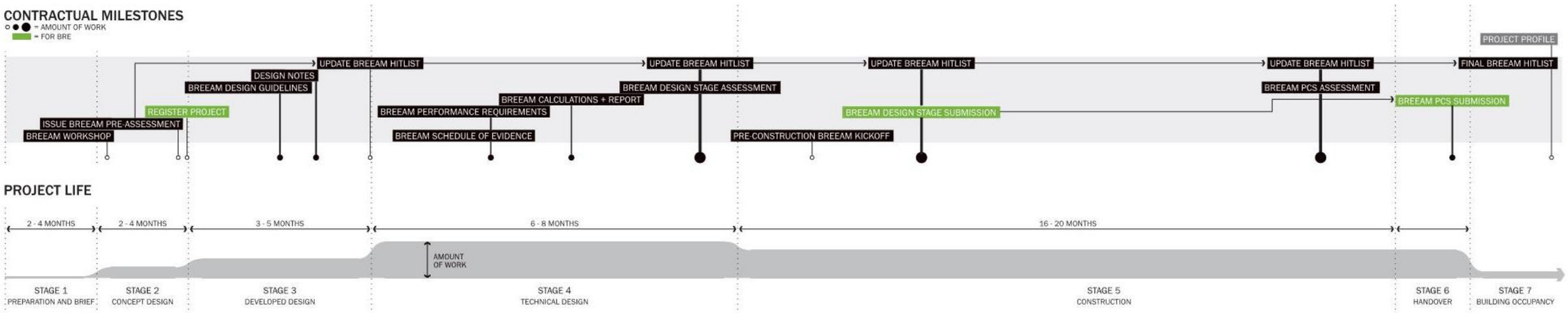


Figure 4.2 BREEAM Overview

Under BREEAM 2018, the assessment and verification process remain the same as with 2014 scheme. Similarly, it is essential that early-stage involvement and buy-in from the design team, contractor and client are achieved. This is of importance since the BREEAM assessment is a continuous process throughout the life cycle of a project with key miles stones and outputs required for credit compliance. The BREEAM timeline below illustrates the BREEAM involvement throughout the RIBA stages.

Figure 4.1 Project Life and Contractual Milestones



4.1.4 BREEAM Minimum Requirements

The BREEAM ratings require a percentage level as well as compliance with certain minimum requirements. Higher ratings require more minimum standards. The minimum requirements to achieve Excellent and Outstanding ratings are listed in Table 4.1.

Table 4.1 BREEAM Minimum Standards

Credit	Summary of Criteria	Excellent	Outstanding
Man 03	1 Responsible Construction management credit for Excellent 2 Responsible Construction management credits for Outstanding	✓	✓
Man 04	1 credit for commissioning test schedule and responsibilities	✓	✓
Man 04	Building User Guides for building user and facilities manager	✓	✓
Man 05	1 credit for commissioning implementation	✓	✓
Ene 01	Building energy performance significantly better than building regulation requirements. 4 credits for Excellent 6 credits for Outstanding	✓	✓
Ene 02	1 credit for submetering.	✓	✓
Wat 01	Water consumption reduction on BRE baseline 1 credit for Excellent 2 credits for Outstanding	✓	✓
Wat 02	Specify a water meter on the mains water supply to each building.	✓	✓
Mat 03	100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy.	✓	✓
Wst 01	1 credit to be achieved for Outstanding.	✗	✓
Wst 03	1 credit for installation of dedicated recyclable waste storage space	✓	✓

4.1.5 Early-stage Actions

Several of the BREEAM Issues include time critical actions that must be completed before credits can be secured. Table 4.2 below summarises the BREEAM credits that have early-stage actions (up to RIBA Stage 2) that must be undertaken in order to secure the BREEAM Outstanding rating. Further information and specific credit criteria can be found within the relevant sections of the BREEAM 2018 Manual.

The following appointments are required:

- Acoustician to assess against Hea 05 & Pol 05
- Cost consultant for Man 02
- Ecologist to assess against LE 02 – LE05
- SABRE security consultant to assess against Hea 06
- Transport Consultant to assess against Tra 01 & Tra 02
- Whole building life cycle consultant to assess against Mat 01.

Table 4.2 Early-stage Credits

Credit	BREEAM Requirement	Responsibility
Man 01	Action: Consultation with relevant stakeholders, organisations and bodies must be undertaken during preparation of the brief (see Man 04 Issue for specific consultation requirements). Consultation plan to be developed with feedback provided back to stakeholders and design influenced as a result of consultation.	Architect
Man 01	Action: The roles, responsibilities and contributions of the client and design team to be confirmed within a responsibility matrix for all RIBA Stages.	All
Man 01	Action: Appoint BREEAM AP	Client/ Developer
Man 02	Action: Elemental Life Cycle Cost analysis has been undertaken together with any design option appraisals in accordance with PD 156865. The LCC plan considers future replacement costs over a period of analysis as required by the client (e.g., 20, 30, 50 or 60 years); and includes service life, maintenance and operation cost estimates.	Quantity Surveyor
Hea 05	Appointment: An acoustician must be appointed to provide early design advice and solutions in order to achieve the credit.	Acoustician
Hea 06	Appointment: ALO to be appointed to review proposals and identify actions/ requirements to achieve Secured by Design.	Architect
Ene 01	Action: Energy design workshop focusing on operational energy performance.	Client/ Design team
Ene 04	Action: Passive design analysis to be completed for building.	MEP
Tra 01	Action: Undertake a site-specific transport assessment and draft travel plan	Transport Consultant
Mat 01	Appointment: An experienced whole building life cycle consultant to be appointed to completed material embodied carbon options appraisal and calculations using a BREEAM approve LCA software (e.g., IMPACT)	Life Cycle Assessment Consultant
Mat 06	Action: At the Preparation and Brief and Concept Design stages, set targets and report on opportunities and methods to optimise the use of materials.	Architect/ Structural/ MEP
Wst 01	Action: 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, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications.	Client/ Developer
Wst 05	Action: Design team to complete an Adaption to Climate Change strategy appraisal on the structural & fabric resilience over the lifetime of the building.	Architect/ Structural & Civil & MEP
Wst 06	Action: Design team to complete a functional adaption strategy that considers measures to be incorporated into building design to allow potential future functional change of the building use.	Architect
LE 02-LE 05	Appointment: Ecologist is appointed to assess the existing ecological value of the site and provide recommendations to enhance the ecology post development. Site wide approach being used.	Ecologist

4.1.6 Potential Credits

Within the full pre-assessments for student accommodation, retail units, office spaces and the community centre, included as Appendices A,B,C and D, potential credits have been identified for possible inclusion in the assessment. These credits are either tentative until further investigated or can involve additional fee's which may not yet have been considered and accounted for in the cost plan.

A margin of 5% is recommended to mitigate against any credits lost throughout the design process.

5 Home Quality Mark Pre-assessment

5.1 Home Quality Mark ONE Overview

HQM ONE is a certification scheme developed by the Building Research Establishment to allow developers to demonstrate how the homes they have built are high quality, low maintenance and able to provide a comfortable environment in the changing climate. The scheme was formally launched in 2018 to replace the Code for Sustainable Homes and Ecohomes assessments.

5.1.1 Assessment Areas

The assessment is divided into 3 main areas 'My surroundings', 'My Home' and 'Delivery', Figure below shows what aspects are included in each. Requirements achieve a varied number of credits.

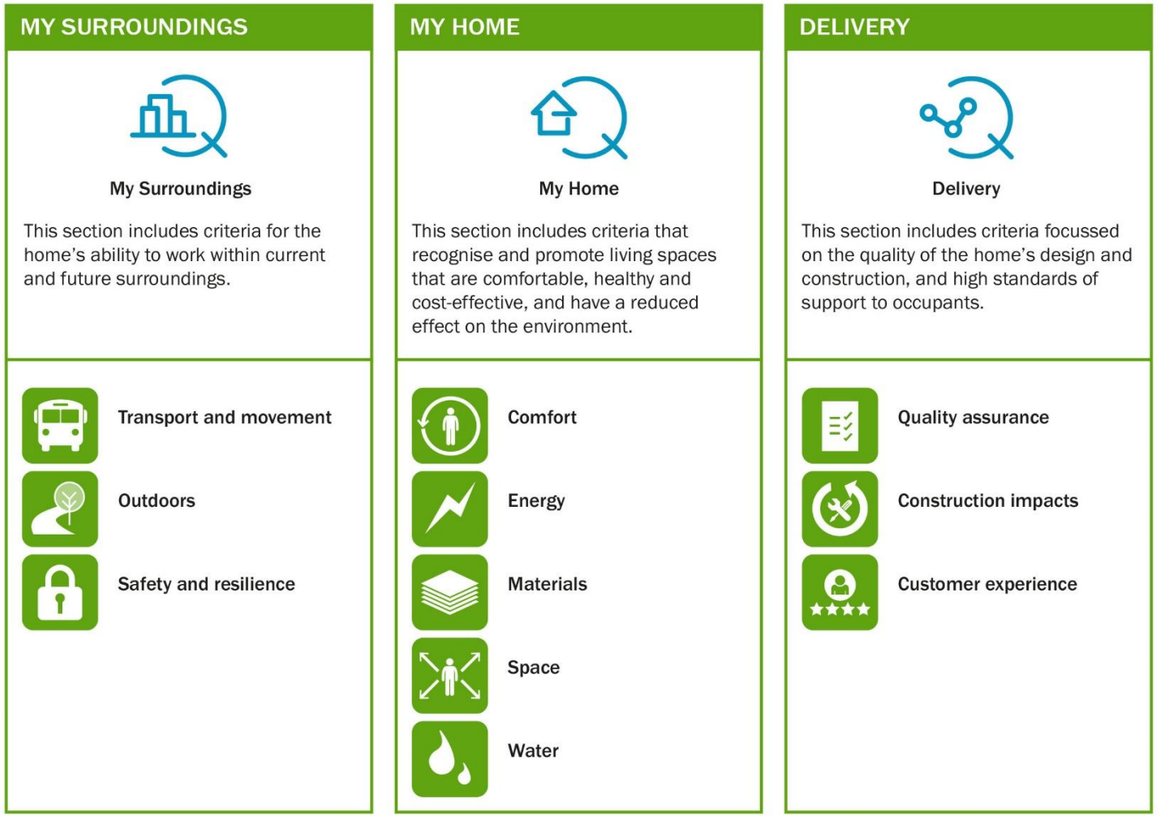


Figure 5.1 HQM ONE Assessment Areas

5.1.2 Scoring

The assessment has a star rating system, this was chosen as it is more easily relatable for the consumer. There are 500 credits in total and the number of stars is related to the number of credits achieved. Table 5.1 outlines the requirements for each star.

Table 5.1 HQM ONE Star Scoring

	1 STAR	1.5 STAR	2 STAR	2.5 STAR	3 STAR	3.5 STAR	4 STAR	4.5 STAR	5 STAR
Minimum total credits	Minimum Requirements only	90	100	120	150	190	240	300	400
Percentage		18%	20%	24%	30%	38%	48%	60%	80%

The scheme not only has the star rating but also demonstrates how the home scores through 3 'Indicators of performance' those being costs, well-being and environmental footprint. Figure 5.2 details briefly what each indicator includes. Each criterion in the manual was scored on the likelihood of it impacting the householders living costs, health and environmental footprint. The scores for each indicator of performance are calculated based on the criterion achieved and range from 1 to 5. The star rating and indicators of performance will be displayed on the final certificate.

Figure 5.2 HQM ONE Scoring

5.1.3 Project HQM ONE Target

The development is currently targeting a score which achieves a 4 star rating. To accomplish this rating, an overall assessment score of at least 48% must be achieved, a minimum 240 credits.

In order to secure a 4 star rating, Atelier Ten recommend that a score of at least 53% is targeted to allow for potential credit loss during the further design and construction stages of the project.

The pre-assessment is predicting a score of 251 credits which is 50.2%, several credits have been highlighted as potential, with predicted score of 302 credits, being 60.4%. These can be reviewed in Appendix B, which contains the full pre-assessment.

5.1.4 Early-stage Actions

Several of the HQM ONE criteria include time critical actions that must be completed before credits can be secured. Table 5.2 below summarises the credits that have early-stage actions (up to RIBA Stage 2) that must be undertaken in order to secure the credit and achieve the targeted rating. Further information and specific credit criteria can be found within the relevant sections of the HQM ONE Manual.

Table 5.3 below outlines some potential credits which would require early action.

The following appointments are required for the credit currently targeted:
- Acoustician for section 4.4
- Ecologist for section 2
- Flood consultant for section 3.1.

Table 5.2 Early-stage Actions

Criteria Title	Requirement	Responsibility
2.1 Identifying Ecological Risks and Opportunities	A suitably qualified ecologist is appointed sufficiently early in the project stage to ensure involvement with site configuration and, where necessary, influence over strategic planning decisions	Developer
4.2 Daylight	Daylight analysis completed to demonstrate minimum average daylight factor achieved for all living rooms, dining rooms and studies.	Daylight consultant
6.1 Responsible sourcing	By the end of RIBA stage 2, the client or developer must have a document policy and procedure that sets out procurement requirements relating to responsible sourcing of construction materials, and encourages specification of products with responsible sourcing certification. The policy must be disseminated to all relevant personnel and included within the construction contract.	Client/ Developer
6.2 Environmental Impact of materials	By the end of RIBA stage 2, the client or developer must have a document policy and procedure that sets out procurement requirements relating to sourcing of construction products with lower environmental impact, and encourages specification of products with Environmental Product Declaration (EPD). The policy must be disseminated to all relevant personnel and included within the construction contract.	Client/ Developer
9.1 Project Preparation	Where it is demonstrated that lessons learnt from previous projects have been incorporated into the assessed home following the process set out in the Methodology. During design brief (typically RIBA stage 1 or equivalent) an outline delivery plan has been developed which is kept up to date as the project progresses.	Client/ Developer
10.4 Site Waste Management	By the end of RIBA stage 2 the client or developer must have a documented policy that sets out procurement requirements for all suppliers and trades to adhere to relating to opportunities for minimising construction waste on-site. The policy must be disseminated to relevant personnel and included within the construction contract. The policy must encourage specification of products which can help to minimise waste arisings.	Client/ Developer
10.4 Site Waste Management	Complete a pre-demolition audit of any existing buildings, structures or hard surfaces to be demolished, if feasible.	Client/ Developer

Table 5.3 Potential early-stage credits

Criteria Title	Requirement	Responsibility
7.2 Access and Space	An Accredited Access Consultant is appointed prior to early design stages (typically RIBA Stage 2 or equivalent). The Accredited Access Consultant advises on Nationally recognised design guidance relating to accessible and inclusive design (that meet every day needs and long term demands) with regard to the Internal functional space and External space aspects of the home.	Architect
6.3 Life Cycle Costing	At the end of RIBA Stage 2, a life cycle cost (LCC) analysis must be produced by a suitably qualified cost consultant. A homeowner's report based on the LCC analysis must be available to potential homeowners prior to commitment to purchase	Client/ Developer
3.3 Security	A suitably qualified security specialist must conduct an evidence-based security needs assessment during or prior to Concept Design.	Developer/ Architect

6 Conclusions

This Sustainability Statement has been prepared to support the detailed planning application for the Battersea Park Road development. To deliver this high standard design and address the wider sustainability issues, strategies associated with health and wellbeing, energy, transport, water, materials, waste and pollution have been outlined in this report.

The BREEAM pre-assessments have been completed for the student accommodation, the retail units, the office and community spaces. They have demonstrated that a BREEAM Outstanding rating is achievable, with minimum 85% required for Outstanding:

- 90.5% for student accommodation
- 86.2% for retail units
- 88% for office spaces
- 88.5% for community space.

For the residential units, Home Quality Mark One Pre-Assessment has been completed. It has demonstrated that a HQM ONE 4-star rating is achievable with an overall targeted score of 50% (48% required for 4 stars).

This Sustainability Statement concludes that the Battersea Park Road development complies with the policy requirements of Wandsworth Local Plan 2023 - 2038 and the London Plan 2021, with the target of a minimum 35% on-site carbon reduction over Part L 2021 exceeded (46% achieved sitewide). Furthermore, the development will provide enjoyable, productive and healthy environment for occupants.

Appendices

Appendix A BREEAM Pre-assessment - Student Accommodation

BREEAM New Construction 2018 Pre-assessment
Multi Residential.Fully Fitted. Long Term stay assessment

6892 Battersea Park Road

Pass 30% Good 45% Very Good 55% Excellent 70% Outstanding 85%

Credit Information				Target Rating	OUTSTANDING	90.5%					
				Score Achieved to Date	Unclassified	6.55%					
Credits Available	Credits Targeted	Potential Credit	Credits Achieved to Date	Credit Issue	Title	Mandatory Credits	Summary of criteria	Schedule of Evidence	Stage required	Comments	Responsible
For full details of credit compliance requirements, refer to the BREEAM 2018 Scheme Document (manual), which takes precedence to this document											
21	21	0	0	Management							
4	4	0	0	**Man 01: Project Brief and Design**	Project Delivery Planning	N/A	**1 credit - Project Delivery Planning -** Prior to completion of the Concept Design, the project delivery stakeholders meet to identify and define each key phase of project delivery.	Evidence confirming stakeholders, roles and responsibilities. Roles and responsibilities matrix PEP Letters Meeting Minutes/ Agendas PAC report Pre-planning report Consultation Plan Demonstration of feedback to stakeholders (e.g. quarterly meetings and monthly newsletter) Employer's Requirements Stage 2 Report	**Stage 2**	Criteria partially covered within RIBA Stage of Work reports	GHA
					Stakeholder Consultation		**1 credit - Stakeholder Consultation -** Prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content.		**Stage 2** Stage 4	Consultation plan is very beneficial but PAC report can cover what is needed.	WJ
					BREEAM Advisory Professional (AP)		**Prerequisite for BREEAM AP credits -** The project team, including the client, formally agree strategic performance targets early in the design process (with the support of the BREEAM AP where appointed).	AP appointment letter or contract Document to confirm BREEAM target rating	**Stage 2**	Appointment letter required. Additional fee	WJ
							1 credit - BREEAM AP (Concept Design) - Involve an AP in the project at the appropriate time and level.	AP reports	**Stage 2**		BREEAM AP
							1 credit - BREEAM AP (Developed Design) - Involve an AP in the project at the appropriate time and level.		Stage 4		
4	4	0	0	**Man 02: Life Cycle Cost and Service Life Planning**	Elemental Life Cycle Cost (LCC)	N/A	**2 credits - Elemental Life Cycle Cost -** <u>At RIBA Stage 2</u> - An elemental life cycle cost (LCC) analysis	Elemental LCC plan. Design documents to demonstrate, 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.	**Stage 2**	Additional fee	ADW
					Component Level Life Options Appraisal		**1 credit - Component Life Cycle Cost -** <u>At RIBA Stage 4</u> - a component level LCC analysis. The results of the analysis and consideration of LCC have been implemented.	*Component level LCC options appraisal plan. * Component level LCC options appraisal - Component level LCC options appraisal for service life planning requires the environment of the building and other local conditions to be identified and the fundamental requirements to be met in planning the service life of the building. Decisions should be made on: – the likely design life of the building (rather than the contractual design life) – minimum functional performance criteria for each component over the building's design life – components that must be repairable, maintainable or replaceable within the design life of the building. Only the key differentiators between components and systems need to be comparatively modelled. * Design drawings, specifications or any design documents to demonstrate how the component level LCC options appraisal was used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. I.e. the design should choose the recommended outcome of the LCC options appraisal or outline why the LCC choice was not incorporated into the design.	Stage 4	Additional fee	ADW

			Capital Cost Reporting		**1 credit - Capital Cost Reporting -** Report the capital cost for the building in pounds per m2	Email or letter or report stating the Predicted capital cost at end of technical design. A revised figure can be submitted at post construction.	Stage 4		QS/ WJ

6	6	0	0	**Man 03: Responsible Construction Practices**	Prerequisite - Legally Harvested and Traded Timber	1 credit = Very Good 1 credit = Excellent 1 credit = Outstanding	**Prerequisite:** All timber to be 'legally harvested and traded timber'	Letter confirming that all timber will be legally harvested and traded timber. Letter confirming the targeted CCS score and construction site impact targets. EMS Certificate. Employer's Requirements.	Stage 4	BREEAM requirements to be included within Employer Requirements Plus innovation credit for CCS	Contractors reqs
					Environmental Management		**1 credit - Environmental Management**: The principal contractor operates an EMS and practices pollution prevention policies and procedures on-site				
					BREEAM Advisory Professional (AP) (site)		**1 credit - BREEAM AP (site)** - Involve a BREEAM AP in the project at an appropriate time and level.				
					Responsible Construction Management		**1 credit - Responsible Construction Management:** Appoint a sustainability champion during construction				
					Monitoring of Construction Site Impacts		**1 credit:** a CCS score between 25 and 34 **2 credits:** a CCS score between 35 and 39				
							Monitor, record, report & target: **1 credit:** Energy and water consumption **1 credit:** Transport (construction materials & waste)				
4	4	0	0	**Man 04: Commissioning and Handover**	Commissioning - testing schedule and responsibilities	Criterion 11 = Very Good, Excellent and Outstanding	**1 credit - Commissioning - testing schedule and responsibilities:** Commissioning programme, roles and responsibilities	Commissioning Programme, Employer's Requirements confirming all criteria Specification	Stage 4	BREEAM requirements to be included within Employer Requirements	Contractors reqs
					Commissioning - design and preparation		**1 credit - Commissioning - design and preparation:** Commissioning manager appointed during design stage to undertake design reviews, provide commissioning management and performance testing input				
					Testing and inspecting building fabric		**1 credit - Testing and inspecting building fabric:** Thermographic survey and/or airtightness test and inspection				
					Handover		**1 credit - Handover:** Building User Guide and building occupiers/premises managers training schedule	Employer's Requirements confirming all criteria	Stage 4		
3	3	0		**Man 05:Aftercare**	Aftercare support - 1 credit	1 credit (crit 3) = Excellent 1 credit (Crit 3) = Outstanding	Provide aftercare support to the building occupiers through having in place operational infrastructure and resources. 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	Contract detailing requirement to provide specific BREEAM aftercare support to the building occupiers through having in place operational infrastructure and resources. Contract with commitment to have 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. Must outline specific BREEAM requirements.	Stage 4	Possible additional fee	Contractors reqs
					Commissioning- implementation -1 credit		Complete commissioning activities over a minimum 12-month period, once the building becomes substantially occupied	Contract with commitment to complete required commissioning activities over a minimum 12-month period.	Stage 4	Possible additional fee	Contractors reqs
					Post-occupancy Evaluation -1 credit		The client or building occupier commits to carry out a POE exercise one year after the building is substantially occupied. An independent party carries out the POE. The client or building occupier commits funds to pay for the POE in advance.	Letter where client or building occupier commits to carry out a POE exercise one year after the building is substantially occupied. The client or building occupier commits funds to pay for the POE in advance. This requires an independent party to be appointed to carry out the POE as described in criterion 5. Evidence of the appointment of the independent party and schedule of responsibilities which fulfils the BREEAM criteria are acceptable to demonstrate compliance.	Stage 4	POE to be committed to and funds confirmed Additional fee	WJ
Man section sub totals				11%							

19	17	2	0	**Health & Well Being**							
5	4	1	0	**Hea 01: Visual Comfort**	Control of glare from sunlight	N/A	**1 credit:** Glare control strategy	Glare Control Strategy Drawings and specification demonstrating the proposed glare control strategy.	Stage 4		GHA
					Daylighting		**2 credit :** Achieve specified average DF requirement Multi residential is 2% over 80% of area in Kitchen, living rooms, studies and non-residential or communal occupied space	Daylighting report outlining all required criteria Documents/ calculations demonstrating Room depth criteria	**Stage 2**	**1 credit targeted.** **At risk until daylight analysis completed.**	A10 GHA
					View out		**1 credit:** Achieve view out requirements Relevant building areas within 8m of an external window which is >20% of the surrounding wall area. Relevant areas are work stations	Drawings demonstrating workstations and applicable areas and provision of windows Window to wall ratio calculations	Stage 4	Permanent workstations should comply.	GHA
					Internal and External Lighting		**1 credit:** Internal and external lighting design & zoning (SLL CL 2012, LG7, BS5489-1:2013+ BS EN 12464-2:2014)	Design drawings Specification Lighting Schedule	Stage 4	Electrical Spec to include lighting compliance	A10

4	3	1		**Hea 02: Indoor Air Quality**	Indoor air quality	N/A	**Pre-requisite:** Produce an Indoor Air Quality Plan	Indoor air quality plan in line with BRE guidance note 06	Stage 4		Watkin Jones
					Ventilation - 1 credit		**1 credit:** The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building Ventilation rates in accordance with BS ISO 17772-1:2017	Mechanical Specification Design drawings	Stage 4	Not targeted as expected not achievable due to space requirements but is POTENTIAL.	
					Emissions from construction products - 2 credits		**Up to 2 credits:** Three out of the five product types meet the emission limits, testing requirements and any additional requirements listed in Table 5.11 OR All of the product types listed meet the emission limits, testing requirements and any additional requirements listed in Table 5.11	Specification extracts detailing the testing standard to which the applicable materials must adhere to. (At post construction the manufacturers literature will be required to confirm compliance. If at design stage the specific product is known the manufacturers literature can be used.)	Stage 4		GHA
					Post construction indoor air quality measurement - 1 credit		**1 credit:** testing of formaldehyde concentration and TVOC concentrations and remediation where necessary.	Contract with commitment to complete required testing and remediation.	Stage 4	Additional fee	Contractors requirements
3	3	0		**Hea 04: Thermal Comfort**	Thermal Modelling	N/A	**1 credit:** Thermal modelling as per CIBSE AM11, compliance with "time out of range" (TOR) metric requirements and overheating limits	Thermal Modelling Report Design drawings Specification	Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems	A10
					Design for future thermal comfort		**1 credit:** Thermal comfort criteria for the projected climate change environment		Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems under a climate change condition	
					Thermal Zoning and Control - 1 credit		**1 credit:** above criteria is met and the proposed heating/cooling strategy to address certain criteria regarding fit for purpose, controls and interoperability between systems		Stage 4		
4	4	0		**Hea 05: Acoustic Performance**	Sound Insulation - 2 credits	N/A	**2 credits**: The building to meet appropriate standards and testing requirements for sound insulation	Acousticians appointment to carry out pre-completion testing. Acoustician's Report	Stage 3/4	Acoustician to be appointed to determine requirements for BREEAM. Architect to confirm that any requirements from the acoustician for the acoustics to be compliant will be followed.	PDA/ GHA
					Indoor Ambient Noise Level - 1 credit		**1 credit:** The building to meet appropriate standards and testing requirements for indoor ambient sound levels				
					Room Acoustics - 1 credit		**1 credit:** The building to meet appropriate standards and testing requirements for reverberation times				
1	1	0		**Hea 06: Security**	Security of Site and Building	N/A	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 purpose of the SNA will be to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development .	Meeting minutes or email correspondence to demonstrate Security Needs Assessment was completed by Suitably Qualified Security Specialist at appropriate time. SQSS report outlining recommendations Design drawings and specification demonstrating incorporation of the recommendations into the design. If a recommendation is not taken on board evidence can be provided to justify this.	**Stage 2** Stage 4	SABRE qualified consultant required for innovation credit. AWD appointed.	WJ/ GHA/ ADW
							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 shall be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.				
2	2	0		**Hea 07: Safe and Healthy Surroundings**	Safe Access	N/A	**1 credit:** Ensure safe access to and safe movement around the site and facilitate the activities that can have physical, mental and social benefits for occupants aiding staff retention.	Drawings demonstrating safe access for pedestrians and cyclists to the building from vehicles	Stage 4		GHA/ EXT
					Outside Space		**1 credit:** Add to the desirability of the building helping to increase its value and appeal to occupants and neighbours.	Drawings	Stage 4		
Hea section sub totals					12.5%						

23	21	2	0	Energy							
13	11	2		**Ene 01: Reduction of Energy Use and Carbon Emissions**	Energy Performance	4 credits = Excellent 6 credits = Outstanding	**Up to 9 credits:** Calculate an Energy Performance Ratio for New Constructions (EPR_{NC}) using BREEAM's Ene 01 calculator starting at: **1 credit:** EPR_{NC} = 0.1 **4 credits:** EPR_{NC} = 0.4 = Excellent: **6 credits:** EPR_{NC} = 0.6 = Outstanding: **9 credits:** EPR_{NC} = 0.90 AND zero net regulated CO_2 emissions	A copy of the Building Regulations Output Document from the approved software.	Stage 4	At risk until energy analysis completed. London Plan Energy Requirements assist.	A10
					Prediction of operational energy consumption		**Pre-requisite:** Prior to completion of the Concept Design, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance.	Workshop minutes, agreed outcomes.	**Stage 2**	Additional fee	
							4 credits: Undertake additional energy modelling and risk assessment during the design and post-construction stage to generate predicted operational energy consumption figures and risks that should be monitored.	Operational energy model in accordance with CIBSE TM54 Predicted energy consumption values, design assumptions, input data and risk assessments reported as detailed in the Energy Prediction and Post-occupancy guidance available from the BREEAM website. Confirmation of suitably qualified energy modeller's qualifications and experience.	Stage 4	A meeting needs to be held with the client on operational energy and notes taken.	A10/ Energy consultant
2	2	0		**Ene 02: Energy Monitoring**	Sub-metering of end-use categories	1 credit= Very Good, Excellent and Outstanding	**1 credit:** Energy metering systems for 90% of the estimated annual energy consumption of each fuel End-use categories include: 1. Space heating 2. Domestic hot water heating 3. Humidification* 4. Cooling* 5. Ventilation, i.e. fans (major)* 6. Pumps 7. Lighting 8. Small power 9. Renewable or low carbon systems (separately) 10. Controls 11. Other major energy consuming systems or plant	Calculation to demonstrate 90% of the estimated annual energy consumption Specification Metering schematic Metering schedule Specification confirming the proposed BMS.	Stage 4	Second credit awarded by default for multi residential assessments.	A10
1	1	0		**Ene 03: External Lighting**	External lighting	N/A	**1 credit:** Energy-efficient external lighting with not less than 60 luminaire lumens per circuit watt is specified and all light fittings are controlled for the presence of daylight, and occupancy in areas of intermittent pedestrian traffic.	Drawings demonstrating the external lighting controls Specification detailing the external lighting luminous efficacy.	Stage 4	Anticipated that external lighting will comply	A10
3	3	0		**Ene 04: Low Carbon Design**	Passive Design	N/A	**1 credit:** Implement passive design measures	Passive design analysis Results from a dynamic simulation model demonstrating the reduced energy demand and CO_2-eq emissions from the specified passive design measures. Specification detailing the passive design measures.	**Stage 2**	Passive design analysis to be undertaken	A10
							1 credit: Implement free cooling analysis	Results from a dynamic simulation model and other used methods demonstrating that the free cooling strategy can meet the building's cooling demand.	**Stage 2**	Include in analysis	
					Low or Zero Carbon technologies		**1 credit:** LZC Feasibility study by end of Concept Design	Drawings demonstrating the location of the LZCs. LZC Study. Results from a dynamic simulation model demonstrating reductions in CO_2-eq emissions from the specified low and zero carbon technology.	**Stage 2**	Results of LZC study must be implemented.	
2	2	0		**Ene 06: Energy Efficient Transportation Systems**	Energy Consumption	N/A	**1 credit**: Analysis of transport demand, usage and lifts, escalators, etc.	Lift Traffic Analysis Lift specification	Stage 4	Lift traffic and energy analysis to be completed.	A10
					Energy Efficient Features		**1 credit:** Specify three energy efficient features for each lift	Specification Design drawings	Stage 4	Energy efficient features to be included	
2	2	0		**Ene 08: Energy Efficient Equipment (2 credits)**	Energy Efficient Equipment	N/A	**2 credits**: ensure that a significant majority of contributors to unregulated energy meet BREEAM criteria The following contributors assumed included in design -Laundry facilities with commercial-sized appliances ~~-Data centres~~ -Domestic-scale appliances (individual and communal facilities) ~~-Kitchen and catering facilities (commercial scale)~~	Letter confirming the significant contributors to unregulated energy (swimming pool, kitchen etc). Calculation demonstrating the above. Evidence to demonstrate how the applicable uses will comply with relevant requirements.	Stage 4	Can be difficult	WJ/ GHA/ A10
Ene section sub totals				15%							

12	**7**	**5**	**0**	**Transport**							
2	**2**	**0**		**Tra 01:Transport Assessment and Travel Plan**	Travel Plan	N/A	**2 credits**: During the feasibility stages, develop a travel plan based on a site-specific travel assessment or statement.	Site specific Transport assessment Travel Plan Meeting minutes, emails or letter to demonstrate occupiers involvement in the travel plan and support of the travel plan.	**Stage 2**	Travel Plan received, require Transport Statement.	Vectos WJ
10	**5**	**5**		**Tra 02: Sustainable Transport Measures (10 credits)**	Sustainable Transport Measures	N/A	**10 credits:** Identify sustainable transport measures and award credits according to the Accessible Index AI of the project, and the total number of points achieved for the options implemented.	Evidence required dependant on criteria being targeted Cycle storage and facilities - Design plans and specification Amenities - plan with locations and distances Public transport information display Public Transport - correspondence ~~Parking - design drawing~~ ~~Car sharing - Building user policy~~ Tra 01 calculator Public Transport service timetables and node locations.	Stage 4	AI predicted to be 13.24 Anticipated that 5 credits can be achieved Credits targeted for - Public transport availability - cycle storage - Public transport information display - existing amenities -cyclist facilities provided for staff.	GHA Vectos Assessor
Tra section sub totals				6%							
9	**7**	**2**	**0**	**Water**							
5	**3**	**2**		**Wat 01: Water Consumption (5 credits + 1 Exemplary)**	Water consumption	1 credit = Good 1 credit = Excellent 2 credits = Outstanding	**Up to 5 credits:** Improvement over baseline case: **1 credit:** 12.5% **2 credits**: 25% **3 credits:** 40% **4 credits:** 50% **5 credits**: 55%	Specification detailing the sanitary wear and flow rates, flush volumes etc for as a minimum: – WCs – Wash-hand basin taps – Showers – Urinals – Kitchen taps: kitchenette - Kitchen tap pre-rinse nozzle - bath If dishwashers and washing machines are to be included information will also be required. See Table 8.3 in manual for guidance. Drawings demonstrating the location of the sanitary ware. Wat 01 Calculator. Confirmation regarding number of sanitary ware.	Stage 4	**3 credits targeted.** Wat 01 calculator to be populated. If the below is followed this would be in line to achieve 3 credits. WC - Flush volume 3.75L WHB taps - 5l/min Showers - 6L/min Baths - 140 litres Urinal - 2l/bowl/hour Kitchenette tap - 6l/min Kitchen taps - pre-rinse nozzle - 7.3l/min Domestic sized dishwashers - 12 l/cycles Domestic sized washing machines - 40 litres/use Commercial sized dishwashers - 5l/rack Commercial sized washing machines - 7.5l/kg	A10/ GHA
1	**1**	**0**		**Wat 02: Water Monitoring (1 credit)**	Water meter	Criterion 1	**1 credit:** Specifying a water meter, with pulsed output, on the mains water supply to each building (including borehole or other source). Water-consuming plant or building areas, (with 10% or more of the total water demand) fitted with sub meters or water monitoring equipment.	Drawings demonstrating the location of the water meters and sub meters. Specification confirming water meters have pulsed output and are connected to BMS.	Stage 4	Pulsed water meter linked to BMS to be installed	A10
2	**2**	**0**		**Wat 03: Water Leak Detection**	Leak Detection Systems	N/A	**1 credit:** A compliant leak detection system is specified or installed on the building's water supply.	Specification detailing the water leak detection system.	Stage 4	Additional cost	A10
					Flow Control Devices		**1 credit:** Flow control devices are fitted to each WC area/facility according to demand.	Drawings demonstrating the location of flow control devices.		Solenoid valves linked to PIR sensors to be installed on cold water services	
1	**1**	**0**		**Wat 04: Water Efficient Equipment (1 credit)**	Water efficient equipment	N/A	**1 credit**: Identify all unregulated water demands and mitigate/reduce the demand through good practice design or specification. -irrigation	Plans or specification Confirmation of strategy	Stage 4	Assumed some planting and irrigation will possibly be from precipitation.	EXT
Wat section sub totals				5.4%							

13	**13**	**0**	**4**	**Materials**							
6	**6**	**0**	**4**	**Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)**	Life cycle impacts	N/A	**Up to 6 credits:** Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology. Submit the Mat 01/02 Results Submission Tool to BRE at the end of concept design and Technical Design. **Option appraisal during Concept Design.** Carry out building LCA options appraisal of **2 to 4** significantly different superstructure design options. Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. **Options appraisal during Technical Design** Carry out building LCA options appraisal of **2 to 3** significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage). **One credit – Substructure and hard landscaping options appraisal during Concept Design** Carry out building LCA options appraisal of a combined total of at least **six** significantly different substructure or hard landscaping design options	Mat 01/02 Results Submission Tool The options appraisal summary document Evidence that the LCA options appraisal summary document has been received by the design team and client (meeting minutes, letter of acknowledgement) Evidence of how the LCA design options have informed the design decision-making process (e.g. meeting minutes, documented design development showing how the LCA options have affected the design) The LCA options appraisal summary document includes substructure and hard landscaping according to the criteria.	**Stage 2**/ 4	Credits require use of an IMPACT compliant tool. Design team to agree if they are happy to use this. 6 credits are based on superstructure appraisal. 1 credit based on Substructure and hard landscaping appraisal. ADW completed. Revsion will be required for stage 4.	GHA/ Apex/ WJ/ ADW
1	**1**	**0**		**Mat 02: Environmental Impacts from Construction Products - Environmental Product Declarations (EPD)**	Specification of products a with a recognised environmental product declaration (EPD)	N/A	**1 credit:** Specify construction products with EPD that achieve a total EPD points score of at least 20.	Environmental Product Declarations (EPD's) for construction products specified in the design. Specification to detail products in the design to have EPDs Roughly 15-20 products needed to achieve credit.	Stage 4	Major construction materials (i.e. concrete, glass, gypsum, metal, stone and aggregates) to hold a EPD	GHA/ Apex/ EXT
4	**4**	**0**		**Mat 03 (Responsible Sourcing of construction products**	Pre-requisite	Criterion 1 only	**Pre-requisite:** Confirmation that all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy.	Specification extract detailing 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy.	Stage 4	Can be in specification or contractors requirements	GHA/ WJ
					Enabling Sustainable Procurement		**1 credit:** The principal contractor sources materials in accordance with a documented sustainable procurement plan.	Sustainable procurement plan	**Stage 2**	1 credit targeted for sustainable procurement policy Plan to be provided by developer or design team	WJ/ GHA
					Measuring responsible sourcing		**Up to 3 credits:** Based on the achieved Responsible Sourcing of Materials (RSM) points: **1 credit:** RSM point = 10% **2 credits:** RSM point = 20% **3 credits:** RSM point = 30%	Specification extracts for materials in the superstructure, internal finishes, substructure and hardscaping. Specification must detail environmental management system certification level. Or specific product specified and the affiliated certificate is also provided. If route 2 being followed quantity of material in m3 or Kg to be provided. Two routes for compliance can be followed: Route 1 does not require quantities to be entered. Consequently it is less accurate and may result in a lower credit score than Route 2. It may be the case that across an assessment there will be a combination of routes for products. For example, Route 1 may be used for the 'timber or timber-based' category and Route 2 for the 'metal' category. Only one route may be used per materials category. Completed copy of the Mat 03 Calculator tool	Stage 4	3 credits targeted for responsible sourcing. Major construction materials (i.e. concrete, glass, gypsum, metal, stone and aggregates) to hold BES 6001 certification 30% of available points to be achieved for 3 credit.	GHA/ Apex/ EXT/ Assessor to complete calculator.
1	**1**	**0**		**Mat 05: Designing for Durability and Resilience**	Designing for durability and resilience	N/A	**1 credit:** Protect vulnerable parts of the building from damage and exposed parts of the building from material degradation	Specification extracts and design drawings detailing protection measures 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. Specification extracts and design drawings detailing how key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. Manual outlines applicable standards which should be adhered to. Design documents to demonstrate access to the roof and façade for cost-effective cleaning, replacement and repair. Design documents to demonstrate how the roof and façade have been designed to prevent water damage, ingress and detrimental ponding.	Stage 4	Risk assessment into material degradation to be completed by architect, MEP and structural engineer	GHA Apex
1	**1**	**0**		**Mat 06: Material Efficiency**	Material efficiency	N/A	**1 credit:** Identify and implement measures at each RIBA stage to optimise the use of materials in building design, procurement, construction, maintenance and end of life.	Technical note and calculations confirming estimated construction waste at each RIBA Stage of project	Every stage starting Stage 2		GHA Apex
				Mat section sub totals	15.0%						
10	**9**	**1**	**1**	**Waste**							

5	5	0		**Wst 01: Construction Waste Management**	Pre-demolition audit	1 credit = Outstanding	**1 credit:** Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.	Pre-demolition audit.	Stage 2		Contractors reqs
					Construction resource efficiency		**Up to 3 credits**: RMP + pre-demolition audit + the amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated: **1 credit:** 13.3 / 11.1 **2 credits:** 7.5 / 6.5 **3 credits:** 3.4 / 3.2	Resource Management Plan or letter of commitment	Stage 4	Pre-demolition audit of existing building and hardstanding to be undertaken prior to demolition. Requirements to be to be included within the employer requirements 3.4m3/100m2 targeted for 3 credits	
					Diversion of resources from landfill		**1 credit:** Divert from landfill (volume or tonnage) Demolition = 80%/90% Non-demolition = 70%/ 80%		Stage 4	Demolition to be diverted from landfill 80%	
1	0	1		**Wst 02: Use of Recycled and Sustainably Sourced Aggregates (1 credit + 1 Exemplary)**	Recycled aggregates	N/A	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. Identify all aggregate uses and types on the project see Table 10.5 and Table 10.6. Determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located. Calculate the distance in kilometres travelled by all aggregates by transport type. Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points.	Pre-demolition audit. Completed Wst 02 calculator Documents to support calculator inputs		Anticipated difficult to achieve. Engineer to advise.	Apex
1	1	0	1	**Wst 03: Operational Waste**	Operational waste	1 credit = Excellent 1 credit = Outstanding	Design drawings and/or specification extracts to confirm the following - size of the general waste storage area - size of recyclable waste storage area - the waste labels for these areas - Location of waste store with distance and safe route for building occupants - How waste store is accessed by waste collectors - location for storing organic waste - provision of water outlet for cleaning organic waste bin Correspondence to demonstrate stores are an appropriate size for the expected amount of waste. Or demonstration in line with BREEAM guidance. Provide internal storage for recyclable waste in residential units.	Drawing demonstrating the location of the waste storage area. Specification confirming that the waste storage area will be clearly labelled, appropriately sized and accessible to building occupants.	Stage 4	Operational Waste Management Stratgey received from Equilibria.	GHA
1	1	0		**Wst 05:Adaption to Climate Change**	Resilience of structure, fabric, building services and renewables installation	N/A	**1 credit:** Climate change adaptation strategy appraisal for building services, renewables, structural and fabric resiliency at RIBA Stage 2.	Climate Change Adaption Strategy	Stage 2	Climate change risk strategy to be developed by design team and mitigation measures implemented Exemplary credit targeted	GHA Apex A10
2	2	0		**Wst 06:Design for Disassembly and Adaptability**	Design for disassembly and functional adaptability - recommendations	N/A	**1 credit:** Conduct a study to explore the ease of disassembly and the functional adaption potential of different design scenarios by the end of Concept Design.	Functional Adaption Strategy Disassembly and functional adaptability study, Study should contain recommendations that aim to enable and facilitate disassembly and functional adaptation. Updated Disassembly and functional adaptability study reflecting technical design, Implementation plan report Building adaptability and disassembly guide.	Stage 2		
					Disassembly and functional adaptability - implementation		**1 credit:** Provide an update during Technical Design on how the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective and information on any changes to the recommendations and solution during the development of the Technical Design. Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.		Stage 4	Technical note confirming measures for ease to adapt for potential future building use (i.e. material change of use) to be developed. Note to be updated at Technical Design Stage	GHA Apex
Wst section sub totals					5.4%						

13	10	3	0	Land Use & Ecology							
2	1	1		LE 01: Site Selection	Site selection - Previously occupied land	N/A	**1 credit:** 75% footprint on previously developed land	Site plans demonstrating previous land use. Plans confirming at least 75% of new development on previous land use.	Stage 4		GHA
					Site selection - Contaminated land		**1 credit:** Contaminated land investigation by a contaminated land specialist and remediation.	Site contamination report	Stage 4	If contamination found the credit may be able to be achieved.	
2	2	0		LE 02: Identifying and Understanding the Risks and Opportunities for the Project	Survey and Evaluation	N/A	**1 credit:** Suitably Qualified Ecologist (SQE) carries out a survey and evaluation.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to identify the optimal ecological outcomes for the site at concept design.	Stage 2 Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement Assumed low ecological value	JFA EXT WJ
					Determining the ecological outcomes for the site		**1 credit:** The project team liaise and collaborate with representative stakeholders early enough to influence key planning decisions (typically Concept Design stage), to: .a Identify the optimal ecological outcomes for the site. .b Identify, appraise and select measures to meet the optimal ecological outcomes for the site (criterion 7.a), in line with the mitigation hierarchy of action, according to the route being used.				
3	3	0		LE 03: Managing Negative Impacts on Ecology	Planning and measures on site		**1 credit:** Further planning to avoid and manage negative ecological impacts on-site is carried out early enough to influence the concept design and design brief as well as site preparation planning. On-site measures for managing negative ecological impacts during site preparation and construction are implemented in-practice (e.g. mitigation measures to protect existing ecological features). Criteria 2-3 are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 Ecological risks and opportunities.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to outline plans to avoid and manage negative ecological impacts on-site. Statement of confirmation that on-site measures for managing negative ecological impacts during site preparation and construction will be implemented in-practice.	Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement	JFA EXT WJ/ Contractor
					Minimising negative impacts on ecology	N/A	**2 credits :** Negative impacts from site preparation and construction works are managed according to the mitigation hierarchy) and no overall loss (see Definitions) of ecological value has occurred.	Statement of confirmation that negative impacts from site preparation and construction works will ben managed according to the mitigation hierarchy, in line with the SQE's recommendations.	Stage 4		
4	2	2		LE 04: Change and Enhancement of Ecological Value (4 credits)	Pre-requisite - Managing negative impacts on ecology		**Pre-requisite:** LE 03 has been achieved and the client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.			
					Ecological enhancement	N/A	**1 credit:** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site.	SQE report or Ecology Assessment Reporting Template Planting plan and specification to demonstrate measures have been implemented that enhance ecological value, based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02.	Stage 2/4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement Ecology calculator required.	JFA EXT Contractor
					Change and enhancement of ecology		**3 credits:** Up to three credits are awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2.	Calculation in line with GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2 to confirm increase in ecological value. Planting plan outlining species which informed the ecology calculator		Assumed additional enhancement difficult but London Plan requirements may provide credits.	
2	2	0		LE 05:Long Term Ecology Management and Maintenance	Long term impact on ecology management and maintenance		**1 credit:** Measures have been implemented to manage and maintain ecology throughout the project. These measures are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 . A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site.	The client or contractor has confirms that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. Statement confirming measures to be implemented to manage and maintain ecology throughout the project. In line with design team and stakeholders collaboration. SQE report or Ecology Assessment Reporting Template Statement of confirmation a section on Ecology and Biodiversity will be included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. A Landscape and Ecology Management Plan Confirmation landscape and management plan or similar will be updated to support maintenance of the ecological value of the site Letter of commitment. Employer's Requirements.	Stage 4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement and recommendations for site mitigation measures to be implemented	JFA EXT WJ
						N/A	**1 credit:** Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1(206) covering at least the first five years after project completion as a minimum. The landscape and management plan or similar will be updated to support maintenance of the ecological value of the site.				
				LE section sub totals	10%						

12	10	2	2	Pollution							
3	2	1		**Pol 01: Impact of Refrigerants**	No refrigerant use	N/A	**3 credits:** No refrigerants.			Not targeted as refrigerant used	
					Pre-requisite		**Pre-requisite:** All systems comply with the requirements of BS EN EN 378: 2016. **2 credits:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent. emissions (DELC CO_{2e}) of ≤100 kgCO_{2e}/kW cooling/heating capacity OR GWP ≤ 10. OR **1 credit:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent emissions (DELC CO_{2e}) of ≤1000 kgCO_{2e}/kW cooling/heating capacity.	Completed PoI 01 calculator to demonstrate Systems using refrigerants have a DELC of ≤1000kgCO_2-eq/kW cooling and heating capacity Specification or manufacturer information outlining refrigerant cooling and heating capacity to populate calculator Manufacturer's literature confirming the refrigerant charge of the system. Specification confirming use of system.	Stage 4	Anticipated that 1 credit can be achieved for DELCO figure and 1 credit with leak detection and automatic pump down	A10
					Leak Detection		**1 credit:** Leak detection system & automatic pump down.	Specification for leak detection or confirmation All systems are hermetically sealed			
2	2	0		**PoI 02:Local Air Quality**	Local air quality	N/A	**Up to 2 credits:** All heating and hot water is supplied by non-combustion systems OR alternatively; Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in the BREEAM manual	Heating, Cooling & DHW drawings and specification		Credit can be achieved if building is all electric (i.e. electricity is fuel source for heating and domestic hot water). Or if connected to a district heating network.	A10
5	4	1	2	**PoI 03: Flood and Surface Water Management**	Pre-requisite	N/A	**Pre-requisite:** An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.	Confirmation of consultants qualifications.	Stage 2		Flood consultant Apex
					Surface water run-off - Flood resilience		**2 credits**: FRA confirming low risk zone. OR **1 credit:** FRA confirming medium or high risk zone (not within the Functional Floodplain). Increase the resilience and resistance to flooding by raising ground floor levels or reflecting measures in BS8533:2011.	Flood Risk Assessment.			
					Surface water run-off - Surface water run-off		**1 credit:** For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance **1 credit:** Flooding will not occur if local drainage system fails AND SUD techniques. Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques Alternative available if above not achievable.	Drainage report detailing the following: -Calculation results for the pre-and post development peak rate of run-off -Information showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels -Calculation results for the pre- and post development volume of run-off -Calculation results for the limiting discharge -Calculations should make an allowance for climate change Documents to confirm Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. SuDs specification		BREEAM guidance note available to confirm compliance.	
					Surface water run-off - Minimising watercourse pollution		**1 credit:** SUDs or source control systems	Design drawings Specification BRE Template Calculation of the 5mm rainfall event from the relevant areas		Criteria 17 - removed to be reviewed.	
1	1	0		**Pol 04: Reduction of Night Time Light Pollution**	Reduction of night time light pollution	N/A	**1 credit:** External lighting design in line with ILP Guidance notes for the reduction of obtrusive light, 2011. Daylight cut-off for general external lighting.	Drawings demonstrating the external lighting and controls. Specification confirming external lighting types and their compliance.		Light pollution statement to be provided	A10
1	1	0		**Pol 05: Reduction of Noise Pollution**	Reduction of noise pollution	N/A	**1 credit:** Either no noise-sensitive areas or buildings within 800m radius OR noise impact assessment in compliance with BS 4142 by a suitably qualified acoustician, along with any remediations.	Acousticians Report. Drawings demonstrating the building and proximity to noise sensitive areas.		Noise Assessment received from PDA. Require further info to comply with BREEAM critiera.	WJ PDA
PoI section sub totals 7%											

10	4	6	0	Innovation

1	1	0		Inn 1	Man 03: Responsible construction practices	N/A	**1 credit:** CCS score of 40 or more	Employer Requirements	Stage 2	Requirements to be included within employer requirements for exemplary performance under the CCS	Contractor reqs
1	1	0		Inn 2	Hea 01: Visual comfort - Exemplary performance - Internal and external lighting levels, zoning and control	N/A	**1 credit:** Lighting in each zone can be manually dimmed by occupants down to 20% of the maximum light output using dimmer switches positioned in accessible locations. Dimming and control gear should avoid flicker and noise.	Sepcification	Stage 4		M&E
1	1	0		Inn 4	Hea 06: Security	N/A	A compliant risk based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	Secured by design certification	Stage 2	SABRE would need to be achieved for the site	WJ GHA
2	0	2		Inn 5	Ene 01: Reduction of Energy Use and Carbon Emissions	N/A	**Two credits** – Post-occupancy stage Achieve maximum available credits in Ene 02 Energy monitoring. In addition,multi-residential buildings must meet the requirements of the second credit for sub-metering of high energy load and tenancy areas. The client or building occupier commits funds to pay for the post occupancy stage. This requires an assessor to be appointed and to report on the actual energy consumption compared with the targets set in criterion 4. The energy model is: . a Submitted to BRE and b Retained by the building owner.	Confirmation model to be handed over POE letter Ene 02 evidence	Stage 4	Not targeted.	Client and M&E
1	0	1		Inn 6	Wat 01: Water Consumption	N/A	**1 credit:** 65% improvement over baseline case.	RWH or GWR to provide majority of water consumption for non-potable uses		RWH or GWR required to achieve credit	
1	0	1		Inn 7	Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)	N/A	**2 credits:** The building achieves at least two more points (one for fewer than four applicable building elements) to achieve maximum credits under standard BREEAM requirements. **1 credit:** Life cycle assessment using an IMPACT compliant software tool and reduction in the environmental impact of the building	Whole life cycle carbon assessment (IMPACT modelling) included in LCC for Man 02.	Stage 2	Requires incorporation of embodied carbon study in LCC.	LCA specialist/ Cost Consultant
1	0	1		Inn 8	Mat 03- Responsible sourcing of materials-Exemplary performance	N/A	**1 Exemplary** RSM point = 70%	Unlikely that all specified materials will comply with responsible sourcing requirements		Unlikely to achieve this without significant constraints applied to material selections	
1	0	1		Inn 9	Wst 01- Construction waste management-Exemplary performance	N/A	**1 credit:** Amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated = 1.6 /1.9 Divert from landfill (volume or tonnage) Demolition = 85%/95% Non-demolition = 95%/95% Key waste groups identified for diversion at pre-construction stage RMP	RMP targets	Stage 4	Difficult level to achieve.	Contractor reqs
0	0	0		Inn 10	Wst 02 - Use of Recycled and Sustainably Sourced Aggregates	N/A	Significant use (35%) of recycled or secondary aggregates in 'high-grade' building aggregate uses. % of high-grade aggregate specified per application must meet the minimum levels. Elements not meeting the minimum should be considered as primary aggregate when calculating the total high grade aggregate specified. Secondary aggregate must be transported within 30 km by road transport.	Unlikely to be achieved		Unlikely to achieve this due to BREEAM requirements for recycled aggregates by end use and requirement to use local suppliers	
1	1	0		Inn 11	Wst 05 - Adaption to climate change-Exemplary performance	N/A	**1 credit:** Above + Hea 04 criterion 6 + 8 credits under Ene 01 + passive design analysis credit under Ene 04 + 3 credits under Wat 01 + Mat 05 criterion 2 + 1 credit under Flood risk and 2 credits under Surface water run-off within Pol 03	Credit dependant upon compliance with all BREEAM criteria.		Required credits are targeted	

Appendix B BREEAM Pre-assessment - Retail Units

Retail Units, Battersea Park Road

Pass 30% Good 45% Very Good 55% Excellent 70% Outstanding 85%

Credit Information				Target Rating	OUTSTANDING	86.2%					
Credits Available	Credits Targeted	Potential Credit	Credits Achieved to Date	Score Achieved to Date	Unclassified	8.45%					
				Credit Issue	Title	Mandatory Credits	Summary of criteria	Schedule of Evidence	Stage required	Comments	Responsible
				For full details of credit compliance requirements, refer to the BREEAM 2018 Scheme Document (manual), which takes precedence to this document							
18	18	0	0	Management							
4	4	0	0	Man 01: Project Brief and Design	Project Delivery Planning	N/A	**1 credit - Project Delivery Planning -** Prior to completion of the Concept Design, the project delivery stakeholders meet to identify and define each key phase of project delivery.	Evidence confirming stakeholders, roles and responsibilities. Roles and responsibilities matrix PEP Letters Meeting Minutes/ Agendas PAC report Pre-planning report Demonstration of feedback to stakeholders (e.g. quarterly meetings and monthly newsletter) Employer's Requirements Stage 2 Report	Stage 2	Criteria generally covered within RIBA Stage of Work reports	Architect Client
					Stakeholder Consultation		**1 credit - Stakeholder Consultation -** Prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content.		Stage 2 Stage 4		
					BREEAM Advisory Professional (AP)		**Prerequisite for BREEAM AP credits -** The project team, including the client, formally agree strategic performance targets early in the design process (with the support of the BREEAM AP where appointed).	AP appointment letter or contract Document to confirm BREEAM target rating	Stage 2		Client
							1 credit - BREEAM AP (Concept Design) - Involve an AP in the project at the appropriate time and level.	AP reports	Stage 2		BREEAM AP
							1 credit - BREEAM AP (Developed Design) - Involve an AP in the project at the appropriate time and level.		Stage 4		
4	4	0	0	Man 02: Life Cycle Cost and Service Life Planning	Elemental Life Cycle Cost (LCC)	N/A	**2 credits - Elemental Life Cycle Cost -** At RIBA Stage 2 - An elemental life cycle cost (LCC) analysis	Elemental LCC plan. Design documents to demonstrate, 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.	Stage 2	Elemental analysis required at early stages	Cost consultant
					Component Level Life Options Appraisal		**1 credit - Component Life Cycle Cost -** At RIBA Stage 4 - a component level LCC analysis. The results of the analysis and consideration of LCC have been implemented.	*Component level LCC options appraisal plan. * Component level LCC options appraisal - Component level LCC options appraisal for service life planning requires the environment of the building and other local conditions to be identified and the fundamental requirements to be met in planning the service life of the building. Decisions should be made on: – the likely design life of the building (rather than the contractual design life) – minimum functional performance criteria for each component over the building's design life – components that must be repairable, maintainable or replaceable within the design life of the building. Only the key differentiators between components and systems need to be comparatively modelled. * Design drawings, specifications or any design documents to demonstrate how the component level LCC options appraisal was used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. I.e. the design should choose the recommended outcome of the LCC options appraisal or outline why the LCC choice was not incorporated into the design.	Stage 4		

					Capital Cost Reporting		**1 credit - Capital Cost Reporting -** Report the capital cost for the building in pounds per m2	Email or letter or report stating the Predicted capital cost at end of technical design. A revised figure can be submitted at post construction.	Stage 4		
6	**6**	**0**	**0**	**Man 03: Responsible Construction Practices**	Prerequisite - Legally Harvested and Traded Timber	1 credit = Very Good 1 credit = Excellent 1 credit = Outstanding	**Prerequisite:** All timber to be 'legally harvested and traded timber'	Letter confirming that all timber will be legally harvested and traded timber. Letter confirming the targeted CCS score and construction site impact targets. EMS Certificate. Employer's Requirements.	Stage 4	BREEAM requirements to be included within Employer Requirements Plus innovation credit for CCS	Contractors reqs
					Environmental Management		**1 credit - Environmental Management**: The principal contractor operates an EMS and practices pollution prevention policies and procedures on-site				
					BREEAM Advisory Professional (AP) (site)		**1 credit - BREEAM AP (site)** - Involve a BREEAM AP in the project at an appropriate time and level.				
					Responsible Construction Management		**1 credit - Responsible Construction Management:** Appoint a sustainability champion during construction				
					Monitoring of Construction Site Impacts		**1 credit:** a CCS score between 25 and 34 **2 credits:** a CCS score between 35 and 39				
							Monitor, record, report & target: **1 credit:** Energy and water consumption **1 credit:** Transport (construction materials & waste)				
4	**4**	**0**	**0**	**Man 04: Commissioning and Handover**	Commissioning - testing schedule and responsibilities	Criterion 11 = Very Good, Excellent and Outstanding	**1 credit - Commissioning - testing schedule and responsibilities:** Commissioning programme, roles and responsibilities	Commissioning Programme, Employer's Requirements confirming all criteria Specification	Stage 4	BREEAM requirements to be included within Employer Requirements	Contractors reqs
					Commissioning - design and preparation		**1 credit - Commissioning - design and preparation:** Commissioning manager appointed during design stage to undertake design reviews, provide commissioning management and performance testing input				
					Testing and inspecting building fabric		**1 credit - Testing and inspecting building fabric:** Thermographic survey and/or airtightness test and inspection				
					Handover		**1 credit - Handover:** Building User Guide and building occupiers/premises managers training schedule				
Man section sub totals	11%										

11	**8**	**3**	**0**	**Health & Well Being**							
4	**2**	**2**	**0**	**Hea 01: Visual Comfort**	Daylighting	N/A	**2 credit :** Achieve specified average DF requirement 1 credit for Point daylight factors of 2% or more in 35% of area. 1 credit for 2% DF in occupied areas bar sales area plus EITHER (a) OR {(b) and (c)} in Table 5.2	Daylighting report outlining all required criteria Documents/ calculations demonstrating Room depth criteria	Stage 2	Not targeted. Difficult with ground floor position.	M&E Architect
					View out		**1 credit:** Achieve view out requirements Relevant building areas within 8m of an external window which is >20% of the surrounding wall area. Relevant areas are work stations	Drawings demonstrating workstations and applicable areas and provision of windows Window to wall ratio calculations	Stage 4	If it is not possible to confirm which areas of the building will contain workstations, benches or desks, all areas of the building designed for or likely to be occupied by workstations, benches or desks must comply with the relevant criteria.	Architect
					Internal and External Lighting		**1 credit:** External lighting design & zoning (BS5489-1:2013+ BS EN 12464-2:2014)	Design drawings Specification Lighting Schedule	Stage 4	Electrical Spec to include lighting compliance	M&E
1	**0**	**1**		**Hea 02: Indoor Air Quality**	Indoor air quality	N/A	**Pre-requisite:** Produce an Indoor Air Quality Plan	Indoor air quality plan in line with BRE guidance note 06	Stage 4	Not targeted as not required.	M&E or specialist
					Ventilation - 1 credit		**1 credit:** The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building Ventilation rates in accordance with BS ISO 17772-1:2017	Mechanical Specification Design drawings	Stage 4	Not targeted as expected not achievable due to space requirements.	M&E
2	**2**	**0**		**Hea 04: Thermal Comfort**	Thermal Modelling	N/A	**1 credit:** Thermal modelling as per CIBSE AM11, compliance with "time out of range" (TOR) metric requirements and overheating limits	Thermal Modelling Report Design drawings Specification	Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems	M&E
					Design for future thermal comfort		**1 credit:** Thermal comfort criteria for the projected climate change environment		Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems under a climate change condition	

1	1	0		**Hea 05: Acoustic Performance**	Indoor Ambient Noise Level - 1 credit	N/A	**1 credit:** The building to meet appropriate standards and testing requirements for indoor ambient sound levels	Acousticians appointment to carry out pre-completion testing. Acoustician's Report	Stage 3/4	Acoustician to be appointed to determine requirements for BREEAM.	Client Acoustician Architect
1	1	0		**Hea 06: Security**	Security of Site and Building	N/A	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 purpose of the SNA will be to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development . 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 shall be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	Meeting minutes or email correspondence to demonstrate Security Needs Assessment was completed by Suitably Qualified Security Specialist at appropriate time. SQSS report outlining recommendations Design drawings and specification demonstrating incorporation of the recommendations into the design. If a recommendation is not taken on board evidence can be provided to justify this.	Stage 2 Stage 4	**At risk until consultant confirmed.** Architectural Liaison Officer (ALO) to review proposals at Stage 2 and provide Secured by Design Report. All recommendations within the SBD report to be implemented. INNOVATION credit not targeted for SABRE.	Architect/ M&E
2	2	0		**Hea 07: Safe and Healthy Surroundings**	Safe Access	N/A	**1 credit:** Ensure safe access to and safe movement around the site and facilitate the activities that can have physical, mental and social benefits for occupants aiding staff retention.	Drawings demonstrating safe access for pedestrians and cyclists to the building from vehicles	Stage 4		Architect/ Landscape Architect
					Outside Space		**1 credit:** Add to the desirability of the building helping to increase its value and appeal to occupants and neighbours.	Drawings confirming location of external terraces	Stage 4	At risk, will retail have outside space?	
Hea section sub totals					5.8%						

19	**16**	**3**	**0**	**Energy**							
13	10	3		**Ene 01: Reduction of Energy Use and Carbon Emissions**	Energy Performance	4 credits = Excellent 6 credits = Outstanding	**Up to 9 credits:** Calculate an Energy Performance Ratio for New Constructions (EPR_{NC}) using BREEAM's Ene 01 calculator starting at: **1 credit:** EPR_{NC} = 0.1 **4 credits:** EPR_{NC} = 0.4 = Excellent: **6 credits:** EPR_{NC} = 0.6 = Outstanding: **9 credits:** EPR_{NC} = 0.90 AND zero net regulated CO_2 emissions	A copy of the Building Regulations Output Document from the approved software.	Stage 4	credits uplifted from 8 to 10 to obtain outstanding rating.	M&E
					Prediction of operational energy consumption		**Pre-requisite:** Prior to completion of the Concept Design, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance.	Workshop minutes, agreed outcomes.	Stage 4		
							4 credits: Undertake additional energy modelling and risk assessment during the design and post-construction stage to generate predicted operational energy consumption figures and risks that should be monitored.	Operational energy model in accordance with CIBSE TM54 Predicted energy consumption values, design assumptions, input data and risk assessments reported as detailed in the Energy Prediction and Post-occupancy guidance available from the BREEAM website. Confirmation of suitably qualified energy modeller's qualifications and experience.	Stage 4	4 credits, require information on expected energy use based on similar buildings.	M&E Client
2	2	0		**Ene 02: Energy Monitoring**	Sub-metering of end-use categories	1 credit= Very Good, Excellent and Outstanding	**1 credit:** Energy metering systems for 90% of the estimated annual energy consumption of each fuel End-use categories include: 1. Space heating 2. Domestic hot water heating 3. Humidification* 4. Cooling* 5. Ventilation, i.e. fans (major)* 6. Pumps 7. Lighting 8. Small power 9. Renewable or low carbon systems (separately) 10. Controls 11. Other major energy consuming systems or plant	Calculation to demonstrate 90% of the estimated annual energy consumption Specification Metering schematic Metering schedule Specification confirming the proposed BMS.	Stage 4	Meters must be installed on the energy supply to each separate tenanted unit or floor plate within the assessed development	M&E
1	1	0		**Ene 03: External Lighting**	External lighting	N/A	**1 credit:** Energy-efficient external lighting with not less than 60 luminaire lumens per circuit watt is specified and all light fittings are controlled for the presence of daylight, and occupancy in areas of intermittent pedestrian traffic.	Drawings demonstrating the external lighting controls Specification detailing the external lighting luminous efficacy.	Stage 4	Anticipated that external lighting will comply	M&E

3	3	0		**Ene 04: Low Carbon Design**	Passive Design	N/A	**1 credit:** Implement passive design measures	Passive design analysis Results from a dynamic simulation model demonstrating the reduced energy demand and CO_2-eq emissions from the specified passive design measures. Specification detailing the passive design measures.	Stage 2	Passive design analysis to be undertaken	M&E
							1 credit: Implement free cooling analysis	Results from a dynamic simulation model and other used methods demonstrating that the free cooling strategy can meet the building's cooling demand.	Stage 2	Include in analysis	
					Low or Zero Carbon technologies		**1 credit:** LZC Feasibility study by end of Concept Design	Drawings demonstrating the location of the LZCs. LZC Study. Results from a dynamic simulation model demonstrating reductions in CO_2-eq emissions from the specified low and zero carbon technology.	Stage 2	Results of LZC study must be implemented.	
Ene section sub totals					12%						
12	**10**	**2**	**0**	**Transport**							
2	2	0		**Tra 01:Transport Assessment and Travel Plan**	Travel Plan	N/A	**2 credits**: During the feasibility stages, develop a travel plan based on a site-specific travel assessment or statement.	Site specific Transport assessment Travel Plan Meeting minutes, emails or letter to demonstrate occupiers involvement in the travel plan and support of the travel plan.	Stage 2	Travel Plan received, require Transport Statement.	Transport consultant Client
10	8	2		**Tra 02: Sustainable Transport Measures (10 credits)**	Sustainable Transport Measures	N/A	**10 credits:** Identify sustainable transport measures and award credits according to the Accessible Index AI of the project, and the total number of points achieved for the options implemented.	Evidence required dependant on criteria being targeted Cycle storage - Design plans and specification Amenities - plan with locations and distances Public transport information display Public Transport - correspondence ~~Parking - design drawing~~ ~~Car sharing - Building user policy~~ Tra 01 calculator Public Transport service timetables and node locations.	Stage 4	Credits uplifted from 4 to 8 credits to obtain an Outstanding rating.	Architect Transport Consultant Assessor
Tra section sub totals					10%						
8	**5**	**3**	**0**	**Water**							
5	2	3		**Wat 01: Water Consumption (5 credits + 1 Exemplary)**	Water consumption	1 credit = Good 1 credit = Excellent 2 credits = Outstanding	**Up to 5 credits:** Improvement over baseline case: **1 credit:** 12.5% **2 credits**: 25% **3 credits:** 40% **4 credits:** 50% **5 credits**: 55%	Specification detailing the sanitary wear and flow rates, flush volumes etc for as a minimum: – WCs – Wash-hand basin taps – Showers – Urinals – Kitchen taps: kitchenette See Table 8.3 in manual for guidance. Drawings demonstrating the location of the sanitary ware. Wat 01 Calculator. Confirmation regarding number of sanitary ware.	Stage 4	These credits are based on the staff having access to WC facilities somewhere in the building. This is based on the 'No fittings present' note in the methodology. A baseline has been assumed for showers and kitchenette taps. Assumed no urinals.	M&E
1	1	0		**Wat 02: Water Monitoring (1 credit)**	Water meter	Criterion 1	**1 credit:** Specifying a water meter, with pulsed output, on the mains water supply to each building (including borehole or other source). Water-consuming plant or building areas, (with 10% or more of the total water demand) fitted with sub meters or water monitoring equipment.	Drawings demonstrating the location of the water meters and sub meters. Specification confirming water meters have pulsed output and are connected to BMS.	Stage 4	Pulsed water meter linked to BMS to be installed	M&E
2	2	0		**Wat 03: Water Leak Detection**	Leak Detection Systems	N/A	**1 credit:** A compliant leak detection system is specified or installed on the building's water supply.	Specification detailing the water leak detection system.	Stage 4	Leak detection system to be installed	M&E
					Flow Control Devices		**1 credit:** Flow control devices are fitted to each WC area/facility according to demand.	Drawings demonstrating the location of flow control devices.		Assumed no WC or sanitary facility to be specified. Control can be added to supply.	
Wat section sub totals					4.4%						

14	13	1	5	Materials							
7	7	0	5	**Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)**	Life cycle impacts	N/A	**Up to 6 credits:** Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology. Submit the Mat 01/02 Results Submission Tool to BRE at the end of concept design and Technical Design. **Option appraisal during Concept Design.** Carry out building LCA options appraisal of **2 to 4** significantly different superstructure design options. Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. **Options appraisal during Technical Design** Carry out building LCA options appraisal of **2 to 3** significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage). **One credit – Substructure and hard landscaping options appraisal during Concept Design** Carry out building LCA options appraisal of a combined total of at least **six** significantly different substructure or hard landscaping design options	Mat 01/02 Results Submission Tool The options appraisal summary document Evidence that the LCA options appraisal summary document has been received by the design team and client (meeting minutes, letter of acknowledgement) Evidence of how the LCA design options have informed the design decision-making process (e.g. meeting minutes, documented design development showing how the LCA options have affected the design) The LCA options appraisal summary document includes substructure and hard landscaping according to the criteria.	Stage 2/ 4	Credits require use of an IMPACT compliant tool. Design team to agree if they are happy to use this. 6 credits are based on superstructure appraisal. 1 credit based on Substructure and hardlandscaping appraisal. Same LCA can be used as completed for the whole building KBCN1173	Architect/ Structural engineer/ QS/ LCA specialist
1	0	1		**Mat 02: Environmental Impacts from Construction Products - Environmental Product Declarations (EPD)**	Specification of products a with a recognised environmental product declaration (EPD)	N/A	**1 credit:** Specify construction products with EPD that achieve a total EPD points score of at least 20.	Environmental Product Declarations (EPD's) for construction products specified in the design. Specification to detail products in the design to have EPDs Roughly 15-20 products needed to achieve credit.	Stage 4	Not targeted, difficult for a shell and core	Architect Structural engineer Landscape Architect
4	4	0		**Mat 03 (Responsible Sourcing of construction products**	Pre-requisite Enabling Sustainable Procurement Measuring responsible sourcing	Criterion 1 only	**Pre-requisite:** Confirmation that all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy. **1 credit:** The principal contractor sources materials in accordance with a documented sustainable procurement plan. **Up to 3 credits:** Based on the achieved Responsible Sourcing of Materials (RSM) points: **1 credit:** RSM point = 10% **2 credits:** RSM point = 20% **3 credits:** RSM point = 30%	Specification extract detailing 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy. Sustainable procurement plan Specification extracts for materials in the superstructure, internal finishes, substructure and hardscaping. Specification must detail environmental management system certification level. Or specific product specified and the affiliated certificate is also provided. If route 2 being followed quantity of material in m3 or Kg to be provided. Two routes for compliance can be followed: Route 1 does not require quantities to be entered. Consequently it is less accurate and may result in a lower credit score than Route 2. It may be the case that across an assessment there will be a combination of routes for products. For example, Route 1 may be used for the 'timber or timber-based' category and Route 2 for the 'metal' category. Only one route may be used per materials category. Completed copy of the Mat 03 Calculator tool	Stage 4 Stage 2 Stage 4	Credits uplifted from 2 to 4 credits to obtain an outstanding rating.	Architect Structural Engineer Landscape Architect Assessor
1	1	0		**Mat 05: Designing for Durability and Resilience**	Designing for durability and resilience	N/A	**1 credit:** Protect vulnerable parts of the building from damage and exposed parts of the building from material degradation	Specification extracts and design drawings detailing protection measures 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. Specification extracts and design drawings detailing how key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. Manual outlines applicable standards which should be adhered to. Design documents to demonstrate access to the roof and façade for cost-effective cleaning, replacement and repair. Design documents to demonstrate how the roof and façade have been designed to prevent water damage, ingress and detrimental ponding.	Stage 4	Risk assessment into material degradation to be completed by architect, MEP and structural engineer	Architect Structural Engineer
1	1	0		**Mat 06: Material Efficiency**	Material efficiency	N/A	**1 credit:** Identify and implement measures at each RIBA stage to optimise the use of materials in building design, procurement, construction, maintenance and end of life.	Technical note and calculations confirming estimated construction waste at each RIBA Stage of project	Every stage		Design team
Mat section sub totals 16.3%											

10	9	1	1	Waste							
5	5	0		**Wst 01: Construction Waste Management**	Pre-demolition audit	1 credit = Outstanding	**1 credit:** Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.	Pre-demolition audit.	Stage 2		Contractors reqs
					Construction resource efficiency		**Up to 3 credits**: RMP + pre-demolition audit + the amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated: **1 credit:** 13.3 / 11.1 **2 credits:** 7.5 / 6.5 **3 credits:** 3.4 / 3.2	Resource Management Plan or letter of commitment	Stage 4	Pre-demolition audit of existing building and hardstanding to be undertaken prior to demolition. Requirements to be included within the employer requirements 3.4m3/100m2 targeted for 3 credits	
					Diversion of resources from landfill		**1 credit:** Divert from landfill (volume or tonnage) Demolition = 80%/90% Non-demolition = 70%/ 80%		Stage 4	Demolition to be diverted from landfill 80%	
1	0	1		**Wst 02: Use of Recycled and Sustainably Sourced Aggregates (1 credit + 1 Exemplary)**	Recycled aggregates	N/A	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. Identify all aggregate uses and types on the project see Table 10.5 and Table 10.6. Determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located. Calculate the distance in kilometres travelled by all aggregates by transport type. Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points.	Pre-demolition audit. Completed Wst 02 calculator Documents to support calculator inputs		Anticipated difficult to achieve. Engineer to advise.	Structural engineer
1	1	0	1	**Wst 03: Operational Waste**	Operational waste	1 credit = Excellent 1 credit = Outstanding	Design drawings and/or specification extracts to confirm the following - size of the general waste storage area - size of recyclable waste storage area - the waste labels for these areas - Location of waste store with distance and safe route for building occupants - How waste store is accessed by waste collectors - location for storing organic waste - provision of water outlet for cleaning organic waste bin Correspondence to demonstrate stores are an appropriate size for the expected amount of waste. Or demonstration in line with BREEAM guidance.	Drawing demonstrating the location of the waste storage area. Specification confirming that the waste storage area will be clearly labelled, appropriately sized and accessible to building occupants.	Stage 4	Operational Waste Management Stratgey received from Equilibria.	Equilibria
1	1	0		**Wst 05:Adaption to Climate Change**	Resilience of structure, fabric, building services and renewables installation	N/A	**1 credit:** Climate change adaptation strategy appraisal for building services, renewables, structural and fabric resiliency at RIBA Stage 2.	Climate Change Adaption Strategy	Stage 2	Climate change risk strategy to be developed by design team and mitigation measures implemented	Architect Structural engineer M&E
2	2	0		**Wst 06:Design for Disassembly and Adaptability**	Design for disassembly and functional adaptability - recommendations	N/A	**1 credit:** Conduct a study to explore the ease of disassembly and the functional adaption potential of different design scenarios by the end of Concept Design.	Functional Adaption Strategy Disassembly and functional adaptability study, Study should contain recommendations that aim to enable and facilitate disassembly and functional adaptation. Updated Disassembly and functional adaptability study reflecting technical design, Implementation plan report Building adaptability and disassembly guide.	Stage 2		Architect Structural engineer
					Disassembly and functional adaptability - implementation		**1 credit:** Provide an update during Technical Design on how the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective and information on any changes to the recommendations and solution during the development of the Technical Design. Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.		Stage 4	Technical note confirming measures for ease to adapt for potential future building use (i.e. material change of use) to be developed. Note to be updated at Technical Design Stage	
Wst section sub totals				6.3%							

13	10	3	0	Land Use & Ecology							
2	1	1		**LE 01: Site Selection**	Site selection - Previously occupied land	N/A	**1 credit:** 75% footprint on previously developed land	Site plans demonstrating previous land use. Plans confirming at least 75% of new development on previous land use.	Stage 4		Architect
					Site selection - Contaminated land		**1 credit:** Contaminated land investigation by a contaminated land specialist and remediation.	Site contamination report	Stage 4		

2	2	0		**LE 02: Identifying and Understanding the Risks and Opportunities for the Project**	Survey and Evaluation	N/A	**1 credit:** Suitably Qualified Ecologist (SQE) carries out a survey and evaluation.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to identify the optimal ecological outcomes for the site at concept design.	Stage 2 Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement Assumed low ecological value KBCN1194 applicable	Ecologist Landscape Architect Client
					Determining the ecological outcomes for the site		**1 credit:** The project team liaise and collaborate with representative stakeholders early enough to influence key planning decisions (typically Concept Design stage), to: .a Identify the optimal ecological outcomes for the site. .b Identify, appraise and select measures to meet the optimal ecological outcomes for the site (criterion 7.a), in line with the mitigation hierarchy of action, according to the route being used.				
3	3	0		**LE 03: Managing Negative Impacts on Ecology**	Planning and measures on site		**1 credit:** Further planning to avoid and manage negative ecological impacts on-site is carried out early enough to influence the concept design and design brief as well as site preparation planning. On-site measures for managing negative ecological impacts during site preparation and construction are implemented in-practice (e.g. mitigation measures to protect existing ecological features). Criteria 2-3 are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 Ecological risks and opportunities.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to outline plans to avoid and manage negative ecological impacts on-site. Statement of confirmation that on-site measures for managing negative ecological impacts during site preparation and construction will be implemented in-practice.	Stage 2 Stage 4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement KBCN1194 applicable	Ecologist Landscape Architect Client/ Contractor
					Minimising negative impacts on ecology	N/A	**2 credits :** Negative impacts from site preparation and construction works are managed according to the mitigation hierarchy) and no overall loss (see Definitions) of ecological value has occurred.	Statement of confirmation that negative impacts from site preparation and construction works will ben managed according to the mitigation hierarchy, in line with the SQE's recommendations.			
4	2	2		**LE 04: Change and Enhancement of Ecological Value (4 credits)**	Pre-requisite - Managing negative impacts on ecology	N/A	**Pre-requisite:** LE 03 has been achieved and the client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site. SQE report or Ecology Assessment Reporting Template Planting plan and specification to demonstrate measures have been implemented that enhance ecological value, based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02. Calculation in line with GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2 to confirm increase in ecological value. Planting plan outlining species which informed the ecology calculator	Stage 2/4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement KBCN1194 applicable Assumed additional enhancement difficult but London Plan requirements may provide credits.	Ecologist Landscape Architect Contractor
					Ecological enhancement		**1 credit:** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site.				
					Change and enhancement of ecology		**3 credits:** Up to three credits are awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2.				
2	2	0		**LE 05:Long Term Ecology Management and Maintenance**	Long term impact on ecology management and maintenance		**1 credit:** Measures have been implemented to manage and maintain ecology throughout the project. These measures are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 . A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site.	The client or contractor has confirms that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. Statement confirming measures to be implemented to manage and maintain ecology throughout the project. In line with design team and stakeholders collaboration. SQE report or Ecology Assessment Reporting Template Statement of confirmation a section on Ecology and Biodiversity will be included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. A Landscape and Ecology Management Plan Confirmation landscape and management plan or similar will be updated to support maintenance of the ecological value of the site Letter of commitment. Employer's Requirements.	Stage 4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement and recommendations for site mitigation measures to be implemented KBCN1194 applicable	Ecologist Landscape Architect Client
						N/A	**1 credit:** Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1(206) covering at least the first five years after project completion as a minimum. The landscape and management plan or similar will be updated to support maintenance of the ecological value of the site.				
LE section sub totals					12%						

12	10	2	2	Pollution							
3	2	1		**Pol 01: Impact of Refrigerants**	No refrigerant use	N/A	**3 credits:** No refrigerants.			Not targeted as refrigerant used	
					Pre-requisite		**Pre-requisite:** All systems comply with the requirements of BS EN EN 378: 2016. **2 credits:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent. emissions (DELC CO_{2e}) of ≤100 $kgCO_{2e}$/kW cooling/heating capacity OR GWP ≤ 10. OR **1 credit:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent emissions (DELC CO_{2e}) of ≤1000 $kgCO_{2e}$/kW cooling/heating capacity.	Completed Pol 01 calculator to demonstrate Systems using refrigerants have a DELC of ≤1000$kgCO_2$-eq/kW cooling and heating capacity Specification or manufacturer information outlining refrigerant cooling and heating capacity to populate calculator Manufacturer's literature confirming the refrigerant charge of the system. Specification confirming use of system.	Stage 4	Anticipated that 1 credit can be achieved for DELCO figure and 1 credit with leak detection and automatic pump down	M&E
					Leak Detection		**1 credit:** Leak detection system & automatic pump down.	Specification for leak detection or confirmation All systems are hermetically sealed			
2	2	0		**Pol 02:Local Air Quality**	Local air quality	N/A	**Up to 2 credits:** All heating and hot water is supplied by non-combustion systems OR alternatively; Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in the BREEAM manual	Heating, Cooling & DHW drawings and specification		Credit can be achieved if building is all electric (i.e. electricity is fuel source for heating and domestic hot water). Or if connected to a district heating network.	M&E
5	4	1	2	**Pol 03: Flood and Surface Water Management**	Pre-requisite	N/A	**Pre-requisite:** An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.	Confirmation of consultants qualifications.	Stage 2	Flood risk report provided, risk is low.	Flood consultant Structural engineer
					Surface water run-off - Flood resilience		**2 credits**: FRA confirming low risk zone. OR **1 credit:** FRA confirming medium or high risk zone (not within the Functional Floodplain). Increase the resilience and resistance to flooding by raising ground floor levels or reflecting measures in BS8533:2011.	Flood Risk Assessment.			
					Surface water run-off - Surface water run-off		**1 credit:** For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance **1 credit:** Flooding will not occur if local drainage system fails AND SUD techniques. Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques Alternative available if above not achievable.	Drainage report detailing the following: -Calculation results for the pre-and post development peak rate of run-off -Information showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels -Calculation results for the pre- and post development volume of run-off -Calculation results for the limiting discharge -Calculations should make an allowance for climate change Documents to confirm Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. SuDs specification		BREEAM guidance note available to confirm compliance,	
					Surface water run-off - Minimising watercourse pollution		**1 credit:** SUDs or source control systems	Design drawings Specification BRE Template Calculation of the 5mm rainfall event from the relevant areas		Criteria 17 to be reveiwed, credit removed.	
1	1	0		**Pol 04: Reduction of Night Time Light Pollution**	Reduction of night time light pollution	N/A	**1 credit:** External lighting design in line with ILP Guidance notes for the reduction of obtrusive light, 2011. Daylight cut-off for general external lighting.	Drawings demonstrating the external lighting and controls. Specification confirming external lighting types and their compliance.		Light pollution statement to be provided	M&E
1	1	0		**Pol 05: Reduction of Noise Pollution**	Reduction of noise pollution	N/A	**1 credit:** Either no noise-sensitive areas or buildings within 800m radius OR noise impact assessment in compliance with BS 4142 by a suitably qualified acoustician, along with any remediations.	Acousticians Report. Drawings demonstrating the building and proximity to noise sensitive areas.		Acoustic report on external background noise levels pre and post development to be provided	Client Acoustician
Pol section sub totals				8%							

10	2	7	0	Innovation							
1	1	0		**Inn 1**	**Man 03: Responsible construction practices**	N/A	**1 credit:** CCS score of 40 or more	Employer Requirements	Stage 2	Requirements to be included within employer requirements for exemplary performance under the CCS	Contrcator reqs

1	0	1		Inn 2	**Hea 01: Visual comfort - Exemplary performance**	N/A	**1 credit:** Achieve exemplary level daylight thresholds dependent on building types. 3% DF in 80% applicable areas required.	Calculations demonstrating exemplary levels of daylighting		Large windows may allow this credit. Not known until analysis completed	M&E
1	1	0		Inn 4	**Hea 06: Security**	N/A	A compliant risk based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	SABRE certification	Stage 2	SABRE required	Client Architect
2	0	2		Inn 5	**Ene 01: Reduction of Energy Use and Carbon Emissions**	N/A	**Two credits** – Post-occupancy stage Achieve maximum available credits in Ene 02 Energy monitoring. In addition,multi-residential buildings must meet the requirements of the second credit for sub-metering of high energy load and tenancy areas. The client or building occupier commits funds to pay for the post occupancy stage. This requires an assessor to be appointed and to report on the actual energy consumption compared with the targets set in criterion 4. The energy model is: . a Submitted to BRE and b Retained by the building owner.	Confirmation model to be handed over Ene 02 evidence	Stage 4		Client and M&E
1	0	1		Inn 6	**Wat 01: Water Consumption**	N/A	**1 credit:** 65% improvement over baseline case.	RWH or GWR to provide majority of water consumption for non-potable uses		RWH or GWR required to achieve credit	
1	0	1		Inn 7	**Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)**	N/A	**2 credits:** The building achieves at least two more points (one for fewer than four applicable building elements) to achieve maximum credits under standard BREEAM requirements. **1 credit:** Life cycle assessment using an IMPACT compliant software tool and reduction in the environmental impact of the building	Whole life cycle carbon assessment (IMPACT modelling) included in LCC fopr Man 02.	Stage 2	Requires incorporation of embodied carbon study in LCC.	LCA specialist/ Cost Consultant
1	0	1		Inn 8	**Mat 03- Responsible sourcing of materials- Exemplary performance**	N/A	**1 Exemplary** RSM point = 70%	Unlikely that all specified materials will comply with responsible sourcing requirements		Unlikely to achieve this without significant constraints applied to material selections	
1	0	1		Inn 9	**Wst 01- Construction waste management- Exemplary performance**	N/A	**1 credit:** Amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated = 1.6 /1.9 Divert from landfill (volume or tonnage) Demolition = 85%/95% Non-demolition = 95%/95% Key waste groups identified for diversion at pre-construction stage RMP	RMP targets	Stage 4	Difficult level to achieve.	Contrcator reqs
0	0	0		Inn 10	**Wst 02 - Use of Recycled and Sustainably Sourced Aggregates**	N/A	Significant use (35%) of recycled or secondary aggregates in 'high-grade' building aggregate uses. % of high-grade aggregate specified per application must meet the minimum levels. Elements not meeting the minimum should be considered as primary aggregate when calculating the total high grade aggregate specified. Secondary aggregate must be transported within 30 km by road transport.	Unlikely to be achieved		Unlikely to achieve this due to BREEAM requirements for recycled aggregates by end use and requirement to use local suppliers	
1	0	0		Inn 11	**Wst 05 - Adaption to climate change- Exemplary performance**	N/A	**1 credit:** Above + Hea 04 criterion 6 + 8 credits under Ene 01 + passive design analysis credit under Ene 04 + 3 credits under Wat 01 + Mat 05 criterion 2 + 1 credit under Flood risk and 2 credits under Surface water run-off within Pol 03	Credit dependant upon compliance with all BREEAM criteria.		Not achieved due to water credits	

Appendix C BREEAM Pre-assessment - Office Space

BREEAM New Construction 2018 Pre-assessment
Office, shell and core assessment

Office Spaces, Battersea Park Road

Pass 30% Good 45% Very Good 55% Excellent 70% Outstanding 85%

Credit Information				Target Rating	OUTSTANDING	88.0%					
Credits Available	Credits Targeted	Potential Credit	Credits Achieved to Date	Score Achieved to Date	Unclassified	8.39%					
				Credit Issue	**Title**	**Mandatory Credits**	**Summary of criteria**	**Schedule of Evidence**	**Stage required**	**Comments**	**Responsible**
				For full details of credit compliance requirements, refer to the BREEAM 2018 Scheme Document (manual), which takes precedence to this document							
18	18	0	0	**Management**							
4	4	0	0	**Man 01: Project Brief and Design**	Project Delivery Planning	N/A	**1 credit - Project Delivery Planning -** Prior to completion of the Concept Design, the project delivery stakeholders meet to identify and define each key phase of project delivery.	Evidence confirming stakeholders, roles and responsibilities. Roles and responsibilities matrix PEP Letters Meeting Minutes/ Agendas PAC report Pre-planning report Demonstration of feedback to stakeholders (e.g. quarterly meetings and monthly newsletter) Employer's Requirements Stage 2 Report	Stage 2	Criteria generally covered within RIBA Stage of Work reports	Architect Client
					Stakeholder Consultation		**1 credit - Stakeholder Consultation -** Prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content.		Stage 2 Stage 4		
					BREEAM Advisory Professional (AP)		**Prerequisite for BREEAM AP credits -** The project team, including the client, formally agree strategic performance targets early in the design process (with the support of the BREEAM AP where appointed).	AP appointment letter or contract Document to confirm BREEAM target rating	Stage 2	Additional appointment.	Client
							1 credit - BREEAM AP (Concept Design) - Involve an AP in the project at the appropriate time and level.	AP reports	Stage 2		BREEAM AP
							1 credit - BREEAM AP (Developed Design) - Involve an AP in the project at the appropriate time and level.		Stage 4		
4	4	0	0	**Man 02: Life Cycle Cost and Service Life Planning**	Elemental Life Cycle Cost (LCC)	N/A	**2 credits - Elemental Life Cycle Cost -** <u>At RIBA Stage 2</u> - An elemental life cycle cost (LCC) analysis	Elemental LCC plan. Design documents to demonstrate, 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.	Stage 2	Elemental analysis required at early stages	Cost consultant
					Component Level Life Options Appraisal		**1 credit - Component Life Cycle Cost -** <u>At RIBA Stage 4</u> - a component level LCC analysis. The results of the analysis and consideration of LCC have been implemented.	*Component level LCC options appraisal plan. * Component level LCC options appraisal - Component level LCC options appraisal for service life planning requires the environment of the building and other local conditions to be identified and the fundamental requirements to be met in planning the service life of the building. Decisions should be made on: – the likely design life of the building (rather than the contractual design life) – minimum functional performance criteria for each component over the building's design life – components that must be repairable, maintainable or replaceable within the design life of the building. Only the key differentiators between components and systems need to be comparatively modelled. * Design drawings, specifications or any design documents to demonstrate how the component level LCC options appraisal was used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. I.e. the design should choose the recommended outcome of the LCC options appraisal or outline why the LCC choice was not incorporated into the design.	Stage 4		

					Capital Cost Reporting		**1 credit - Capital Cost Reporting -** Report the capital cost for the building in pounds per m2	Email or letter or report stating the Predicted capital cost at end of technical design. A revised figure can be submitted at post construction.	Stage 4		
6	**6**	**0**	**0**	**Man 03: Responsible Construction Practices**	Prerequisite - Legally Harvested and Traded Timber	1 credit = Very Good 1 credit = Excellent 1 credit = Outstanding	**Prerequisite:** All timber to be 'legally harvested and traded timber'	Letter confirming that all timber will be legally harvested and traded timber. Letter confirming the targeted CCS score and construction site impact targets. EMS Certificate. Employer's Requirements.	Stage 4	BREEAM requirements to be included within Employer Requirements Plus innovation credit for CCS	Contractors reqs
					Environmental Management		**1 credit - Environmental Management**: The principal contractor operates an EMS and practices pollution prevention policies and procedures on-site				
					BREEAM Advisory Professional (AP) (site)		**1 credit - BREEAM AP (site)** - Involve a BREEAM AP in the project at an appropriate time and level.				
					Responsible Construction Management		**1 credit - Responsible Construction Management:** Appoint a sustainability champion during construction				
					Monitoring of Construction Site Impacts		**1 credit:** a CCS score between 25 and 34 **2 credits:** a CCS score between 35 and 39				
							Monitor, record, report & target: **1 credit:** Energy and water consumption **1 credit:** Transport (construction materials & waste)				
4	**4**	**0**	**0**	**Man 04: Commissioning and Handover**	Commissioning - testing schedule and responsibilities	Criterion 11 = Very Good, Excellent and Outstanding	**1 credit - Commissioning - testing schedule and responsibilities:** Commissioning programme, roles and responsibilities	Commissioning Programme, Employer's Requirements confirming all criteria Specification	Stage 4	BREEAM requirements to be included within Employer Requirements	Contractors reqs
					Commissioning - design and preparation		**1 credit - Commissioning - design and preparation:** Commissioning manager appointed during design stage to undertake design reviews, provide commissioning management and performance testing input				
					Testing and inspecting building fabric		**1 credit - Testing and inspecting building fabric:** Thermographic survey and/or airtightness test and inspection				
					Handover		**1 credit - Handover:** Building User Guide and building occupiers/premises managers training schedule				
Man section sub totals				11%							

11	**8**	**3**	**0**	**Health & Well Being**							
4	**2**	**2**	**0**	**Hea 01: Visual Comfort**	Daylighting	N/A	**2 credit :** Achieve specified average DF requirement 1 credit for Point daylight factors of 2% or more in 35% of area. 1 credit for 2% DF in occupied areas bar sales area plus EITHER (a) OR {(b) and (c)} in Table 5.2	Daylighting report outlining all required criteria Documents/ calculations demonstrating Room depth criteria	Stage 2	Not targeted. At risk until daylight analysis completed.	M&E Architect
					View out		**1 credit:** Achieve view out requirements Relevant building areas within 8m of an external window which is >20% of the surrounding wall area. Relevant areas are work stations	Drawings demonstrating workstations and applicable areas and provision of windows Window to wall ratio calculations	Stage 4	If it is not possible to confirm which areas of the space will contain workstations, benches or desks, all areas of the building designed for or likely to be occupied by workstations, benches or desks must comply with the relevant criteria.	Architect
					Internal and External Lighting		**1 credit:** External lighting design & zoning (BS5489-1:2013+ BS EN 12464-2:2014)	Design drawings Specification Lighting Schedule	Stage 4	Electrical Spec to include lighting compliance	M&E
1	**0**	**1**		**Hea 02: Indoor Air Quality**	Indoor air quality	N/A	**Pre-requisite:** Produce an Indoor Air Quality Plan	Indoor air quality plan in line with BRE guidance note 06	Stage 4	Not targeted as not required.	M&E or specialist
					Ventilation - 1 credit		**1 credit:** The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building Ventilation rates in accordance with BS ISO 17772-1:2017	Mechanical Specification Design drawings	Stage 4	Not targeted as expected not achievable due to space requirements.	M&E
2	**2**	**0**		**Hea 04: Thermal Comfort**	Thermal Modelling	N/A	**1 credit:** Thermal modelling as per CIBSE AM11, compliance with "time out of range" (TOR) metric requirements and overheating limits	Thermal Modelling Report Design drawings Specification	Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems	M&E
					Design for future thermal comfort		**1 credit:** Thermal comfort criteria for the projected climate change environment		Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems under a climate change condition	
1	**1**	**0**		**Hea 05: Acoustic Performance**	Indoor Ambient Noise Level - 1 credit	N/A	**1 credit:** The building to meet appropriate standards and testing requirements for indoor ambient sound levels	Acousticians appointment to carry out pre-completion testing. Acoustician's Report	Stage 3/4	Acoustician to be appointed to determine requirements for BREEAM.	Client Acoustician Architect

1	1	0		**Hea 06: Security**	Security of Site and Building	N/A	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 purpose of the SNA will be to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development . 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 shall be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	Meeting minutes or email correspondence to demonstrate Security Needs Assessment was completed by Suitably Qualified Security Specialist at appropriate time. SQSS report outlining recommendations Design drawings and specification demonstrating incorporation of the recommendations into the design. If a recommendation is not taken on board evidence can be provided to justify this.	Stage 2 Stage 4	**At risk until consultant confirmed.** Architectural Liaison Officer (ALO) to review proposals at Stage 2 and provide Secured by Design Report. All recommendations within the SBD report to be implemented. INNOVATION credit targeted for SABRE.	Architect/ M&E
2	2	0		**Hea 07: Safe and Healthy Surroundings**	Safe Access	N/A	**1 credit:** Ensure safe access to and safe movement around the site and facilitate the activities that can have physical, mental and social benefits for occupants aiding staff retention.	Drawings demonstrating safe access for pedestrians and cyclists to the building from vehicles	Stage 4		Architect/ Landscape Architect
					Outside Space		**1 credit:** Add to the desirability of the building helping to increase its value and appeal to occupants and neighbours.	Drawings confirming location of external terraces	Stage 4	Expected office workers will have access to outside space	
Hea section sub totals				5.8%							

19	**16**	**3**	**0**	**Energy**							
13	10	3		**Ene 01: Reduction of Energy Use and Carbon Emissions**	Energy Performance	4 credits = Excellent 6 credits = Outstanding	**Up to 9 credits:** Calculate an Energy Performance Ratio for New Constructions (EPR_{NC}) using BREEAM's Ene 01 calculator starting at: **1 credit:** EPR_{NC} = 0.1 **4 credits:** EPR_{NC} = 0.4 = Excellent: **6 credits:** EPR_{NC} = 0.6 = Outstanding: **9 credits:** EPR_{NC} = 0.90 AND zero net regulated CO_2 emissions	A copy of the Building Regulations Output Document from the approved software.	Stage 4	CREDITS UPLIFTED FROM 8 TO 10 TO OBTAIN OUTSTANDING RATING	M&E
					Prediction of operational energy consumption		**Pre-requisite:** Prior to completion of the Concept Design, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance.	Workshop minutes, agreed outcomes.	Stage 4	4 credits, require information on expected energy use based on similar buildings.	M&E Client
							4 credits: Undertake additional energy modelling and risk assessment during the design and post-construction stage to generate predicted operational energy consumption figures and risks that should be monitored.	Operational energy model in accordance with CIBSE TM54 Predicted energy consumption values, design assumptions, input data and risk assessments reported as detailed in the Energy Prediction and Post-occupancy guidance available from the BREEAM website. Confirmation of suitably qualified energy modeller's qualifications and experience.	Stage 4		
2	2	0		**Ene 02: Energy Monitoring**	Sub-metering of end-use categories	1 credit= Very Good, Excellent and Outstanding	**1 credit:** Energy metering systems for 90% of the estimated annual energy consumption of each fuel End-use categories include: 1. Space heating 2. Domestic hot water heating 3. Humidification* 4. Cooling* 5. Ventilation, i.e. fans (major)* 6. Pumps 7. Lighting 8. Small power 9. Renewable or low carbon systems (separately) 10. Controls 11. Other major energy consuming systems or plant	Calculation to demonstrate 90% of the estimated annual energy consumption Specification Metering schematic Metering schedule Specification confirming the proposed BMS.	Stage 4	Meters must be installed for each end-use. Space likely will not need sub metered by area.	M&E
1	1	0		**Ene 03: External Lighting**	External lighting	N/A	**1 credit:** Energy-efficient external lighting with not less than 60 luminaire lumens per circuit watt is specified and all light fittings are controlled for the presence of daylight, and occupancy in areas of intermittent pedestrian traffic.	Drawings demonstrating the external lighting controls Specification detailing the external lighting luminous efficacy.	Stage 4	Anticipated that external lighting will comply	M&E

3	3	0		**Ene 04: Low Carbon Design**	Passive Design	N/A	**1 credit:** Implement passive design measures	Passive design analysis Results from a dynamic simulation model demonstrating the reduced energy demand and CO_2-eq emissions from the specified passive design measures. Specification detailing the passive design measures.	Stage 2	Passive design analysis to be undertaken	M&E
							1 credit: Implement free cooling analysis	Results from a dynamic simulation model and other used methods demonstrating that the free cooling strategy can meet the building's cooling demand.	Stage 2	Include in analysis	
					Low or Zero Carbon technologies		**1 credit:** LZC Feasibility study by end of Concept Design	Drawings demonstrating the location of the LZCs. LZC Study. Results from a dynamic simulation model demonstrating reductions in CO_2-eq emissions from the specified low and zero carbon technology.	Stage 2	Results of LZC study must be implemented.	
Ene section sub totals					12%						
12	**10**	**2**	**0**	**Transport**							
2	2	0		**Tra 01:Transport Assessment and Travel Plan**	Travel Plan	N/A	**2 credits**: During the feasibility stages, develop a travel plan based on a site-specific travel assessment or statement.	Site specific Transport assessment Travel Plan Meeting minutes, emails or letter to demonstrate occupiers involvement in the travel plan and support of the travel plan.	Stage 2	Travel Plan received, require Transport Statement.	Transport consultant Client
10	8	2		**Tra 02: Sustainable Transport Measures (10 credits)**	Sustainable Transport Measures	N/A	**10 credits:** Identify sustainable transport measures and award credits according to the Accessible Index AI of the project, and the total number of points achieved for the options implemented.	Evidence required dependant on criteria being targeted Cycle storage - Design plans and specification Amenities - plan with locations and distances Public transport information display Public Transport - correspondence ~~Parking - design drawing~~ ~~Car sharing - Building user policy~~ Tra 01 calculator Public Transport service timetables and node locations.	Stage 4	CREDITS UPLIFTED FROM 4 TO 8 TO OBTAIN OUTSTANDING RATING	Architect Transport Consultant Assessor
Tra section sub totals					10%						
8	**7**	**1**	**0**	**Water**							
5	4	1		**Wat 01: Water Consumption (5 credits + 1 Exemplary)**	Water consumption	1 credit = Good 1 credit = Excellent 2 credits = Outstanding	**Up to 5 credits:** Improvement over baseline case: **1 credit:** 12.5% **2 credits**: 25% **3 credits:** 40% **4 credits:** 50% **5 credits**: 55%	Specification detailing the sanitary wear and flow rates, flush volumes etc for as a minimum: – WCs – Wash-hand basin taps – Showers – Urinals – Kitchen taps: kitchenette See Table 8.3 in manual for guidance. Drawings demonstrating the location of the sanitary ware. Wat 01 Calculator. Confirmation regarding number of sanitary ware.	Stage 4	CREDITS UPLIFTED FROM 2 TO 4 TO OBTAIN OUTSTANDING RATING	M&E
1	1	0		**Wat 02: Water Monitoring (1 credit)**	Water meter	Criterion 1	**1 credit:** Specifying a water meter, with pulsed output, on the mains water supply to each building (including borehole or other source). Water-consuming plant or building areas, (with 10% or more of the total water demand) fitted with sub meters or water monitoring equipment.	Drawings demonstrating the location of the water meters and sub meters. Specification confirming water meters have pulsed output and are connected to BMS.	Stage 4	Pulsed water meter linked to BMS to be installed	M&E
2	2	0		**Wat 03: Water Leak Detection**	Leak Detection Systems	N/A	**1 credit:** A compliant leak detection system is specified or installed on the building's water supply.	Specification detailing the water leak detection system.	Stage 4	Leak detection system to be installed	M&E
					Flow Control Devices		**1 credit:** Flow control devices are fitted to each WC area/facility according to demand.	Drawings demonstrating the location of flow control devices.		Assumed no WC or sanitary facility to be specified. Control can be added to supply.	
Wat section sub totals					6.1%						

14	13	1	5	Materials							
7	7	0	5	**Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)**	Life cycle impacts	N/A	**Up to 6 credits:** Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology. Submit the Mat 01/02 Results Submission Tool to BRE at the end of concept design and Technical Design. **Option appraisal during Concept Design.** Carry out building LCA options appraisal of **2 to 4** significantly different superstructure design options. Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. **Options appraisal during Technical Design** Carry out building LCA options appraisal of **2 to 3** significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage). **One credit – Substructure and hard landscaping options appraisal during Concept Design** Carry out building LCA options appraisal of a combined total of at least **six** significantly different substructure or hard landscaping design options	Mat 01/02 Results Submission Tool The options appraisal summary document Evidence that the LCA options appraisal summary document has been received by the design team and client (meeting minutes, letter of acknowledgement) Evidence of how the LCA design options have informed the design decision-making process (e.g. meeting minutes, documented design development showing how the LCA options have affected the design) The LCA options appraisal summary document includes substructure and hard landscaping according to the criteria.	Stage 2/ 4	Credits require use of an IMPACT compliant tool. Design team to agree if they are happy to use this. 6 credits are based on superstructure appraisal. 1 credit based on Substructure and hard landscaping appraisal. Same LCA can be used as completed for the whole building . KBCN1173	Architect/ Structural engineer/ QS/ LCA specialist
1	0	1		**Mat 02: Environmental Impacts from Construction Products - Environmental Product Declarations (EPD)**	Specification of products a with a recognised environmental product declaration (EPD)	N/A	**1 credit:** Specify construction products with EPD that achieve a total EPD points score of at least 20.	Environmental Product Declarations (EPD's) for construction products specified in the design. Specification to detail products in the design to have EPDs Roughly 15-20 products needed to achieve credit.	Stage 4	Not targeted, difficult for a shell and core to achieve.	Architect Structural engineer Landscape Architect
4	4	0		**Mat 03 (Responsible Sourcing of construction products**	Pre-requisite Enabling Sustainable Procurement Measuring responsible sourcing	Criterion 1 only	**Pre-requisite:** Confirmation that all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy. **1 credit:** The principal contractor sources materials in accordance with a documented sustainable procurement plan. **Up to 3 credits:** Based on the achieved Responsible Sourcing of Materials (RSM) points: **1 credit:** RSM point = 10% **2 credits:** RSM point = 20% **3 credits:** RSM point = 30%	Specification extract detailing 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy. Sustainable procurement plan Specification extracts for materials in the superstructure, internal finishes, substructure and hardscaping. Specification must detail environmental management system certification level. Or specific product specified and the affiliated certificate is also provided. If route 2 being followed quantity of material in m3 or Kg to be provided. Two routes for compliance can be followed: Route 1 does not require quantities to be entered. Consequently it is less accurate and may result in a lower credit score than Route 2. It may be the case that across an assessment there will be a combination of routes for products. For example, Route 1 may be used for the 'timber or timber-based' category and Route 2 for the 'metal' category. Only one route may be used per materials category. Completed copy of the Mat 03 Calculator tool	Stage 4 Stage 2 Stage 4	CREDITS UPLIFTED FROM 2 TO 4 TO OBTAIN OUTSTANDING RATING	Architect Structural Engineer Landscape Architect Assessor
1	1	0		**Mat 05: Designing for Durability and Resilience**	Designing for durability and resilience	N/A	**1 credit:** Protect vulnerable parts of the building from damage and exposed parts of the building from material degradation	Specification extracts and design drawings detailing protection measures 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. Specification extracts and design drawings detailing how key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. Manual outlines applicable standards which should be adhered to. Design documents to demonstrate access to the roof and façade for cost-effective cleaning, replacement and repair. Design documents to demonstrate how the roof and façade have been designed to prevent water damage, ingress and detrimental ponding.	Stage 4	Risk assessment into material degradation to be completed by architect, MEP and structural engineer	Architect Structural Engineer
1	1	0		**Mat 06: Material Efficiency**	Material efficiency	N/A	**1 credit:** Identify and implement measures at each RIBA stage to optimise the use of materials in building design, procurement, construction, maintenance and end of life.	Technical note and calculations confirming estimated construction waste at each RIBA Stage of project	Every stage		Design team
Mat section sub totals				16.3%							

11	**10**	**1**	**1**	**Waste**							
5	**5**	**0**		**Wst 01: Construction Waste Management**	Pre-demolition audit	1 credit = Outstanding	**1 credit:** Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.	Pre-demolition audit.	Stage 2		Contractors reqs
					Construction resource efficiency		**Up to 3 credits**: RMP + pre-demolition audit + the amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated: **1 credit:** 13.3 / 11.1 **2 credits:** 7.5 / 6.5 **3 credits:** 3.4 / 3.2	Resource Management Plan or letter of commitment	Stage 4	Pre-demolition audit of existing building and hardstanding to be undertaken prior to demolition. Requirements to be included within the employer requirements 3.4m3/100m2 targeted for 3 credits	
					Diversion of resources from landfill		**1 credit:** Divert from landfill (volume or tonnage) Demolition = 80%/90% Non-demolition = 70%/ 80%		Stage 4	Demolition to be diverted from landfill 80%	
1	**0**	**1**		**Wst 02: Use of Recycled and Sustainably Sourced Aggregates (1 credit + 1 Exemplary)**	Recycled aggregates	N/A	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. Identify all aggregate uses and types on the project see Table 10.5 and Table 10.6. Determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located. Calculate the distance in kilometres travelled by all aggregates by transport type. Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points.	Pre-demolition audit. Completed Wst 02 calculator Documents to support calculator inputs		Anticipated difficult to achieve. Engineer to advise.	Structural engineer
1	**1**	**0**	**1**	**Wst 03: Operational Waste**	Operational waste	1 credit = Excellent 1 credit = Outstanding	Design drawings and/or specification extracts to confirm the following - size of the general waste storage area - size of recyclable waste storage area - the waste labels for these areas - Location of waste store with distance and safe route for building occupants - How waste store is accessed by waste collectors - location for storing organic waste - provision of water outlet for cleaning organic waste bin Correspondence to demonstrate stores are an appropriate size for the expected amount of waste. Or demonstration in line with BREEAM guidance.	Drawing demonstrating the location of the waste storage area. Specification confirming that the waste storage area will be clearly labelled, appropriately sized and accessible to building occupants.	Stage 4	Operational Waste Management Stratgey received from Equilibria.	Equilibria
1	**1**	**0**		**Wst 04: Speculative Finishes**	Speculative floor and ceiling finishes	N/A	Office buildings only: **Where the future occupant is unknown:** Carpets, other floor finishes and ceiling finishes have been installed in a show area only (<25% of the net lettable floor area) **OR Where the building is developed for a specific occupant:** the occupant selects the specified floor and ceiling finishes.	Letter for developer confirming compliance with BREEAM criteria			Architect or Client
1	**1**	**0**		**Wst 05:Adaption to Climate Change**	Resilience of structure, fabric, building services and renewables installation	N/A	**1 credit:** Climate change adaptation strategy appraisal for building services, renewables, structural and fabric resiliency at RIBA Stage 2.	Climate Change Adaption Strategy	Stage 2	Climate change risk strategy to be developed by design team and mitigation measures implemented	Architect Structural engineer M&E
2	**2**	**0**		**Wst 06:Design for Disassembly and Adaptability**	Design for disassembly and functional adaptability - recommendations	N/A	**1 credit:** Conduct a study to explore the ease of disassembly and the functional adaption potential of different design scenarios by the end of Concept Design.	Functional Adaption Strategy Disassembly and functional adaptability study, Study should contain recommendations that aim to enable and facilitate disassembly and functional adaptation.	Stage 2		Architect Structural engineer
					Disassembly and functional adaptability - implementation		**1 credit:** Provide an update during Technical Design on how the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective and information on any changes to the recommendations and solution during the development of the Technical Design. Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.	Updated Disassembly and functional adaptability study reflecting technical design, Implementation plan report Building adaptability and disassembly guide.	Stage 4	Technical note confirming measures for ease to adapt for potential future building use (i.e. material change of use) to be developed. Note to be updated at Technical Design Stage	
				Wst section sub totals	6.4%						
13	**10**	**3**	**0**	**Land Use & Ecology**							
2	**1**	**1**		**LE 01: Site Selection**	Site selection - Previously occupied land	N/A	**1 credit:** 75% footprint on previously developed land	Site plans demonstrating previous land use. Plans confirming at least 75% of new development on previous land use.	Stage 4		Architect
					Site selection - Contaminated land		**1 credit:** Contaminated land investigation by a contaminated land specialist and remediation.	Site contamination report	Stage 4		

2	2	0		**LE 02: Identifying and Understanding the Risks and Opportunities for the Project**	Survey and Evaluation	N/A	**1 credit:** Suitably Qualified Ecologist (SQE) carries out a survey and evaluation.	SQE report or Ecology Assessment Reporting Template	Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement	Ecologist
					Determining the ecological outcomes for the site		**1 credit:** The project team liaise and collaborate with representative stakeholders early enough to influence key planning decisions (typically Concept Design stage), to: .a Identify the optimal ecological outcomes for the site. .b Identify, appraise and select measures to meet the optimal ecological outcomes for the site (criterion 7.a), in line with the mitigation hierarchy of action, according to the route being used.	Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to identify the optimal ecological outcomes for the site at concept design.	Stage 2	Assumed low ecological value KBCN1194 applicable	Landscape Architect Client
3	3	0		**LE 03: Managing Negative Impacts on Ecology**	Planning and measures on site		**1 credit:** Further planning to avoid and manage negative ecological impacts on-site is carried out early enough to influence the concept design and design brief as well as site preparation planning. On-site measures for managing negative ecological impacts during site preparation and construction are implemented in-practice (e.g. mitigation measures to protect existing ecological features). Criteria 2-3 are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 Ecological risks and opportunities.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to outline plans to avoid and manage negative ecological impacts on-site. Statement of confirmation that on-site measures for managing negative ecological impacts during site preparation and construction will be implemented in-practice.	Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement KBCN1194 applicable	Ecologist Landscape Architect Client/ Contractor
					Minimising negative impacts on ecology	N/A	**2 credits :** Negative impacts from site preparation and construction works are managed according to the mitigation hierarchy) and no overall loss (see Definitions) of ecological value has occurred.	Statement of confirmation that negative impacts from site preparation and construction works will ben managed according to the mitigation hierarchy, in line with the SQE's recommendations.	Stage 4		
4	2	2		**LE 04: Change and Enhancement of Ecological Value (4 credits)**	Pre-requisite - Managing negative impacts on ecology	N/A	**Pre-requisite:** LE 03 has been achieved and the client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	Stage 2/4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement KBCN1194 applicable	Ecologist Landscape Architect Contractor
					Ecological enhancement		**1 credit:** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site.	SQE report or Ecology Assessment Reporting Template Planting plan and specification to demonstrate measures have been implemented that enhance ecological value, based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02.			
					Change and enhancement of ecology		**3 credits:** Up to three credits are awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2.	Calculation in line with GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2 to confirm increase in ecological value. Planting plan outlining species which informed the ecology calculator		Assumed additional enhancement difficult but London Plan requirements may provide credits.	
2	2	0		**LE 05:Long Term Ecology Management and Maintenance**	Long term impact on ecology management and maintenance		**1 credit:** Measures have been implemented to manage and maintain ecology throughout the project. These measures are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 . A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site.	The client or contractor has confirms that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. Statement confirming measures to be implemented to manage and maintain ecology throughout the project. In line with design team and stakeholders collaboration. SQE report or Ecology Assessment Reporting Template	Stage 4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement and recommendations for site mitigation measures to be implemented KBCN1194 applicable	Ecologist Landscape Architect Client
						N/A	**1 credit:** Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1(206) covering at least the first five years after project completion as a minimum. The landscape and management plan or similar will be updated to support maintenance of the ecological value of the site.	Statement of confirmation a section on Ecology and Biodiversity will be included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. A Landscape and Ecology Management Plan Confirmation landscape and management plan or similar will be updated to support maintenance of the ecological value of the site Letter of commitment. Employer's Requirements.			
LE section sub totals				12%							

12	**10**	**2**	**2**	**Pollution**							
3	2	1		**Pol 01: Impact of Refrigerants**	No refrigerant use	N/A	**3 credits:** No refrigerants.			Not targeted as refrigerant used	M&E
					Pre-requisite		**Pre-requisite:** All systems comply with the requirements of BS EN EN 378: 2016. **2 credits:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent. emissions (DELC CO_{2e}) of ≤100 $kgCO_{2e}$/kW cooling/heating capacity OR GWP ≤ 10. OR **1 credit:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent emissions (DELC CO_{2e}) of ≤1000 $kgCO_{2e}$/kW cooling/heating capacity.	Completed Pol 01 calculator to demonstrate Systems using refrigerants have a DELC of ≤1000$kgCO_2$-eq/kW cooling and heating capacity Specification or manufacturer information outlining refrigerant cooling and heating capacity to populate calculator Manufacturer's literature confirming the refrigerant charge of the system. Specification confirming use of system.	Stage 4	Anticipated that 1 credit can be achieved for DELCO figure and 1 credit with leak detection and automatic pump down	

					Leak Detection		**1 credit:** Leak detection system & automatic pump down.	Specification for leak detection or confirmation All systems are hermetically sealed			
2	**2**	**0**		**Pol 02:Local Air Quality**	Local air quality	N/A	**Up to 2 credits:** All heating and hot water is supplied by non-combustion systems OR alternatively; Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in the BREEAM manual	Heating, Cooling & DHW drawings and specification		Credit can be achieved if building is all electric (i.e. electricity is fuel source for heating and domestic hot water). Or if connected to a district heating network.	M&E
5	**4**	**1**	**2**	**Pol 03: Flood and Surface Water Management**	Pre-requisite	N/A	**Pre-requisite:** An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.	Confirmation of consultants qualifications.	Stage 2		Flood consultant Structural engineer
					Surface water run-off - Flood resilience		**2 credits**: FRA confirming low risk zone. OR **1 credit:** FRA confirming medium or high risk zone (not within the Functional Floodplain). Increase the resilience and resistance to flooding by raising ground floor levels or reflecting measures in BS8533:2011.	Flood Risk Assessment.		Flood risk report provided, risk is low.	
					Surface water run-off - Surface water run-off		**1 credit:** For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance **1 credit:** Flooding will not occur if local drainage system fails AND SUD techniques. Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques Alternative available if above not achievable.	Drainage report detailing the following: -Calculation results for the pre-and post development peak rate of run-off -Information showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels -Calculation results for the pre- and post development volume of run-off -Calculation results for the limiting discharge -Calculations should make an allowance for climate change Documents to confirm Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. SuDs specification		BREEAM guidance note available to confirm compliance,	
					Surface water run-off - Minimising watercourse pollution		**1 credit:** SUDs or source control systems	Design drawings Specification BRE Template Calculation of the 5mm rainfall event from the relevant areas		Criteria 17 to be reviewed, credit removed.	
1	**1**	**0**		**Pol 04: Reduction of Night Time Light Pollution**	Reduction of night time light pollution	N/A	**1 credit:** External lighting design in line with ILP Guidance notes for the reduction of obtrusive light, 2011. Daylight cut-off for general external lighting.	Drawings demonstrating the external lighting and controls. Specification confirming external lighting types and their compliance.		Light pollution statement to be provided	M&E
1	**1**	**0**		**Pol 05: Reduction of Noise Pollution**	Reduction of noise pollution	N/A	**1 credit:** Either no noise-sensitive areas or buildings within 800m radius OR noise impact assessment in compliance with BS 4142 by a suitably qualified acoustician, along with any remediations.	Acousticians Report. Drawings demonstrating the building and proximity to noise sensitive areas.		Acoustic report on external background noise levels pre and post development to be provided	Client Acoustician
Pol section sub totals					8%						

10	**2**	**7**	**0**	**Innovation**							
1	**1**	**0**		**Inn 1**	**Man 03: Responsible construction practices**	N/A	**1 credit:** CCS score of 40 or more	Employer Requirements	Stage 2	Requirements to be included within employer requirements for exemplary performance under the CCS	Contractor reqs
1	**0**	**1**		**Inn 2**	**Hea 01: Visual comfort - Exemplary performance**	N/A	**1 credit:** Achieve exemplary level daylight thresholds dependent on building types. 3% DF in 80% applicable areas required.	Calculations demonstrating exemplary levels of daylighting		Large windows may allow this credit. Not known until analysis completed	M&E
1	**1**	**0**		**Inn 4**	**Hea 06: Security**	N/A	A compliant risk based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	Secured by design certification	Stage 2	SABRE required	Client Architect
2	**0**	**2**		**Inn 5**	**Ene 01: Reduction of Energy Use and Carbon Emissions**	N/A	**Two credits** – Post-occupancy stage Achieve maximum available credits in Ene 02 Energy monitoring. In addition,multi-residential buildings must meet the requirements of the second credit for sub-metering of high energy load and tenancy areas. The client or building occupier commits funds to pay for the post occupancy stage. This requires an assessor to be appointed and to report on the actual energy consumption compared with the targets set in criterion 4. The energy model is: . a Submitted to BRE and b Retained by the building owner.	Confirmation model to be handed over POE letter Ene 02 evidence	Stage 4		Client and M&E

1	0	1		Inn 7	**Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)**	N/A	**2 credits:** The building achieves at least two more points (one for fewer than four applicable building elements) to achieve maximum credits under standard BREEAM requirements. **1 credit:** Life cycle assessment using an IMPACT compliant software tool and reduction in the environmental impact of the building	Whole life cycle carbon assessment (IMPACT modelling) included in LCC for Man 02.	Stage 2	Requires incorporation of embodied carbon study in LCC.	LCA specialist/ Cost Consultant
1	0	1		Inn 8	**Mat 03- Responsible sourcing of materials- Exemplary performance**	N/A	**1 Exemplary** RSM point = 70%	Unlikely that all specified materials will comply with responsible sourcing requirements		Unlikely to achieve this without significant constraints applied to material selections	
1	0	1		Inn 9	**Wst 01- Construction waste management- Exemplary performance**	N/A	**1 credit:** Amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated = 1.6 /1.9 Divert from landfill (volume or tonnage) Demolition = 85%/95% Non-demolition = 95%/95% Key waste groups identified for diversion at pre-construction stage RMP	RMP targets	Stage 4	Difficult level to achieve.	Contractor reqs
1	0	1		Inn 11	**Wst 05 - Adaption to climate change- Exemplary performance**	N/A	**1 credit:** Above + Hea 04 criterion 6 + 8 credits under Ene 01 + passive design analysis credit under Ene 04 + 3 credits under Wat 01 + Mat 05 criterion 2 + 1 credit under Flood risk and 2 credits under Surface water run-off within Pol 03	Credit dependant upon compliance with all BREEAM criteria.		Not achievable due to water credits	

Appendix D BREEAM Pre-assessment - Community Centre

BREEAM New Construction 2018 Pre-assessment
Community centre, shell and core assessment

Community Centre, Battersea Park Road

Pass 30% Good 45% Very Good 55% Excellent 70% Outstanding 85%

Credit Information				Target Rating	OUTSTANDING	88.5%					
Credits Available	Credits Targeted	Potential Credit	Credits Achieved to Date	Score Achieved to Date	Unclassified	8.45%					
				Credit Issue	Title	Mandatory Credits	Summary of criteria	Schedule of Evidence	Stage required	Comments	Responsible
				For full details of credit compliance requirements, refer to the BREEAM 2018 Scheme Document (manual), which takes precedence to this document							
18	18	0	0	Management							
4	4	0	0	Man 01: Project Brief and Design	Project Delivery Planning	N/A	**1 credit - Project Delivery Planning -** Prior to completion of the Concept Design, the project delivery stakeholders meet to identify and define each key phase of project delivery.	Evidence confirming stakeholders, roles and responsibilities. Roles and responsibilities matrix PEP Letters Meeting Minutes/ Agendas PAC report Pre-planning report Demonstration of feedback to stakeholders (e.g. quarterly meetings and monthly newsletter) Employer's Requirements Stage 2 Report	Stage 2	Criteria generally covered within RIBA Stage of Work reports	Architect Client
					Stakeholder Consultation		**1 credit - Stakeholder Consultation -** Prior to completion of the Concept Design, the design team consult with all interested parties on matters that cover the minimum consultation content.		Stage 2 Stage 4		
					BREEAM Advisory Professional (AP)		**Prerequisite for BREEAM AP credits -** The project team, including the client, formally agree strategic performance targets early in the design process (with the support of the BREEAM AP where appointed).	AP appointment letter or contract Document to confirm BREEAM target rating	Stage 2	Atelier Ten BREEAM AP working for the project	Client
							1 credit - BREEAM AP (Concept Design) - Involve an AP in the project at the appropriate time and level.	AP reports	Stage 2		
							1 credit - BREEAM AP (Developed Design) - Involve an AP in the project at the appropriate time and level.		Stage 4		BREEAM AP
4	4	0	0	Man 02: Life Cycle Cost and Service Life Planning	Elemental Life Cycle Cost (LCC)	N/A	**2 credits - Elemental Life Cycle Cost -** <u>At RIBA Stage 2</u> - An elemental life cycle cost (LCC) analysis	Elemental LCC plan. Design documents to demonstrate, 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.	Stage 2	Elemental analysis required at early stages	Cost consultant
					Component Level Life Options Appraisal		**1 credit - Component Life Cycle Cost -** <u>At RIBA Stage 4</u> - a component level LCC analysis. The results of the analysis and consideration of LCC have been implemented.	*Component level LCC options appraisal plan. * Component level LCC options appraisal - Component level LCC options appraisal for service life planning requires the environment of the building and other local conditions to be identified and the fundamental requirements to be met in planning the service life of the building. Decisions should be made on: – the likely design life of the building (rather than the contractual design life) – minimum functional performance criteria for each component over the building's design life – components that must be repairable, maintainable or replaceable within the design life of the building. Only the key differentiators between components and systems need to be comparatively modelled. * Design drawings, specifications or any design documents to demonstrate how the component level LCC options appraisal was used to influence building and systems design and specification to minimise life cycle costs and maximise critical value. I.e. the design should choose the recommended outcome of the LCC options appraisal or outline why the LCC choice was not incorporated into the design.	Stage 4		
					Capital Cost Reporting		**1 credit - Capital Cost Reporting -** Report the capital cost for the building in pounds per m2	Email or letter or report stating the Predicted capital cost at end of technical design. A revised figure can be submitted at post construction.	Stage 4		

6	6	0	0	**Man 03: Responsible Construction Practices**	Prerequisite - Legally Harvested and Traded Timber	1 credit = Very Good 1 credit = Excellent 1 credit = Outstanding	**Prerequisite:** All timber to be 'legally harvested and traded timber'	Letter confirming that all timber will be legally harvested and traded timber. Letter confirming the targeted CCS score and construction site impact targets. EMS Certificate. Employer's Requirements.	Stage 4	BREEAM requirements to be included within Employer Requirements Plus innovation credit for CCS	Contractors reqs
					Environmental Management		**1 credit - Environmental Management**: The principal contractor operates an EMS and practices pollution prevention policies and procedures on-site				
					BREEAM Advisory Professional (AP) (site)		**1 credit - BREEAM AP (site)** - Involve a BREEAM AP in the project at an appropriate time and level.				
					Responsible Construction Management		**1 credit - Responsible Construction Management:** Appoint a sustainability champion during construction				
					Monitoring of Construction Site Impacts		**1 credit:** a CCS score between 25 and 34 **2 credits:** a CCS score between 35 and 39				
							Monitor, record, report & target: **1 credit:** Energy and water consumption **1 credit:** Transport (construction materials & waste)				
4	4	0	0	**Man 04: Commissioning and Handover**	Commissioning - testing schedule and responsibilities	Criterion 11 = Very Good, Excellent and Outstanding	**1 credit - Commissioning - testing schedule and responsibilities:** Commissioning programme, roles and responsibilities	Commissioning Programme, Employer's Requirements confirming all criteria Specification	Stage 4	BREEAM requirements to be included within Employer Requirements	Contractors reqs
					Commissioning - design and preparation		**1 credit - Commissioning - design and preparation:** Commissioning manager appointed during design stage to undertake design reviews, provide commissioning management and performance testing input				
					Testing and inspecting building fabric		**1 credit - Testing and inspecting building fabric:** Thermographic survey and/or airtightness test and inspection				
					Handover		**1 credit - Handover:** Building User Guide and building occupiers/premises managers training schedule				
				Man section sub totals	11%						
10	8	2	0	**Health & Well Being**							
3	2	1	0	**Hea 01: Visual Comfort**	Daylighting	N/A	**2 credit :** Achieve specified average DF requirement 1 credit for Point daylight factors of 2% or more in 35% of area. 1 credit for 2% DF in occupied areas bar sales area plus EITHER (a) OR {(b) and (c)} in Table 5.2	Daylighting report outlining all required criteria Documents/ calculations demonstrating Room depth criteria	Stage 2	Not targeted. Ground floor position is less likely to meet requirements.	M&E Architect
					View out		**1 credit:** Achieve view out requirements Relevant building areas within 8m of an external window which is >20% of the surrounding wall area. Relevant areas are work stations	Drawings demonstrating workstations and applicable areas and provision of windows Window to wall ratio calculations	Stage 4	If it is not possible to confirm which areas of the building will contain workstations, benches or desks, all areas of the building designed for or likely to be occupied by workstations, benches or desks must comply with the relevant criteria.	Architect
					Internal and External Lighting		**1 credit:** External lighting design & zoning (BS5489-1:2013+ BS EN 12464-2:2014)	Design drawings Specification Lighting Schedule	Stage 4	Electrical Spec to include lighting compliance External lighting only applies	M&E
1	0	1		**Hea 02: Indoor Air Quality**	Indoor air quality	N/A	**Pre-requisite:** Produce an Indoor Air Quality Plan	Indoor air quality plan in line with BRE guidance note 06	Stage 4	Not targeted as not required.	M&E or specialist
					Ventilation - 1 credit		**1 credit:** The building has been designed to minimise the indoor concentration and recirculation of pollutants in the building Ventilation rates in accordance with BS ISO 17772-1:2017	Mechanical Specification Design drawings	Stage 4	Not targeted as expected not achievable due to space requirements.	M&E
2	2	0		**Hea 04: Thermal Comfort**	Thermal Modelling	N/A	**1 credit:** Thermal modelling as per CIBSE AM11, compliance with "time out of range" (TOR) metric requirements and overheating limits	Thermal Modelling Report Design drawings Specification	Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems	M&E
					Design for future thermal comfort		**1 credit:** Thermal comfort criteria for the projected climate change environment		Stage 4	Thermal modelling to be completed to determine thermal comfort performance with sized heating/ cooling systems under a climate change condition	
1	1	0		**Hea 05: Acoustic Performance**	Indoor Ambient Noise Level - 1 credit	N/A	**1 credit:** The building to achieve indoor ambient noise levels that comply with the design ranges given in Section 7 of BS 8233:2014.	Acousticians appointment to carry out pre-completion testing. Acoustician's Report	Stage 3/4	Acoustician to be appointed to determine requirements for BREEAM.	Client Acoustician Architect

1	1	0		**Hea 06: Security**	Security of Site and Building	N/A	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 purpose of the SNA will be to identify attributes of the proposal, site and surroundings which may influence the approach to security for the development . 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 shall be incorporated into proposals and implemented in the as-built development. Any deviation from those controls and recommendations shall be justified and agreed with the SQSS.	Meeting minutes or email correspondence to demonstrate Security Needs Assessment was completed by Suitably Qualified Security Specialist at appropriate time. SQSS report outlining recommendations Design drawings and specification demonstrating incorporation of the recommendations into the design. If a recommendation is not taken on board evidence can be provided to justify this.	Stage 2 Stage 4	**At risk until consultant confirmed.** Architectural Liaison Officer (ALO) to review proposals at Stage 2 and provide Secured by Design Report. All recommendations within the SBD report to be implemented. INNOVATION credit targeted for SABRE.	Architect/ M&E
2	2	0		**Hea 07: Safe and Healthy Surroundings**	Safe Access	N/A	**1 credit:** Ensure safe access to and safe movement around the site and facilitate the activities that can have physical, mental and social benefits for occupants aiding staff retention.	Drawings demonstrating safe access for pedestrians and cyclists to the building from vehicles	Stage 4		Architect/ Landscape Architect
					Outside Space		**1 credit:** Add to the desirability of the building helping to increase its value and appeal to occupants and neighbours.	Drawings confirming location of external terraces	Stage 4	At risk, will retail have outside space?	
Hea section sub totals				6.4%							

19	**16**	**3**	**0**	**Energy**							
13	10	3		**Ene 01: Reduction of Energy Use and Carbon Emissions**	Energy Performance	4 credits = Excellent 6 credits = Outstanding	**Up to 9 credits:** Calculate an Energy Performance Ratio for New Constructions (EPR_{NC}) using BREEAM's Ene 01 calculator starting at: **1 credit:** EPR_{NC} = 0.1 **4 credits:** EPR_{NC} = 0.4 = Excellent: **6 credits:** EPR_{NC} = 0.6 = Outstanding: **9 credits:** EPR_{NC} = 0.90 AND zero net regulated CO_2 emissions	A copy of the Building Regulations Output Document from the approved software.	Stage 4	CREDITS UPLIFTED FROM 8 TO 10 TO OBTAIN OUTSTANDING RATING	M&E
					Prediction of operational energy consumption		**Pre-requisite:** Prior to completion of the Concept Design, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance. **4 credits:** Undertake additional energy modelling and risk assessment during the design and post-construction stage to generate predicted operational energy consumption figures and risks that should be monitored.	Workshop minutes, agreed outcomes. Operational energy model in accordance with CIBSE TM54 Predicted energy consumption values, design assumptions, input data and risk assessments reported as detailed in the Energy Prediction and Post-occupancy guidance available from the BREEAM website. Confirmation of suitably qualified energy modeller's qualifications and experience.	Stage 4 Stage 4	4 credits, require information on expected energy use based on similar buildings.	M&E Client
2	2	0		**Ene 02: Energy Monitoring**	Sub-metering of end-use categories	1 credit= Very Good, Excellent and Outstanding	**1 credit:** Energy metering systems for 90% of the estimated annual energy consumption of each fuel End-use categories include: 1. Space heating 2. Domestic hot water heating 3. Humidification* 4. Cooling* 5. Ventilation, i.e. fans (major)* 6. Pumps 7. Lighting 8. Small power 9. Renewable or low carbon systems (separately) 10. Controls 11. Other major energy consuming systems or plant	Calculation to demonstrate 90% of the estimated annual energy consumption Specification Metering schematic Metering schedule Specification confirming the proposed BMS.	Stage 4	Meters must be installed on the energy supply to each separate tenanted unit or floor plate within the assessed development	M&E
1	1	0		**Ene 03: External Lighting**	External lighting	N/A	**1 credit:** Energy-efficient external lighting with not less than 60 luminaire lumens per circuit watt is specified and all light fittings are controlled for the presence of daylight, and occupancy in areas of intermittent pedestrian traffic.	Drawings demonstrating the external lighting controls Specification detailing the external lighting luminous efficacy.	Stage 4	Anticipated that external lighting will comply	M&E

3	3	0		**Ene 04: Low Carbon Design**	Passive Design	N/A	**1 credit:** Implement passive design measures	Passive design analysis Results from a dynamic simulation model demonstrating the reduced energy demand and CO_2-eq emissions from the specified passive design measures. Specification detailing the passive design measures.	Stage 2	Passive design analysis to be undertaken	M&E
							1 credit: Implement free cooling analysis	Results from a dynamic simulation model and other used methods demonstrating that the free cooling strategy can meet the building's cooling demand.	Stage 2	Include in analysis	
					Low or Zero Carbon technologies		**1 credit:** LZC Feasibility study by end of Concept Design	Drawings demonstrating the location of the LZCs. LZC Study. Results from a dynamic simulation model demonstrating reductions in CO_2-eq emissions from the specified low and zero carbon technology.	Stage 2	Results of LZC study must be implemented.	
Ene section sub totals					12%						
12	**10**	**2**	**0**	**Transport**							
2	2	0		**Tra 01:Transport Assessment and Travel Plan**	Travel Plan	N/A	**2 credits**: During the feasibility stages, develop a travel plan based on a site-specific travel assessment or statement.	Site specific Transport assessment Travel Plan Meeting minutes, emails or letter to demonstrate occupiers involvement in the travel plan and support of the travel plan.	Stage 2	Travel Plan received, require Transport Statement.	Transport consultant Client
10	8	2		**Tra 02: Sustainable Transport Measures (10 credits)**	Sustainable Transport Measures	N/A	**10 credits:** Identify sustainable transport measures and award credits according to the Accessible Index AI of the project, and the total number of points achieved for the options implemented.	Evidence required dependant on criteria being targeted Cycle storage - Design plans and specification Amenities - plan with locations and distances Public transport information display Public Transport - correspondence ~~Parking - design drawing~~ ~~Car sharing - Building user policy~~ Tra 01 calculator Public Transport service timetables and node locations.	Stage 4	CREDITS UPLIFTED FROM 4 TO 8 TO OBTAIN OUTSTANDING RATING	Architect Transport Consultant Assessor
Tra section sub totals					10%						
8	**7**	**1**	**0**	**Water**							
5	4	1		**Wat 01: Water Consumption (5 credits + 1 Exemplary)**	Water consumption	1 credit = Good 1 credit = Excellent 2 credits = Outstanding	**Up to 5 credits:** Improvement over baseline case: **1 credit:** 12.5% **2 credits**: 25% **3 credits:** 40% **4 credits:** 50% **5 credits**: 55%	Specification detailing the sanitary wear and flow rates, flush volumes etc for as a minimum: – WCs – Wash-hand basin taps – Showers – Urinals – Kitchen taps: kitchenette See Table 8.3 in manual for guidance. Drawings demonstrating the location of the sanitary ware. Wat 01 Calculator. Confirmation regarding number of sanitary ware.	Stage 4	CREDITS UPLIFTED FROM 2 TO 4 TO OBTAIN OUTSTANDING RATING.	M&E
1	1	0		**Wat 02: Water Monitoring (1 credit)**	Water meter	Criterion 1	**1 credit:** Specifying a water meter, with pulsed output, on the mains water supply to each building (including borehole or other source). Water-consuming plant or building areas, (with 10% or more of the total water demand) fitted with sub meters or water monitoring equipment.	Drawings demonstrating the location of the water meters and sub meters. Specification confirming water meters have pulsed output and are connected to BMS.	Stage 4	Pulsed water meter linked to BMS to be installed	M&E
2	2	0		**Wat 03: Water Leak Detection**	Leak Detection Systems	N/A	**1 credit:** A compliant leak detection system is specified or installed on the building's water supply.	Specification detailing the water leak detection system.	Stage 4	Leak detection system to be installed	M&E
					Flow Control Devices		**1 credit:** Flow control devices are fitted to each WC area/facility according to demand.	Drawings demonstrating the location of flow control devices.		Assumed no WC or sanitary facility to be specified. Control can be added to supply.	
Wat section sub totals					6.1%						

14	13	1	5	Materials							
7	7	0	5	**Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)**	Life cycle impacts	N/A	**Up to 6 credits:** Carry out a building LCA on of the superstructure design using either the BREEAM Simplified Building LCA tool or an IMPACT Compliant LCA tool according to the methodology. Submit the Mat 01/02 Results Submission Tool to BRE at the end of concept design and Technical Design. **Option appraisal during Concept Design.** Carry out building LCA options appraisal of **2 to 4** significantly different superstructure design options. Integrate the LCA options appraisal activity within the wider design decision-making process. Record this in an options appraisal summary document. **Options appraisal during Technical Design** Carry out building LCA options appraisal of **2 to 3** significantly different superstructure design options (based on the selected Concept Design option and as applicable to the Technical Design stage). **One credit – Substructure and hard landscaping options appraisal during Concept Design** Carry out building LCA options appraisal of a combined total of at least **six** significantly different substructure or hard landscaping design options	Mat 01/02 Results Submission Tool The options appraisal summary document Evidence that the LCA options appraisal summary document has been received by the design team and client (meeting minutes, letter of acknowledgement) Evidence of how the LCA design options have informed the design decision-making process (e.g. meeting minutes, documented design development showing how the LCA options have affected the design) The LCA options appraisal summary document includes substructure and hard landscaping according to the criteria.	Stage 2/ 4	Credits require use of an IMPACT compliant tool. Design team to agree if they are happy to use this. 6 credits are based on superstructure appraisal. 1 credit based on Substructure and hardlandscaping appraisal. Same LCA can be used as completed for the whole building KBCN1173	Architect/ Structural engineer/ QS/ LCA specialist
1	0	1		**Mat 02: Environmental Impacts from Construction Products - Environmental Product Declarations (EPD)**	Specification of products a with a recognised environmental product declaration (EPD)	N/A	**1 credit:** Specify construction products with EPD that achieve a total EPD points score of at least 20.	Environmental Product Declarations (EPD's) for construction products specified in the design. Specification to detail products in the design to have EPDs Roughly 15-20 products needed to achieve credit.	Stage 4	Not targeted Difficult to achieved for a shell and core project	Architect Structural engineer Landscape Architect
4	4	0		**Mat 03 (Responsible Sourcing of construction products**	Pre-requisite	Criterion 1 only	**Pre-requisite:** Confirmation that all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy.	Specification extract detailing 100% of timber and timber-based products used on the project are 'Legal' and 'Sustainable' as per the UK Government's Timber Procurement Policy.	Stage 4	CREDITS UPLIFTED FROM 2 TO 4 TO OBTAIN OUTSTANDING RATING.	Architect Structural Engineer Landscape Architect Assessor
					Enabling Sustainable Procurement		**1 credit:** The principal contractor sources materials in accordance with a documented sustainable procurement plan.	Sustainable procurement plan	Stage 2		
					Measuring responsible sourcing		**Up to 3 credits:** Based on the achieved Responsible Sourcing of Materials (RSM) points: **1 credit:** RSM point = 10% **2 credits:** RSM point = 20% **3 credits:** RSM point = 30%	Specification extracts for materials in the superstructure, internal finishes, substructure and hardscaping. Specification must detail environmental management system certification level. Or specific product specified and the affiliated certificate is also provided. If route 2 being followed quantity of material in m3 or Kg to be provided. Two routes for compliance can be followed: Route 1 does not require quantities to be entered. Consequently it is less accurate and may result in a lower credit score than Route 2. It may be the case that across an assessment there will be a combination of routes for products. For example, Route 1 may be used for the 'timber or timber-based' category and Route 2 for the 'metal' category. Only one route may be used per materials category. Completed copy of the Mat 03 Calculator tool	Stage 4		
1	1	0		**Mat 05: Designing for Durability and Resilience**	Designing for durability and resilience	N/A	**1 credit:** Protect vulnerable parts of the building from damage and exposed parts of the building from material degradation	Specification extracts and design drawings detailing protection measures 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. Specification extracts and design drawings detailing how key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. Manual outlines applicable standards which should be adhered to. Design documents to demonstrate access to the roof and façade for cost-effective cleaning, replacement and repair. Design documents to demonstrate how the roof and façade have been designed to prevent water damage, ingress and detrimental ponding.	Stage 4	Risk assessment into material degradation to be completed by architect, MEP and structural engineer	Architect Structural Engineer
1	1	0		**Mat 06: Material Efficiency**	Material efficiency	N/A	**1 credit:** Identify and implement measures <u>at each RIBA stage</u> to optimise the use of materials in building design, procurement, construction, maintenance and end of life.	Technical note and calculations confirming estimated construction waste at each RIBA Stage of project	Every stage		Design team
Mat section sub totals 16.3%											

10	9	1	1	Waste							
5	5	0		**Wst 01: Construction Waste Management**	Pre-demolition audit	1 credit = Outstanding	**1 credit:** Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition.	Pre-demolition audit.	Stage 2		Contractors reqs
					Construction resource efficiency		**Up to 3 credits**: RMP + pre-demolition audit + the amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated: **1 credit:** 13.3 / 11.1 **2 credits:** 7.5 / 6.5 **3 credits:** 3.4 / 3.2	Resource Management Plan or letter of commitment	Stage 4	Pre-demolition audit of existing building and hardstanding to be undertaken prior to demolition. Requirements to be included within the employer requirements 3.4m3/100m2 targeted for 3 credits Demolition to be diverted from landfill 80%	
					Diversion of resources from landfill		**1 credit:** Divert from landfill (volume or tonnage) Demolition = 80%/90% Non-demolition = 70%/ 80%		Stage 4		
1	0	1		**Wst 02: Use of Recycled and Sustainably Sourced Aggregates (1 credit + 1 Exemplary)**	Recycled aggregates	N/A	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. Identify all aggregate uses and types on the project see Table 10.5 and Table 10.6. Determine the quantity in tonnes for each identified use and aggregate type. Identify the region in which the aggregate source is located. Calculate the distance in kilometres travelled by all aggregates by transport type. Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points.	Pre-demolition audit. Completed Wst 02 calculator Documents to support calculator inputs		Anticipated difficult to achieve. Engineer to advise.	Structural engineer
1	1	0	1	**Wst 03: Operational Waste**	Operational waste	1 credit = Excellent 1 credit = Outstanding	Design drawings and/or specification extracts to confirm the following - size of the general waste storage area - size of recyclable waste storage area - the waste labels for these areas - Location of waste store with distance and safe route for building occupants - How waste store is accessed by waste collectors - location for storing organic waste - provision of water outlet for cleaning organic waste bin Correspondence to demonstrate stores are an appropriate size for the expected amount of waste. Or demonstration in line with BREEAM guidance.	Drawing demonstrating the location of the waste storage area. Specification confirming that the waste storage area will be clearly labelled, appropriately sized and accessible to building occupants.	Stage 4	Operational Waste Management Stratgey received from Equilibria.	Equilibria
1	1	0		**Wst 05:Adaption to Climate Change**	Resilience of structure, fabric, building services and renewables installation	N/A	**1 credit:** Climate change adaptation strategy appraisal for building services, renewables, structural and fabric resiliency at RIBA Stage 2.	Climate Change Adaption Strategy	Stage 2	Climate change risk strategy to be developed by design team and mitigation measures implemented	Architect Structural engineer M&E
2	2	0		**Wst 06:Design for Disassembly and Adaptability**	Design for disassembly and functional adaptability - recommendations	N/A	**1 credit:** Conduct a study to explore the ease of disassembly and the functional adaption potential of different design scenarios by the end of Concept Design.	Functional Adaption Strategy Disassembly and functional adaptability study, Study should contain recommendations that aim to enable and facilitate disassembly and functional adaptation. Updated Disassembly and functional adaptability study reflecting technical design, Implementation plan report Building adaptability and disassembly guide.	Stage 2		Architect Structural engineer
					Disassembly and functional adaptability - implementation		**1 credit:** Provide an update during Technical Design on how the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective and information on any changes to the recommendations and solution during the development of the Technical Design. Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.		Stage 4	Technical note confirming measures for ease to adapt for potential future building use (i.e. material change of use) to be developed. Note to be updated at Technical Design Stage	
Wst section sub totals				6.3%							

13	10	3	0	Land Use & Ecology							
2	1	1		**LE 01: Site Selection**	Site selection - Previously occupied land	N/A	**1 credit:** 75% footprint on previously developed land	Site plans demonstrating previous land use. Plans confirming at least 75% of new development on previous land use.	Stage 4		Architect
					Site selection - Contaminated land		**1 credit:** Contaminated land investigation by a contaminated land specialist and remediation.	Site contamination report	Stage 4		
2	2	0		**LE 02: Identifying and Understanding the Risks and Opportunities for the Project**	Survey and Evaluation	N/A	**1 credit:** Suitably Qualified Ecologist (SQE) carries out a survey and evaluation.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to identify the optimal ecological outcomes for the site at concept design.	Stage 2 Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement Assumed low ecological value KBCN1194 applicable	Ecologist Landscape Architect Client
					Determining the ecological outcomes for the site		**1 credit:** The project team liaise and collaborate with representative stakeholders early enough to influence key planning decisions (typically Concept Design stage), to: .a Identify the optimal ecological outcomes for the site. .b Identify, appraise and select measures to meet the optimal ecological outcomes for the site (criterion 7.a), in line with the mitigation hierarchy of action, according to the route being used.				
3	3	0		**LE 03: Managing Negative Impacts on Ecology**	Planning and measures on site		**1 credit:** Further planning to avoid and manage negative ecological impacts on-site is carried out early enough to influence the concept design and design brief as well as site preparation planning. On-site measures for managing negative ecological impacts during site preparation and construction are implemented in-practice (e.g. mitigation measures to protect existing ecological features). Criteria 2-3 are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 Ecological risks and opportunities.	SQE report or Ecology Assessment Reporting Template Meeting minutes or email correspondence to demonstrate there was collaboration between design team and stakeholders to outline plans to avoid and manage negative ecological impacts on-site. Statement of confirmation that on-site measures for managing negative ecological impacts during site preparation and construction will be implemented in-practice.	Stage 2	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement KBCN1194 applicable	Ecologist Landscape Architect Client/ Contractor
					Minimising negative impacts on ecology	N/A	**2 credits :** Negative impacts from site preparation and construction works are managed according to the mitigation hierarchy) and no overall loss (see Definitions) of ecological value has occurred.	Statement of confirmation that negative impacts from site preparation and construction works will ben managed according to the mitigation hierarchy, in line with the SQE's recommendations.	Stage 4		
4	2	2		**LE 04: Change and Enhancement of Ecological Value (4 credits)**	Pre-requisite - Managing negative impacts on ecology	N/A	**Pre-requisite:** LE 03 has been achieved and the client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	The client or contractor confirms compliance is monitored against all relevant UK, EU or international legislation relating to the ecology of the site.	Stage 2/4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement KBCN1194 applicable	Ecologist Landscape Architect Contractor
					Ecological enhancement		**1 credit:** The project team liaising and collaborating with representative stakeholders, taking into consideration data collated and shared, have implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site.	SQE report or Ecology Assessment Reporting Template Planting plan and specification to demonstrate measures have been implemented that enhance ecological value, based on input from the project team and SQE in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02.			
					Change and enhancement of ecology		**3 credits:** Up to three credits are awarded based on the change in ecological value occurring as a result of the project. This must be calculated in accordance with the process set out in GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2.	Calculation in line with GN36 - BREEAM, CEEQUAL and HQM Ecology Calculation Methodology – Route 2 to confirm increase in ecological value. Planting plan outlining species which informed the ecology calculator		Assumed additional enhancement difficult but London Plan requirements may provide credits.	
2	2	0		**LE 05:Long Term Ecology Management and Maintenance**	Long term impact on ecology management and maintenance	N/A	**1 credit:** Measures have been implemented to manage and maintain ecology throughout the project. These measures are based on input from the project team in collaboration with representative stakeholders and data collated as part of the 'Determining ecological outcomes' in LE 02 . A section on Ecology and Biodiversity has been included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. **1 credit:** Landscape and Ecology Management Plan, or equivalent, has been developed in accordance with BS 42020:2013 Section 11.1(206) covering at least the first five years after project completion as a minimum. The landscape and management plan or similar will be updated to support maintenance of the ecological value of the site.	The client or contractor has confirms that compliance is being monitored against all relevant UK, EU and international standards relating to the ecology of the site. Statement confirming measures to be implemented to manage and maintain ecology throughout the project. In line with design team and stakeholders collaboration. SQE report or Ecology Assessment Reporting Template Statement of confirmation a section on Ecology and Biodiversity will be included as part of the tenant or building owner information supplied, to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. A Landscape and Ecology Management Plan Confirmation landscape and management plan or similar will be updated to support maintenance of the ecological value of the site Letter of commitment. Employer's Requirements.	Stage 4	Ecologist to be appointed at RIBA Stage 2 to advise on ecological protection and enhancement and recommendations for site mitigation measures to be implemented KBCN1194 applicable	Ecologist Landscape Architect Client
LE section sub totals				12%							

12	**10**	**2**	**2**	**Pollution**							
3	**2**	**1**		**Pol 01: Impact of Refrigerants**	No refrigerant use	N/A	**3 credits:** No refrigerants.			Not targeted as refrigerant used	M&E
					Pre-requisite		**Pre-requisite:** All systems comply with the requirements of BS EN EN 378: 2016. **2 credits:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent. emissions (DELC CO_{2e}) of ≤100 $kgCO_{2e}$/kW cooling/heating capacity OR GWP ≤ 10. OR **1 credit:** Refrigerants have Direct Effect Life Cycle CO_2 equivalent emissions (DELC CO_{2e}) of ≤1000 $kgCO_{2e}$/kW cooling/heating capacity.	Completed Pol 01 calculator to demonstrate Systems using refrigerants have a DELC of ≤1000$kgCO_2$-eq/kW cooling and heating capacity Specification or manufacturer information outlining refrigerant cooling and heating capacity to populate calculator Manufacturer's literature confirming the refrigerant charge of the system. Specification confirming use of system.	Stage 4	Anticipated that 1 credit can be achieved for DELCO figure and 1 credit with leak detection and automatic pump down	
					Leak Detection		**1 credit:** Leak detection system & automatic pump down.	Specification for leak detection or confirmation All systems are hermetically sealed			
2	**2**	**0**		**Pol 02:Local Air Quality**	Local air quality	N/A	**Up to 2 credits:** All heating and hot water is supplied by non-combustion systems OR alternatively; Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in the BREEAM manual	Heating, Cooling & DHW drawings and specification		Credit can be achieved if building is all electric (i.e. electricity is fuel source for heating and domestic hot water). Or if connected to a district heating network.	M&E
5	**4**	**1**	**2**	**Pol 03: Flood and Surface Water Management**	Pre-requisite	N/A	**Pre-requisite:** An appropriate consultant is appointed to carry out and demonstrate the development's compliance with all criteria.	Confirmation of consultants qualifications.	Stage 2		
					Surface water run-off - Flood resilience		**2 credits**: FRA confirming low risk zone. OR **1 credit:** FRA confirming medium or high risk zone (not within the Functional Floodplain). Increase the resilience and resistance to flooding by raising ground floor levels or reflecting measures in BS8533:2011.	Flood Risk Assessment.		Flood risk report provided, risk is low.	
					Surface water run-off - Surface water run-off		**1 credit:** For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance **1 credit:** Flooding will not occur if local drainage system fails AND SUD techniques. Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques Alternative available if above not achievable.	Drainage report detailing the following: -Calculation results for the pre-and post development peak rate of run-off -Information showing the proposed drainage solution, system failure flood flow routes, potential flood ponding levels and ground floor levels -Calculation results for the pre- and post development volume of run-off -Calculation results for the limiting discharge -Calculations should make an allowance for climate change Documents to confirm Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. SuDs specification		BREEAM guidance note available to confirm compliance,	Flood consultant Structural engineer
					Surface water run-off - Minimising watercourse pollution		**1 credit:** SUDs or source control systems	Design drawings Specification BRE Template Calculation of the 5mm rainfall event from the relevant areas		Criteria 17 to be reveiwed, credit removed.	
1	**1**	**0**		**Pol 04: Reduction of Night Time Light Pollution**	Reduction of night time light pollution	N/A	**1 credit:** External lighting design in line with ILP Guidance notes for the reduction of obtrusive light, 2011. Daylight cut-off for general external lighting.	Drawings demonstrating the external lighting and controls. Specification confirming external lighting types and their compliance.		Light pollution statement to be provided	M&E
1	**1**	**0**		**Pol 05: Reduction of Noise Pollution**	Reduction of noise pollution	N/A	**1 credit:** Either no noise-sensitive areas or buildings within 800m radius OR noise impact assessment in compliance with BS 4142 by a suitably qualified acoustician, along with any remediations.	Acousticians Report. Drawings demonstrating the building and proximity to noise sensitive areas.		Acoustic report on external background noise levels pre and post development to be provided	Client Acoustician
Pol section sub totals 8%											

10	**2**	**8**	**0**	**Innovation**							
1	**1**	**0**		**Inn 1**	**Man 03: Responsible construction practices**	N/A	**1 credit:** CCS score of 40 or more	Employer Requirements	Stage 2	Requirements to be included within employer requirements for exemplary performance under the CCS	Contrcator reqs

1	0	1		Inn 2	Hea 01: Visual comfort - Exemplary performance	N/A	**1 credit:** Achieve exemplary level daylight thresholds dependent on building types. 3% DF in 80% applicable areas required.	Calculations demonstrating exemplary levels of daylighting		Large windows may allow this credit. Not known until analysis completed	M&E
1	1	0		Inn 4	Hea 06: Security	N/A	A compliant risk based security rating scheme has been used. The performance against the scheme has been confirmed by independent assessment and verification.	SABRE certification	Stage 2	SABRE required	Client Architect
2	0	2		Inn 5	Ene 01: Reduction of Energy Use and Carbon Emissions	N/A	**Two credits** – Post-occupancy stage Achieve maximum available credits in Ene 02 Energy monitoring. In addition,multi-residential buildings must meet the requirements of the second credit for sub-metering of high energy load and tenancy areas. The client or building occupier commits funds to pay for the post occupancy stage. This requires an assessor to be appointed and to report on the actual energy consumption compared with the targets set in criterion 4. The energy model is: . a Submitted to BRE and b Retained by the building owner.	Confirmation model to be handed over Ene 02 evidence	Stage 4		Client and M&E
1	0	1		Inn 6	Wat 01: Water Consumption	N/A	**1 credit:** 65% improvement over baseline case.	RWH or GWR to provide majority of water consumption for non-potable uses		RWH or GWR required to achieve credit	
1	0	1		Inn 7	Mat 01: Environmental Impacts from Construction Products - Building Life Cycle Assessment (LCA)	N/A	**2 credits:** The building achieves at least two more points (one for fewer than four applicable building elements) to achieve maximum credits under standard BREEAM requirements. **1 credit:** Life cycle assessment using an IMPACT compliant software tool and reduction in the environmental impact of the building	Whole life cycle carbon assessment (IMPACT modelling) included in LCC fopr Man 02.	Stage 2	Requires incorporation of embodied carbon study in LCC.	LCA specialist/ Cost Consultant
1	0	1		Inn 8	Mat 03- Responsible sourcing of materials- Exemplary performance	N/A	**1 Exemplary** RSM point = 70%	Unlikely that all specified materials will comply with responsible sourcing requirements		Unlikely to achieve this without significant constraints applied to material selections	
1	0	1		Inn 9	Wst 01- Construction waste management- Exemplary performance	N/A	**1 credit:** Amount of non-hazardous on-site/off-site construction waste (m^3/100m^2 or tonnes/100m^2) generated = 1.6 /1.9 Divert from landfill (volume or tonnage) Demolition = 85%/95% Non-demolition = 95%/95% Key waste groups identified for diversion at pre-construction stage RMP	RMP targets	Stage 4	Difficult level to achieve.	Contrcator reqs
0	0	0		Inn 10	Wst 02 - Use of Recycled and Sustainably Sourced Aggregates	N/A	Significant use (35%) of recycled or secondary aggregates in 'high-grade' building aggregate uses. % of high-grade aggregate specified per application must meet the minimum levels. Elements not meeting the minimum should be considered as primary aggregate when calculating the total high grade aggregate specified. Secondary aggregate must be transported within 30 km by road transport.	Unlikely to be achieved		Unlikely to achieve this due to BREEAM requirements for recycled aggregates by end use and requirement to use local suppliers	
1	0	1		Inn 11	Wst 05 - Adaption to climate change- Exemplary performance	N/A	**1 credit:** Above + Hea 04 criterion 6 + 8 credits under Ene 01 + passive design analysis credit under Ene 04 + 3 credits under Wat 01 + Mat 05 criterion 2 + 1 credit under Flood risk and 2 credits under Surface water run-off within Pol 03	Credit dependant upon compliance with all BREEAM criteria.		Not achievable due to water credits.	

Appendix E HQM Pre-assessment

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
48	**27**	**1**	**2**	**Transport and Movement**							
12	4	0	0	1.1 Public Transport Availability	01 Accessibility Index (crit 1-3)	None	To recognise and encourage developments with good proximity to public transport networks, in turn promoting ease of access for occupants.	Up to 12 credits: Credits are awarded based on Public Transport Accessibility Index scores. AI is calculated from information on: the distance to public transport nodes; the public transport type serving compliant nodes; and the frequency of services stopping at each node.	Stage 4	PTAL is 3 4 credits achievable	Transport consultant
3	0	0			02 Improved Local service	None		3 credits: Increase in public transport to the site negotiated with local transport providers.		Credits not targeted	
0	0	0		1.2 Sustainable Transport Options	01 Home Information (crit 1)	Prerequisite		Home information needs to be provided as part of or all of the criteria in this issue. Please see 11.2 Home Information.	Stage 4	Commitment to be provided that compliant home information will be made.	Client
6	3	0	0		02 Cycle storage (crit 2-4)	None	To provide alternative sustainable transport options and the associated facilities to reduce dependency on traditionally fuelled cars.	Up to 6 credits: A number of cycle storage spaces must be provided depending on house type, according to the criteria in the HQM Technical Manual Table 2 (p13). There must be a safe pedestrian route from the cycle storage to the entrance of the home.	Stage 4	Design drawings needed to show compliance For 3 credits: Studio or 1 b - 1 cycle space for every 2 homes is provided 2 and 3 bedrooms - 1 space per home. 4 bed and above 2 spaces per home.	Architect
4	0	0			03 Cycle networks (crit 5-7)			4 credits: Consultation with the local authority is carried out on the state of current cycle routes. The home must be connected to a safe cycle route via a safe pedestrian route.		Not targeted	Design team
4	2	0	0		04 Electric charging points (crit 8-9)			4 credits: The home must be provided with safe access to a dedicated electric vehicle charging point or a communal charging point located within close proximity to the home via a safe pedestrian route. Home information for electric charging points must be provided.	Stage 4	20% of communal parking to be EV.	Client and Design Team
3	2	1	2		05 Car clubs (crit 10-11)			2 credits: A compliant Car Club is within 650m of the home via a safe pedestrian route. One further credit can be awarded where at least 60% of the vehicles available from the compliant Car Club are hybrid or electric vehicles.	Stage 2	Enterprise Car Club, Ubeeqo and Zipcar appear to serve this area. % electric to be investigated.	Client
11	11	0	0	1.3 Local Amenities	01 Key local amenities (crit 1)	None	To ensure occupants have access to a range of key amenities in the local area and to reduce dependency on private transport.	11 credits: Three or more amenities must be located within walking distance of the home via safe pedestrian routes.	Stage 2	cash machine and supermarket available. ! More to be confirmed.	Architect/ Client
5	5	0	0		02 Beneficial local amenities (crit 2-3)			5 credits: Criterion 1 (above) must be met, and two or more of the following amenities must be located within 1.5 miles of the home via safe pedestrian routes or via 30min public transport: recreation or leisure facilities; education facilities; large scale retail; community facilities.	Stage 2	Gym and school within 1.5 miles.	Architect/ Client
				TM	10.0%						
58	**35**	**3**	**0**	**Outdoors**							
0	0	0	0	2.1 Identifying Ecological Risks and Opportunities	01 Assessment route selection (crit 1-2)	Prerequisite	To work out the ecological baseline and zone of influence of the site and identify risks and opportunities for achieving the best outcomes.	An assessment route for the project has been determined through GN: 34. The client or contractor confirms compliance is, or will be, monitored against all relevant UK and EU or International legislation relating to the ecology of the site.	Stage 2	Suitably qualified ecologist to be procured.	Client/ Ecologist
3	3	0	0		02 Survey and evaluation (crit 3-6)	None		3 credits: COMPREHENSIVE ROUTE A suitably qualified ecologist is appointed sufficiently early in the project stage to ensure involvement with site configuration and, where necessary, influence over strategic planning decisions. Before the design brief, a suitably qualified ecologist has carried out an appropriate level of survey and evaluation for the site and its zone of influence to determine the ecological baseline. Information and data are collated and shared with the project team to inform the site preparation, design or construction works.	Action before any work on site	Ecologist to complete survey and provide input to design team	Client/ Ecologist
3	3	0			03 Determining ecological outcomes (crit 7-10)	None		3 credits: COMPREHENSIVE ROUTE During early design stages, the project team liaise and collaborate with representative stakeholders to identify, appraise and agree actions for the project that will achieve the optimal ecological outcomes, in line with the mitigation hierarchy.	Stage 2/3	Ecologist to work with design team	Client/ Ecologist/ Design team
1	0	1	0		04 Wider Site sustainability (crit 11-12)	None		1 credit: COMPREHENSIVE ROUTE When determining the optimal ecological outcome for the site, consider the wider site sustainability-related activities and the potential for ecosystem service related benefits.		Ecologist can advise on inclusion.	Client/ Ecologist/ Design team

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
0	0	0		2.2 Managing Impacts on Ecology	01 Ecological risks and opportunities for the project (Crit 1-2)	Prerequisite	To avoid, or limit as far as possible, negative impacts on the ecology of the site and its zone of influence arising as a result of the project.	The 02 Survey and Evaluation, and 03 Determining Ecological Outcomes criteria within the 2.1 Identifying Ecological Risks and Opportunities issue have been achieved. The client or contractor has confirmed that compliance is, or will be, monitored against all relevant UK, EU, and International legislative requirements relating to the ecology of the site.	Stage 2		Client
3	3	0			02 Liaison, implementation and data (Crit 3-5)	None		3 credits: Roles and responsibilities have been clearly defined, allocated and implemented deliver the actions for issue 2.1. Site preparation and construction works have been planned for and implemented early enough to deliver the actions agreed in issue 2.1. The project team have liaised and collaborated with representative stakeholders, taking into consideration data collated and shared, and have implemented actions during site preparation and construction works.	Stage 2/3	Roles and responsibilities to be discussed and outlined	Client/ Design team
6	6	0			03 Routes of rigour - Managing negative impacts (Crit 6-9)	None		Up to 6 credits: COMPREHENSIVE ROUTE Negative impacts from site preparation and construction works have been managed according to the mitigation hierarchy and either: No overall loss of ecological value has occurred for 6 credits. Or The loss of ecological value has been limited as far as possible for 3 credits.	Stage 4	Assumed no overall loss due to minimal existing ecology.	Client/ Design team
2	2	0		2.3 Ecological Change and Enhancement	01 Previously occupied land (Crit 1)	None	To enhance the ecological value of the site and areas within its zone of influence to support local, regional and national priorities.	2 credits: At least 75% of the proposed development's footprint is on an area of land which has previously been occupied.	Stage 2	Land is previously used	Architect
0	0	0			02 Ecological risks and opportunities for the project (Crit 2-3)	Prerequisite		The 02 Survey and Evaluation, and 03 Determining Ecological Outcomes criteria within the 2.1 Identifying Ecological Risks and Opportunities issue have been achieved via either the foundation or comprehensive routes. The client or contractor has confirmed that compliance has, or will be, monitored against all relevant UK, EU, and International legislative requirements relating to the ecology of the site.	Stage 2		Client/ Ecologist
2	2	0			03 Routes of rigour - Liaison, implementation and data (Crit 4-7)	None		2 Credits: COMPREHENSIVE ROUTE The project team have liaised and collaborated with representative stakeholders, taking into consideration data collated and shared, to determine and implement actions that enhance the ecological value of the site, or where this is not feasible, off-site, within the zone of influence. Data collated are provided to the local environmental records centres nearest to or relevant for the site.	Stage 4	Data to be provided to local record centre	Ecologist/ Design team
8	4	2			04 Measuring the change in ecological value (Crit 8)	None		Up to 8 credits: COMPREHENSIVE ROUTE Credits are awarded depending on the change in ecological value that occurs as a result of the project	Stage 4	No net loss of ecology assumed for 4 credits. POTENTIAL: to have net gain for 6 credits.	Ecologist/ Landscape Architect
0	0	0		2.4 Long Term Ecological Management and Maintenance	01 Roles and responsibilities, implementation, statutory obligations (Crit 1-2)	Prerequisite	To continue to monitor, manage and maintain the site and its biodiversity and ecological features to achieve the intended outcomes for the long term.	The client or contractor has confirmed that compliance is, or will be, monitored against all relevant UK, and EU and International legislation and relating to the ecology of the site. 2.3 Ecological Change and Enhancement crit 6 and crit 7, and 2 credits for crit 8 (minimising loss of ecology) has been achieved.	Stage 2		Client/ Design team
0	0	0			02 Home Information (Crit 3)	Prerequisite		Information is provided to the home occupier detailing the long term ecological management actions and requirements part of the 11.2 Home Information	Stage 4	Commitment to be provided that compliant home information will be made.	Client
0	0	0			03 Liaison, review and management (Crit 4)	Prerequisite		The project team liaise and collaborate with representative stakeholders, taking into consideration data collated and shared, to determine and implement the actions made and structures required for 04 Landscape and ecology management plan and 05 Monitoring and update criteria, where pursued.	Stage 4		Design team/ Client
4	4	0			04 Landscape and ecology management plan (Crit 5)	None		4 credit: A management plan is in place for the landscape and ecology accessible to the assessed home.	Stage 3	LEMP to be in place.	Landscape Architect
4	4	0			05 Monitoring and update (Crit 6-8)	None		4 credit: To help ensure the continued relevance of actions over the period of the Landscape and ecology management plan, formal commitments are in place	Stage 4	Commitments in place to confirm use and update of LEMP.	Landscape Architect/ Client
0	0	0	0		01 Home information (Crit 1)	Prerequisite		Home information needs to be provided as part of or all of the criteria in this issue	Stage 4	Commitment to be provided that compliant home information will be made.	Client
4	4	0			02 Accessible recreational spaces (Crit 2)			4 credits: The home is within walking distance of Recreational Spaces		Battersea Park appears to be within 1km walking distance	Client/ Architect

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
6	0	0		2.5 Recreational Space	03 Private spaces (Crit 3)	None	To provide occupants with access to outdoor recreational space, promoting community spirit, activity and wellbeing.	Up to 6 credits: Private external space is provided that is clearly associated with the home. Where balconies or roof terraces are being specified these should be minimum 1.5 m in depth. Credits are awarded for private external space based on the areas detailed in Table 9 of the manual.		Private space not available for all. Some may achieved. If external terraces are 1.5m in depth and more than 4m2 this credit can be achieved.	Architect
7	0	0			04 Communal space (Crit 4-5)			Up to 7 credits: The home is within Close proximity to Communal space. Credits are awarded for Communal space based on the areas detailed in Table 10 of the manual.		Space to be 5% of GDA for 4 credits.	Architect
3	0	0			05 Growing space (crit 6-9)			Up to 3 credits: Up to 3 credits can be awarded where growing space is provided in close proximity to the home. Where growing space is provided in a communal area, Suitable management and maintenance arrangements are in place. The local authority and local growing initiatives or groups have been consulted to determine the demand for, and suitable types of, Growing space. The outputs of the consultation feed into the provision of Growing space.		Growing space not being provided.	Client/ Architect
2	0	0			06 Expert input (crit 10-12)			2 credits: Expert advice must be sought at the design stage to inform the design of growing space. Growing space is planted with Low maintenance species in part of the area, in accordance with the expert input.		Not achievable.	Landscape Architect
				0	10.0%						
47	35	5	17	Safety and resilience							
19	17	0	17	3.1 Flood risk	01 Flood risk assessment (follow 02A or 02B) (crit 1-6)	Minimum requirement - FRA 02B - Home Information	To reduce the risk of flooding for occupants and neighbours by considering the location, master-planning and design of new homes.	Up to 19 credits: Either route 02A (Low risk) or 02B (Medium or high risk) must be followed. The flood risk of the new home is communicated to the purchaser of the home before they make a decision on whether to buy the home. 02A (19 credits): A site-specific flood risk assessment must confirm that the development site is situated in an area with low annual probability of flooding. 02B (17 credits): Where a site-specific flood risk assessment confirms the development site is situated in an area with a medium or high annual probability of flooding, design measures must be implemented to increase the resilience and resistance of the development to flooding. Home information relating to flood resilience measures in place must be provided.	Stage 2	Potentially medium flood risk from fluvial. At risk until assessment report provided.	Flood consultant
0	0	0	0	3.2 Managing Rainfall Impacts	01 Home information (crit 1)	Prerequisite	To encourage new developments to include measures to manage rainfall to help reduce the risk of flooding, as well as the impact on the local environment and the environment downstream of the site, and improve the quality of run-off water.	Prerequisite: Home information needs to be provided as part of or all of the criteria in this issue.		Commitment to be provided that compliant home information will be made.	Team member
14	9	0			02 Routes of rigour - Managing the rate and volume of run-off (crit 2-5)	None		Up to 14 credits: Either route 02A (Foundation route) or 02B (Comprehensive route) must be followed: 02A (up to 3 credits): The reduction in impermeable area of the development site must be calculated. The number of credits achieved depends on the percentage reduction in impermeable area, according to Table 14 in the HQM Technical Manual (p59). 02B (up to 14 credits): An appropriately qualified professional must be appointed to demonstrate that the development site meets the following criteria: drainage measures are specified to ensure that peak run-off from the site to watercourses is no greater for the developed site than it was for either the pre-development site (3 credits) or an equivalent run-off for a greenfield site (5 credits). This should comply at the 1 year and 100 year return periods, including with an allowance for climate change. Drainage design measures must ensure that the post-development volume run-off for the 100-year 6-hour event is no greater than it was for either the re-development site (6 credits) or greenfield volume of run-off site (9 credits). Calculations must include an allowance for climate change. Any additional predicted volume of run-off for this event must be prevented from leaving the site by using infiltration or other sustainable urban drainage systems techniques.	Stage 3/4	Pre-development site assumed for peak rate (3credits) and volume of run off (6 credits).	Structural engineer
3	3	0			03 Water quality (crit 6-8)			3 credits: Water quality credits are only available where at least 3 credits in the comprehensive route (02B) are sought. An appropriately qualified professional must be appointed. To protect the water quality of receiving surface waters and ground waters, appropriate pollution prevention and treatment measures are designed and installed in surface water drainage systems in accordance with C753 The SuDS Manual.	Stage 3/4	SUDS strategy to be compliant	Structural engineer

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
2	2	0	0		04 Designing for maintenance and operation (crit 9)			2 credits: Agreements must be put in place for the ownership, long term operation and maintenance of all sustainable urban drainage systems for the design life of the development.	Stage 4	Expected maintenance responsibilities will be assigned to someone	Client
0	0	0	0	3.3 Security	01 Home Information (crit 1)	Prerequisite	To promote the design of developments where people feel safe and secure, and where crime and the fear of crime does not reduce people's quality of life or sense of community.	Home information needs to be provided as part of or all of the criteria in this issue.	Stage 4	Commitment to be provided that compliant home information will be made.	Client
0	0	0			03 Security needs assessment (Crit 2)	Prerequisite		Prerequisite: A suitably qualified security specialist must conduct an evidence-based security needs assessment during or prior to Concept Design.	Stage 2	SQSS to be engaged with at stage 2	Client/ Architect
9	4	5	0		04 Security features (crit 3-4)	None		Up to 9 credits: Recommendations or solutions proposed by the security specialist must be implemented. Home information relating to the implemented security measures must be provided.	Stage 4	Security consultant to be procured, 4 credits achieved for following 50% of recommendations. 5 credits are potential.	Security consultant/ Client/ Architect
				SR	8.8%						
68	**33**	**10**	**0**	**Comfort**							
0	0	0	0	4.1 Indoor Pollutants	01 Home information (Crit 1)	Prerequisite	To increase comfort for occupants and minimise negative impacts on health arising from indoor air pollutants emitted from the building and its materials.	Home information needs to be provided as part of or all of the criteria in this issue.		Commitment to be provided that compliant home information will be made.	Client
0	0	0			02 Minimising emissions from space and water heating (Crit 2)	Prerequisite		All combustion appliances within a home must have flues that discharge outdoors.			M&E
2	2	0			03 Minimising the effects of cooking (Crit 3-6)	None		Up to 2 credits: Cooker hood 1 credit: Naturally ventilated homes - In each kitchen, a cooker hood is provided that is extractive (discharge air outdoors). Mechanically ventilated homes In each kitchen, a cooker hood is provided that is re-circulating. Home information needs to be provided as part of this criteria 1 credit: Cooking fuel - Only cooking appliances with zero emissions from the fuel are specified	Stage 4	Electric cookers to be provided and cooker hood.	M&E
4	2	2			04 Minimising emissions from building product types (Crit 7)	None		Up to 4 credits: Credits are awarded where building product types meet the emission limits, testing requirements and additional requirements listed in the HQM Technical Manual, Table 16. The quantity of credits awarded is based upon how many building product types meet the requirements according to Table 17 in the HQM manual.	Stage 4	2 credits targeted and 2 as potential. Archiect to confirm what finishes can comply.	Architect
3	0	3			05 Minimising airborne formaldehyde from all sources (crit 8-9)	None		3 credits: The formaldehyde concentration in indoor air must be measured post construction (but pre-occupancy) and not exceed 0.1 mg/m^3 (100 $\mu g/m^3$), averaged over 30 minutes.		Marked as potential. Targeted within to the BREEAM assessment	Client/Contractor
3	0	3	0		06 Minimising airborne TVOCs from all sources (crit 10-11)	None		3 credits: The TVOC (total volatile organic compound) concentration in indoor air must be measured post construction (but pre-occupancy) and not exceed 0.3 mg/m^3 (300 $\mu g/m^3$), averaged over 8 hours, with no individual compound exceeding 0.03 mg/m^3 (30 $\mu g/m^3$).			Client/ Contractor
5	0	0		4.2 Daylight	01 Average daylight factor (kitchens) (crit 1)	None	To promote good daylighting, thereby improving the occupants' quality of life and reducing the amount of energy used to light the home.	5 credits: All kitchens must achieve a minimum average daylight factor of at least 2%.		Not targeted as kitchens located at the back of the flat away from window.	Architect/ Daylight Consultant
5	3	0			02 Average daylight factor (living spaces) (crit 2)			Up to 5 credits: Credits are awarded based on the minimum average daylight factor achieved for all living rooms, dining rooms and studies. 1.5% = 1 credits, 1.8% = 3 credits, 2.0% = 5 credits.	Stage 2	1.8% targeted for 3 credits. At risk until daylight analysis completed.	Architect/ Daylight Consultant
3	0	0	0		03 View of sky (crit 3)			3 credits: 80% of the working plane in each kitchen, living room, dining room and study must receive direct light from the sky.		View of sky not expected to be achievable in kitchens.	Architect/ Daylight Consultant
2	2	0		4.3 Noise Sources	01 Internal noise levels (crit 1-2)	None	To reduce noise disturbance to occupants in both inside and outside areas of homes by promoting low levels of sound from noise sources outside the home and from building services.	2 credits: A Suitably Qualified Acoustician (SQA) must be appointed. The home must be built to meet the internal noise requirements outlined in the HQM Technical Manual, Table 20.	Stage 3/4	Suitable Qualified Acoustician required. Could be onerous depending on existing external noise.	Architect/ Acoustician
2	2	0	0		02 External noise levels (crit 3-4)			Up to 2 credits: The noise levels of external functional spaces do not exceed the requirements outlined in the HQM Technical Manual, Table 21.	Stage 3/4		Acoustician/ M&E/ Architect

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
5	3	2		4.4 Sound Insulation	Sound insulation between homes (crit 1)	None	To reduce noise disturbances for occupants and neighbours by promoting good levels of sound insulation between neighbouring homes and different rooms within the home.	Up to 5 credits: It must be demonstrated that the home achieves the targets set out in the HQM Technical Manual, Table 22 for airborne and impact sound insulation taking into account both separating walls and floors between homes either through a program of pre-completion testing or through registering all relevant building elements with Robust Details Limited and meeting their performance targets.	Stage 3/4	Requirements for 3 credits targeted. Robust details or acoustician required. POTENTIAL to achieve 5 credits.	Acoustician/ Architect
4	2	0			Sound insulation between rooms (crit 2-3)			Up to 4 credits: The targets set out in Table 23 of the HQM Technical Manual for airborne sound insulation must be met and this must be demonstrated through testing with an acoustics laboratory. The SQA must pass on critical information to relevant construction professionals outlining key issues that have the potential to reduce sound insulation during the construction process including: information on the means to ensure that sockets, switches, down lights and other services or perforations maintain the acoustic performance; and guidance relating to appropriate junction details at the head, foot and perimeter of the partition or floor.	Stage 3/4	Requirements for 2 credits targeted. Acoustician required.	Acoustician/ Architect
0	0	0		4.5 Temperature	Home information (crit 1)	Prerequisite	To minimise the risk of uncontrollable high temperatures happening as a result of current and projected future climate scenarios by recognising that this needs to be considered early in the design process.	Prerequisite: Home information must be provided to the occupant relating to the temperature controls.	Stage 3/4	Commitment to be provided that compliant home information will be made.	Client
0	0	0			02 Temperature analysis	Minimum requirement		Thermal analysis has been carried out using either of the methodologies referred to in the foundation or comprehensive routes for this issue. A summary of the thermal analysis results and recommendations on the control of internal temperatures is provided for the use of the home occupant in line with the requirements in the home information issue.			M&E
17	17	0	0		03 Routes of rigour (follow 03A or 03B) - Temperature analysis (crit 3-9)	None		Up to 17 credits: Either 03A (Foundation route) or 03B (Comprehensive route) must be followed: 03A (up to 11 credits): The HQM high temperature tool must be completed using both current weather data files (7 credits) and projected climate change weather data files (4 credits). The output must confirm that the threshold temperature is below 22°C. 03B (up to 17 credits): Full dynamic thermal modelling analysis must be carried out in accordance with CIBSE TM59. The modelling must demonstrate that for air conditioned buildings' summer operative temperature ranges are in accordance with CIBSE Guide A criteria, or for naturally ventilated buildings that the building is designed to limit the risk of overheating in accordance with the adaptive comfort methodology outlined in CIBSE TM59 (11 credits). In addition, thermal modelling must demonstrate that these criteria are met for a projected climate change environment. Where thermal comfort criteria are not met in this environment, the project team must demonstrate how the building has been adapted, or designed to be easily adapted in the future using passive design solutions to meet the requirements. (6 credits)	Stage 3/4	Full dynamic thermal modelling to be completed and tested against current and future climates.	M&E
0	0	0		4.6 Ventilation	01 Information Sign (crit 1)	Minimum requirement	To achieve a high standard of air quality in the home to avoid environments that could damage the health and wellbeing of people living in it.	An information sign (written in plain English) is securely fixed to the rear of a boiler, meter or airing cupboard door (or another door of similar permanence). See manual for what it should cover.	Stage 4	Required	M&E
4	0	0			02 Ventilation air intakes (crit 2-3)	None		4 credits: Criterion 1 (above) must be achieved and the home's ventilation air intakes must avoid drawing in pollution in accordance with CIBSE TM21.		Not targeted, expected unachievable	M&E
5	0	0			03 Ventilation rates (crit 4-7)	Minimum requirement		Minimum requirement: The relevant requirements in Table 25 are met. 5 credits: Criterion 1-3 must be achieved and the requirements in table 26 and 27 are met. The ventilation system achieves an internal noise level of 35dB(A) or less in all non-bedroom spaces within the home and 30dB(A) or less in all bedrooms within the home in line with the methodology in ANC Guidelines Part 1 2011, operating at the minimum rate* for continuous extract ventilation systems and for intermittent extract ventilation system, it should not be running.	Stage 4	Minimum requirement to be achieved. Credits not targeted	M&E
4	0	0	0		04 Maintenance and controls (crit 7-9)	Minimum requirement		Minimum requirement: The relevant requirements in Table 28 are met. 4 credits: Criteria 1-8 must be achieved and any required maintenance of the ventilation system must be able to be completed safely by the occupant. Any maintenance activity intended to be carried out by a building services engineer can be carried out safely by the building services engineer. For mechanical continuous ventilation systems (e.g. MVHR, MEV), controls are provided that enable sufficient control of the background continuous ventilation rate to meet varying occupancy levels without having to enable 'boost' mode.	Stage 4	Minimum requirement to be met. Credits cannot be achieved without criteria 1-8 achieved.	M&E
				C	14.0%						
83	43	0	0	Energy							

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

					Targeted	Targeted + Potential	Achieved				
Credit information			Evidence information	Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
0	0	0	0	5.1 Energy and Cost	01 Home information (crit 1)	Prerequisite	To improve energy performance and reduce costs associated with running the home, and encourage more thorough energy calculations during the design stage.	Prerequisite: Home information needs to be provided as part of or all of the criteria in this issue	Stage 4	Commitment to be provided that compliant home information will be made.	Client
40	20	0			02 Energy performance (crit 2)	None		Up to 40 credits: Credits are awarded according to the home energy performance ratio (HEPR) generated in the online assessment tool, in line with Table 29 in the HQM ONE Manual.	Stage 3/4	To be informed by SAP output.	M&E
6	0	0			03 Towards carbon negative (crit 3-4)	None		Up to 6 credits: The building must achieve a home energy performance ratio of greater than or equal to 0.9 and have zero net regulated emissions. Credits are awarded according to the online assessment tool output for the percentage of the home unregulated operational energy consumption (as calculated in SAP - Section 16, including for energy bolt-on inputs) that is generated by carbon neutral on site or near site sources, in line with Table 30 . The output is based on the input files entered for the 02 Energy performance criteria.		Not achievable with current design.	M&E
14	0	0			04 Cost	None		Up to 14 credits: Credits are automatically awarded according to the outputs scored for cost, in line with Table 31.		Can be predicted once initial SAPs output tested.	M&E
0	0	0	0	5.2 Decentralised Energy	01 Home information (crit 1)	Prerequisite	To maximise the cost and carbon-saving benefits of generating energy from low and zero carbon technologies (LZCTs) by encouraging best practice when selecting, installing and allowing for easy future installation of LZCTs.	Prerequisite: Relevant home information regarding LZCT system installations or retrofit options available to the householder must be provided.	Stage 4	Commitment to be provided that compliant home information will be made.	Client
0	0	0			02 Feasibility study (crit 2)	Prerequisite		Prerequisite: An independent assessment prepared by an appropriately qualified professional (AQP) must be carried out to establish the most feasible recognised local (on-site LZCT or near-site LZCT) low or zero carbon (LZC) energy sources for the building as well as any suitable infrastructure for future retrofit.	Stage 2	Feasibility study required for BREEAM also.	M&E
8	8	0			03 Implementation of feasibility study findings (crit 3-4)	None		Up to 8 credits: 03A Infrastructure 4 credits: Where the feasibility study confirms the installation of LZCTs is not currently a viable option, appropriate infrastructure is installed to allow the future retrofit of at least one LZCT, in accordance with the feasibility study recommendations outlined in Table 33. 03B Installation 8 credits: Where LZCTs are designed and installed in line with the feasibility study findings.	Stage 4	Recommendation from feasibility study to be implemented.	M&E
15	15	0	0	5.3 Impact on Local Air Quality	01 Impact on local air quality (crit 1-5)	None	To promote the use of heating and hot-water generating appliances which have little or no impact on local air quality.	Up to 15 credits: Where all heating and hot water within a home is supplied by non-combustion appliances such as appliances powered by electricity. Up to 10 credits: All installed plant must meet the following emission levels (Table 35 and Table 36). The measurements must be provided by manufacturers, following the labelling requirements of the European directive 2009/125/EC (for local space heaters, solid fuel local space heaters, boilers and combination heaters and solid fuel boilers).	Stage 4	Anticipated all heating and hot water to be electric.	M&E
				EC	16.4%						

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
69	13	9	0	**Materials**							
0	0	0	0	6.1 Responsible sourcing	01 Legally harvested and legally traded timber (crit 1)	Prerequisite	To encourage the selection of construction products where sustainable development principles have been followed across the supply chain, including when extracting, processing and manufacturing materials and parts.	Prerequisite: All timber and timber based products must be legally harvested.	Stage 4		Client/ Architect
2	2	0			02 Product procurement policy (crit 2)	None		2 credits: By the end of RIBA stage 2, the client or developer must have a document policy and procedure that sets out procurement requirements relating to responsible sourcing of construction materials, and encourages specification of products with responsible sourcing certification. The policy must be disseminated to all relevant personnel and included within the construction contract.	Stage 2	Procurement policy required for BREEAM also.	Client
23	7	0			03 Responsible sourcing of construction products assessment (crit 3)			Up to 23 credits: The home must be assessed through either of the two routes (foundation route and comprehensive route) with detailed methodology described in the HQM Technical Manual. Credits are awarded based on the percentage of points achieved according to Table 37.	Stage 4	7 credits targeted for 10% of available points. Similar to target for BREEAM.	Client/ Architect
2	2	0	0	6.2 Environmental Impact of materials	01 Product procurement policy (crit 1)	None	To reduce the effect construction products have on the environment by recognising and encouraging the selection of products with a low environmental impact, including embodied carbon over the life cycle of the building.	2 credit: By the end of RIBA stage 2, the client or developer must have a document policy and procedure that sets out procurement requirements relating to sourcing of construction products with lower environmental impact, and encourages specification of products with Environmental Product Declaration (EPD). The policy must be disseminated to all relevant personnel and included within the construction contract.	Stage 2	Procurement policy to favour materials with EPDs	Client
4	2	2			02 Product environmental information (crit 2)			Up to 4 credits: Where a range of products specified at the Design Stage and installed by the Post Construction Stage are covered by verified EPD. Credits are awarded according to Table 40. Only two EPDs per material type can be counted	Stage 3/4	2 credits targeted based on 6 products with EPDs. Only 2 EPDs available per material type.	Design team
19	0	0	0		Routes of rigour (follow 03A or 03B) - Building life cycle assessment			Up to 19 credits: Either 03A (Foundation route) or 03B (Comprehensive route) must be followed: 03A (up to 7 credits): A life cycle assessment must carried out using the HQM Environmental Impact of Construction products tool. This tool is only suitable for assessment of standard, simple homes. 02B (up to 19 credits): A life cycle assessment is carried out using an IMPACT compliant tool. Credits are awarded based on the home's impact benchmark achieved according to Table 41.		Credits not currently targeted. POTENTIAL to include as impact LCA to be completed for BREEAM.	Design team/ LCA specialist
6	0	0		6.3 Life Cycle Costing	01 Occupant's life cycle cost report (crit 1-3)	None	To encourage economic sustainability by recognising and encouraging people to use and share life cycle costing analysis data to reduce maintenance and operational costs and deliver value over the whole life of a home.	6 credits: At the end of RIBA Stage 2, a life cycle cost (LCC) analysis must be produced by a suitably qualified cost consultant. A homeowner's report based on the LCC analysis must be available to potential homeowners prior to commitment to purchase. A final version of the homeowner's report, updated based on the latest LCC at the end of stage 4 must be included within the home information.	Stage 2	Not targeted. Additional cost.	Cost consultant/ Client
6	0	0	0		02 Component level life cycle cost optimisation (crit 4)			6 credits: By the end of RIBA stage 4 a component level LCC analysis is carried out and includes appropriate examples from the design team to illustrate how the component level LCC optimisation has been used to influence building and systems design or specification to reduce the overall maintenance and operational costs to the homeowner. The analysis is provided as a report to the client.	Stage 4	Not targeted. Additional cost.	Cost Consultant/ Client
5	0	5		6.4 Durability	01 Integral elements (crit 1)	None	To reduce the need for maintenance, repairs and frequent replacement of materials resulting from damage to exposed elements of the building and landscape.	5 credits: The relevant integral building elements at risk of severe material degradation must be identified and appropriate measures must be incorporated into the design and specification to limit degradation effects identified.		POTENTIAL requires report from design team	Architect/ Structural Engineer
2	0	2	0		Finishing elements (crit 2-3)			2 credits: Criteria 1 must be achieved and the relevant finishing building elements at risk of cosmetic material degradation must be identified. Appropriate measures must be incorporated in the design and specification to limit the degradation effects identified.		POTENTIAL requires report from design team	Architect/ Structural Engineer
				M	18.0%						

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
24	**8**	**14**	**7**	**Space**							
1	0	0		7.1 Drying Space	01 External drying (crit 1)	None	To provide access to sufficient and convenient drying space to reduce the effect drying clothes inside has on occupants' health and the amount of energy used.	1 credit: Secure external drying space must be provided, 30m for a House with private external space, 20m for a house without private external space, 20m for a flat or apartment.		Expected cannot be achieved.	Architect
2	1	0			02 Internal drying space (crit 2)			2 credits: A tumble drier or washer dryer, that is energy efficient and has an acceptable level of condensation, is installed prior to handover. Credits are awarded according to Table 49.		Only 1 credit can be achieved for washer dryers.EU energy label system has been revised see KBCN1445	Architect
0	0	0		7.2 Access and Space	01 Home information (Crit 1)	Prerequisite	To provide an acceptable and effective internal space that is accessible to all and supports the function of the home.	Home information needs to be provided as part of or all of the criteria in this issue			Client
5	0	5			02 Nationally described space standards (crit 2-3)	None		5 credits: The home must meet the Technical Housing Standards - Nationally Described Space Standard. Where the built in storage provided shows an improvement over the requirement stated in Technical Housing Standards – Nationally Described Space Standards by 0.5m²	Stage 2	POTENTIAL Not achieved due to storage requirement. Being investigated.	Architect
3	0	3			03 Accessible and adaptable design (crit 4-6)			3 credits: The internal functional space and external space associated with the home meet the requirements of the Building Regulations in Approved Document M- Access to and use of buildings Category 2 OR Approved Document M, Category 3 - Wheelchair user dwellings, where required by the local authority. An Accredited Access Consultant is appointed prior to early design stages (typically RIBA Stage 2 or equivalent). The Accredited Access Consultant advises on Nationally recognised design guidance relating to accessible and inclusive design (that meet every day needs and long term demands) with regard to the Internal functional space and External space aspects of the home.		POTENTIAL if access consultant procured.	Architect/ Access Consultant
3	0	3	0		04 Accredited access consultant confirmation (crit 4)			3 credits: The Accredited Access Consultant confirms that the homes have been built following the advice given in crit 6 via one (or more) of the following according to the level of assurance they deem required based on the nature of the development: – Confirmation from the developer that the homes have been built to the final design. – Completion of a site inspection. – Completion of an as-built evidence review.		POTENTIAL if access consultant procured and does an inspection and design review.	Access Consultant
0	0	0		7.3 Recyclable Waste	01 Home information (crit 1)	Prerequisite	To provide occupiers with suitable options for storing and disposing of recyclable waste, and reducing the amount of waste that goes to landfill by making it more convenient to store of recycling in the home before it is collected.	Home information needs to be provided as part of or all of the criteria in this issue.	Stage 4	Commitment to be provided that compliant home information will be made.	Client
2	2	0	2		02 Consultation with the waste collection authority (crit 2)	None		2 credits: The waste collection authority must be consulted to determine the waste collection patterns, identifying the number of recyclable streams (including composting) and the type and size of waste collection containers.	Stage 2	Operational Waste Strategy received from Equilibria	Client/ Architect
5	5	0	5		03 Internal waste storage (crit 3-4)			5 credits: Dedicated internal space with fixed units to store recyclable waste must be provided. The number of internal recyclable waste facilities must reflect the number of recyclable waste streams collected by the waste collection authority. The combined capacity of internal recyclable facilities must be a minimum of: 30 litres for homes with 1-2 bedrooms; 40 litres for homes with 3 or more bedrooms. All homes are provided with dedicated internal space, with fixed units to store food waste that are a minimum of 10 litres in volume.		Operational Waste Strategy received from Equilibria	Architect
3	0	3	0		04 Composting facilities and management (crit 5)			3 credits: All homes must provided with composting facilities, for garden or food waste, in the form of one or more of the following: Individual home-composting facilities; Local communal facilities within 50m from the main entrance to the home via Safe pedestrian routes; composting collection services run by the waste collection authority.		POTENTIAL Should be investigated to be sure this development could be included food waste collections.	Client/ Architect
				S	4.6%						
17	**8**	**0**	**0**	**Water**							

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
11	8	0	0	8.1 Water Efficiency	01 Water efficient fittings (crit 1)	None	To reduce the amount of mains water used in the home.	Up to 11 credits: Either: 1. The home must achieve 6 water fitting categories in the optimal fittings standard set by the optional water efficiency requirement in the water efficiency standards in the building regulations (5 credits). 2. Achieve all water fitting categories in the optimal fittings standard and a modelled water consumption no greater than 110 litres per person per day (8 credits); 3. The advanced fittings standard set out in the HQM Technical Manual is achieved along with a modelled water consumption of no greater than 110 litres per person per day (11 credits).	Stage 3/4	Modelled consumption of max 110litres per person	Client/ Architect
6	0	0	0		02 Water recycling (crit 2-3)			Up to 6 credits: Criterion 1 (above) must be achieved and rainwater or greywater recycling systems must be specified and it must be demonstrated that these systems supply sufficient water to offset the demand for WC flushing in the home. 50% - 3 credits, 100% - 6 credits		Not targeted, WCs not being supplied by greywater or rainwater.	Client/ Architect
				W	2.0%						
64	39	3	0	Delivery							
4	0	0	0	9.1 Project Preparation	01 Feedback from previous projects (crit 1-2)	None	To encourage procedures that improve the overall quality of the home and reduce the difference between predicted and actual performance in the home	4 credits: Where it is demonstrated that lessons learnt from previous projects have been incorporated into the assessed home following the process set out in the Methodology. During design brief (typically RIBA stage 1 or equivalent) an outline delivery plan has been developed which is kept up to date as the project progresses.	Stage 1	Assumed experience from similar projects provided by client and developer.	Client
0	0	0	0		02 Project delivery plan (crit 3-4)	Minimum requirement		Before detailed design has started (typically RIBA stage 3 or equivalent)the Project delivery stakeholders have met to discuss: a: Project design and client requirements with regards to meeting HQM compliance. b: Roles responsibilities and roles and the contribution of each member of the project delivery team to meet the above. c: HQM performance targets to be achieved are agreed. Before any activities have started on-site criteria 4 a-g have been agreed.	Stage 3	Team must review criteria 4 requirements.	Client/ Design team
0	0	0			03 Product procurement substitution policy (crit 5)	Minimum requirement		The client or the principal contractor has a product procurement policy that: a: Sets out performance requirements for products and specifications to be procured for the assessed project. The performance requirements should: a.i: Encourage products and specifications, to be procured according to best practice standards. a.ii: Encourage specifications that lead to high build quality. b: Sets out instances where substitutions will be allowed and what should be taken into account when considering substitutions. c: States clearly that any substitution of products or specification will need to meet the performance requirements set out for the project. It should set out clear approval and verification procedures for the contractor to follow when substituting products. It should include a requirement for the contractor to provide details of substitutions and recorded evidence to demonstrate that substituted products meet performance requirements.	Stage 1	Procurement Policy required.	Contractor
0	0	0			04 Dissemination of information (crit 6)	Minimum requirement		Processes are in place to ensure communication of crit 3 & crit 4 and Key considerations to all relevant trades (for example via toolbox talks, briefings, meetings, BIM, graphic examples of good workmanship on-site) as appropriate for their specific involvement. Information should be communicated in an understandable way, in an appropriate language, which includes content as detailed in the HQM ONE manual.	Stage 3/4	Communication routes to be clear for information passed to all staff.	Client/ Developer
2	0	0	0		05 Site worker feedback (crit 7-9)	Minimum requirement		2 credits: The client or the principal contractor has a documented policy and procedure in place to enable staff to make protected disclosures. The policy should include all items in criteria 8 a-i. The principal contractor is responsible for prominently displaying the policy and contact details on the construction site and has ensured all site workers and the client (where a policy has been put in place by the principal Contractor under crit 7) have been made aware of the policy.	Stage 3/4	Protected disclosures policy required.	Developer/ Contractor

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)											
0	0	0	0	9.2 Commissioning and Testing	01 Commissioning building services and control systems (crit 1-3)	Minimum requirement	To make sure that homes and their systems are performing as designed when they are handed over to the occupiers.	Appropriate project team members have been appointed to conduct and manage commissioning activities. All building systems listed below that are present are commissioned in line with the manufacturer's guidance and appropriate commissioning best practice guidance by individuals who were not involved in the installation process: a: Hot water. b: Heating. c: Ventilation. d: Comfort cooling. e: Low and zero carbon technologies. For buildings with complex building services and systems a specialist commissioning manager must be appointed to conduct and manage commissioning activities. They must be appointed during the design stage.	Design stage	Commitment required at design stage	Developer
4	2	0	0		02 Fabric pre-testing (crit 4-5)	None		Up to 4 credits: A member of an appropriate body has been appointed to: a: Determine the appropriate inspection and pre-testing methods for the site, using their professional discretion in line with the Methodology section and their professional body best practice guidance. b: Provide quality assurance of the assessed home's fabric performance, including continuity of insulation, through inspection and air permeability testing, after the Primary air barrier is complete and while it is still accessible. c: Outline recommendations to help meet the designed fabric performance standards at post-construction. d: Broaden the sample size and carry out additional pre-testing of more homes if there is evidence of potential causes for the air test targets not being met for other dwelling types, which may affect other units not tested. The recommendations made as part of crit 4.c are carried out. Credits awarded depending on the proportion of homes that are inspected and tested. 25% - 1 credit, 50% - 2 credits, 75% - 3 credits, 100% -4 credits.	Stage 4	2 credits targeted for 50% of each dwelling type to have fabric pre-testing and any recommendations carried out.	Developer
7	0	0	0		03 Post-construction testing (crit 6-7)			Up to 7 credits: Where post-construction testing and inspection of the integrity of the assessed home's building fabric is carried out, in accordance with an appropriate standard (see Table 55). Credits are awarded, depending on the aspects that are tested, in line with Table 54. Any remedial work is carried out before handover, to ensure the required performance characteristics of the home are met, where this is highlighted as needed from post-construction testing and inspection.		Not targeted.	Developer
0	0	0			01 Visual defects inspection	Minimum requirement		An appropriately qualified person, who is independent from site activities has done the following, before the occupant moves in: a: Carried out a visual defects inspection of all the aspects in the visual defects inspection table, to check installation and finishes are in line with the specification. b: Identified, monitored and reported on any remedial work that is needed, to the developer or client. c: Ensured the home is finished and habitable, including the following: c.i: Access to the home is safe and clear, including drives and pathways to the home. c.ii: There are no health and safety hazards inside the home. c.iii: Electrics and plumbing are all functioning. c.iv: All Active Systems inside the home are installed, working and ready for occupant use. c.v: All fixtures and fittings are installed and finished. c.vi: Finishes and decoration are completed internally and externally. The results of the visual defects inspection and any outstanding remedial work are reported and given to occupants before they move in as part of their home information.		Commitment required at design stage	Developer
0	0	0			02 Construction inspections (crit 3)	Minimum requirement		Where an Appropriately qualified person is based on-site and has done the following, as a main part of their role: a: Outlined and agreed the strategy, roles and responsibilities for meeting the '02 Construction inspections' criteria, as part of the activities in the 'project delivery plan' criteria in the 9.1 Project Preparation issue. b: Carried out systematic and scheduled inspections of build quality for all assessed homes at key stages throughout construction and ensured they comply with the home's required performance characteristics, including the following, as a minimum: b.i: Design specifications. b.ii: Warranty standards. b.iii: Building Regulations, planning permissions and other local authority and statutory requirements. c: Ensured any design variations or materials substitutions are appropriately managed and approved by an appropriate member of the design team or the client.		Commitment required at design stage	Developer

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
				Percentage	50.0%	59.2%	143.5%				
Credits available	Credits targeted	Potential credits	Evidence assessed	Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
0	0	0		9.3 Inspections and Completion	03 Construction record (crit 4-5)	Minimum requirement	To increase confidence that the home is capable of meeting its specified performance targets and a high level of build quality.	Where an Appropriately qualified person has been appointed to ensure a Construction record is kept throughout the construction stage that demonstrates the quality assurance measures taken to meet the home's required performance characteristics. The record is available to: a: Site operatives throughout the construction stage for them to directly contribute to, as appropriate. b: Occupants on request, as part of any visual defects inspections and when moving in. It needs to be available for the duration of the building warranty in place.			Developer
2	2	0			04 Right to inspect (crit 6-9)			2 credits: Potential owners of the home are given the right for them, or their own independent representative, to carry out their own, non-invasive, visual inspection or snagging check. This may be carried out up to one month before committing to buy the home, or up to one month before completion of the build and purchase if the home is not built at the time of committing to buy. The notification of this right is prominently given within the property sales materials. The home's specification and construction record is available to the potential owner or their representative carrying out the inspection. Any snagging issues, defects or inconsistencies with the home's specification that are identified by the visual defects inspection are resolved within 28 days after completion of the property purchase. Any activities referred to in the occupant' right to inspect do not impact the statutory rights owed by the developer to the purchaser in anyway.		Targeted	Developer
1	1	0			05 Feedback dissemination (crit 10)			1 credit: Where the Appropriately qualified person for the 02 Construction inspections criteria provides feedback on any lessons learnt and examples of good practice, regarding quality assurance from activities on the assessed site, to the developer, client, consultants and designers, to inform future projects via recorded meetings or an easily accessible platform.	Stage 2		Developer
5	0	0			06 Third party verification (crit 11)			5 credits: The appropriately qualified person appointed to carry out the role in the 02 Construction inspections criteria is an Independent third party.		Not targeted as expected inspections to be carried out in house.	Developer
4	4	0			07 Early inspection visit (crit 12)	None		4 credits: Where a contracted commitment is in place for a visit to be made, between four and six weeks after occupants have moved in, that includes the following: a: An inspection of the active systems referred to in 11.1 Aftercare:02 Handover visit to check they are functioning in line with their design intent and manufacturer's guidance. If needed, the following actions are taken to ensure the active systems are functioning as intended: repairs, remedial works, recommissioning, replacement or guidance given to occupants. b: Rectify any problems regarding the home. For example, as a result of any snagging issues or defects not previously identified or resolved. c: Adapt any systems to reflect occupant usage patterns and individual preferences as appropriate.		Targeted. Commitment required at design stage	Developer
4	4	0			08 Seasonal inspection visit (crit 13)			4 credits: Where a contracted commitment is in place for a visit to be made, between eight and twelve months after the occupant has moved in, to do the following: a: Carry out the same checks referred to in the 07 Early inspection visit criteria. b: Make any adjustments or provide occupants with guidance to ensure the home and its systems are performing as expected throughout the year, allowing for seasonal variation. c: Offer to check heating bills and take action to investigate and ensure homes are performing in line with their design intent. For example, this may include a combination of: .c.i: Occupant guidance where occupant behaviour is a significant factor. c.ii: Remedial measures to address any sources of unexpected heat loss, where this is identified by testing such as thermal imaging at junctions and meeting points. c.iii: Systems adjustments or replacement where they are not running efficiently or are faulty. d: Offer to align any inspection visits with visits required for meeting criteria for the 11.4 Post Occupancy Evaluation issue, as appropriate.		Targeted, as expected inspections will be carried out.	Developer
5	5	0	0	10.1 Responsible construction practices	01 Considerate Construction (crit 1)	None	To promote the environmentally and socially considerate, and accountable management of construction sites.	Up to 5 credits: The principal contractor must use a compliant considerate construction scheme and their performance against the scheme must be confirmed by independent assessment and verification. Or follow the items in Table 57 Responsible Construction management items.		Targeted as CCS being pursued for BREEAM.	Developer/ Contractor
2	2	0	0		01 Contractor's energy efficiency checklist (crit 1)			2 credits: The contractor's energy efficiency checklist in the HQM Technical Manual must be completed.		Commitment required at design stage	Developer/ Contractor

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

					Targeted	Targeted + Potential	Achieved				
Credit information			Evidence information	Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
				For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)							
2	2	0		10.2 Construction Energy Use	02 Energy monitoring and reporting (crit 2)	None	To avoid wasting energy on site and reduce as far as possible the amount of energy used, and associated carbon emissions, during the construction process.	2 credits: Target, monitor and report data on the principal contractor's and subcontractors' metered energy consumption as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation.		Monitoring required for BREEAM.	Developer/ Contractor
1	1	0			03 Weekly detailed monitoring and reporting of metered energy use (crit 3)			1 credit: Conduct the monitoring and reporting of data in crit 2 on a weekly basis.			Developer/ Contractor
2	2	0		10.3 Construction Water Use	01 Contractor's water efficiency checklist (crit 1)	None	To avoid wasting water on site, by using it efficiently and reducing usage as far as possible.	2 credits: The contractor's water efficiency checklist in the HQM Technical Manual must be completed.		Commitment required at design stage	Developer/ Contractor
2	2	0			02 Water monitoring and reporting (crit 2)			2 credits: Target, monitor and report data on the principal contractor's and subcontractors' potable water consumption (m3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation.		Monitoring required for BREEAM.	Developer/ Contractor
1	1	0			03 Weekly detailed monitoring and reporting of metered water use (crit 3)			1 credit: Conduct the monitoring and reporting of data in crit 2 , on a weekly basis.			Developer/ Contractor
1	1	0		10.4 Site Waste Management	01 Product procurement policy (crit 1-3)	None	To promote resource efficiency and reduce as far as possible the effect of construction on the environment by managing construction waste effectively to reduce the total amount of waste produced, and by looking at alternatives to landfill for disposing waste.	1 credit: By the end of RIBA stage 2 the client or developer must have a documented policy that sets out procurement requirements for all suppliers and trades to adhere to relating to opportunities for minimising construction waste on-site. The policy must be disseminated to relevant personnel and included within the construction contract. The policy must encourage specification of products which can help to minimise waste arisings.	Stage 2	Targeted, policy needed on minimising construction waste.	Developer
8	6	0			02 Construction resource efficiency (crit 4-6)			Up to 8 credits: Complete a pre-demolition audit of any existing buildings, structures or hard surfaces to be demolished, if feasible. A resource management plan (RMP) must be developed covering the non-hazardous waste related to on-site construction and where applicable dedicated off-site manufacture or fabrication generated by the building's design and construction. Associated credits can be awarded where construction waste related to on-site construction and dedicated off-site manufacture or fabrication (excluding demolition and excavation waste) meets, or is lower than, the benchmarks identified in Table 60 of the HQM ONE manual. **Waste generated per 100m2 (GIFA)** **m3 per 100m2 Tonnes per 100m2 Credits** <13.9 <8.5 2 <8.1 <4.9 4 <4.8 <2.9 6 <3.5 <1.9 8	Pre-demolition	Pre-demolition audit required. 6 credits targeted inline with waste being less than 2.9Tonnes per 100m2 GIFA. This is in line with the BREEAM target.	Developer/ Contractor
4	4	0			03 Diversion of construction waste from landfill (crit 7-8)			Up to 4 credits: Waste materials must be sorted into separate key waste groups as per Table 62 in HQM ONE manual. Credits are awarded for the project's performance with regards to the diversion of non-hazardous construction and demolition waste from landfill, against the benchmarks in the HQM ONE Manual, Table 61. Waste Type %diverted by m3 %diverted by tonnes Credits Construction 70% 80% 2 Demolition 80% 90% 2 Construction 85% 90% 4 Demolition 85% 95% 4		4 credits targeted for 90% construction waste and 95% demolition waste diverted from landfill.	Developer/ Contractor
3	0	3	0		04 Diversion of excavation waste from landfill (crit 9-10)			3 credits: Maximum (4) credits must be achieved for criterion 8, and at least 95% of excavation waste must be diverted from landfill.		POTENTIAL: Developer to advise if achievable.	Developer/ Contractor
				HD	9.8%						
22	9	1	0	Customer Experience							
0	0	0			01 Building warranty (crit 1)	Minimum Requirement		The home is covered by a building warranty, from a warranty provider who is a member of and fully complies with 'The Consumer Code for Home Builders' or is recognised by the Trading Standards Institute.	Stage 4	Confirmation required at design stage	Developer

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

					Targeted	Targeted + Potential	Achieved			
Credit information			Evidence information	Rating	250	296	1.43478836			
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%			
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)											
0	0	0		11.1 Aftercare	02 Handover Visit (crit 2)	Minimum Requirement	To support occupants when they first move into their home, to help them manage their home efficiently, live comfortably and deal with any early problems as soon as possible.	Where a contracted commitment is in place for the following to be met, as agreed with the first occupants before or after they move in a) Introduction to the home information available, including its purpose and communication of the content as detailed in manual b) Demonstrations of how to operate and maintain any installed active systems and passive design features, with reference to the home information available. c) Provisionally agree dates for the 4–6 week and 8–12 month aftercare visits, where these criteria are met in the 9.3 Inspections and Completion issue. d) Where post occupancy evaluations (POEs) have been committed to, details regarding what a POE is, how the occupants can get involved and the benefits of being involved. Provisional dates are arranged for POE visits as appropriate.	Stage 4	Commitment required at design stage	Developer
4	4	0			03 On-call support (crit 3)	None		Up to 4 credits: Where a contracted commitment has been made to provide on-call support, to the occupants of the home being assessed in line with what is listed in the HQM ONE manual. Credits are awarded depending on how long the support is available for: – 3 credits for two years. – 4 credits for three years.		4 credits targeted for on call support for 4 years.	Developer
0	0	0		11.2 Home Information	01 Home information (crit 1)	Minimum requirement	To provide occupants with useful and accessible information that helps them get the most from their home, work with their local community and reduce their costs and environmental footprint.	Where it is demonstrated that all applicable home information will be provided to occupants of all homes from the first day of moving in and the home information detailed in the HQM ONE Manual.	Stage 4	Home information pack required.	Developer
0	0	0		11.3 Smart Homes	01 Home information (crit 1)	Prerequisite	To make sure that the home is able to adapt to increasingly digital lifestyles, take account of developing technologies, and respond	Home information needs to be provided as part of or all of the criteria in this issue. Please see 11.2 Home Information.		Commitment to be provided that compliant home information will be made.	Developer
2	1	0			02 Connectivity (crit 2-3)			up to 2 credits: A network infrastructure provider is contacted during the planning stage and requirements met as detailed in manual. Credits are awarded depending on the download speed of the broadband available to the home: – 1 credit for superfast broadband (24Mbit/s). – 2 credits for ultra-fast broadband (100Mbit/s).		1 credit targeted for broadband 24Mbit/s	Developer/ M&E
1	1	0			03 Connectivity in the home (crit 4-9)			1 credit: There is a primary home distribution space (PHDS) containing a patching panel which together provides a central location for all wiring to be run, including connections from incoming services and distribution of cabling around the home, in accordance with PAS 35491 2017. Ethernet (Cat 5e) is routed to all principal rooms (see definition) in the home, within routing ducts, and with the provision for pulling through new cables in the future. Cable ducting is provided in secondary rooms (see definition) in the home for future upgrades or to resolve poor wireless broadband in any secondary rooms. Cable ducting must either have curved inside and outer corners if they have 90 degree angles, or must be greater than 90 degrees. Both installation and commissioning are done in accordance with PAS 35491 2017 (sections 5 and 6). Installed devices relating to this issue (such as visual display units, sensors, transmitters, signal repeaters, or hubs) must not:. a: Reduce the minimum number of electrical sockets available to occupants that are required legally or by the design. b: Impede the access or functioning of any other switches or control devices.	Stage 3/4		Developer/ M&E
1	1	0			04 Basic smart metering (crit 10-11)			1 credit: crit 2 to crit 9 have been achieved. Accessible smart home devices or systems have been installed at no additional cost to the occupant (for example, subscription fees) that: a: Provide a smart heating functionality by monitoring internal temperature levels in the main living room, as a minimum, and keep it within a fixed range for energy savings and comfort, and b: Has a 12-month warranty on the smart heating devices. This includes smart thermostat, temperature sensors, boiler transceiver unit and any communications hub provided specifically with the smart heating system. c: Use a smartphone application interface for the smart devices that: c.i: Displays internal temperature levels over a weekly, monthly and yearly basis. c.ii: Provides remote control of heating with the ability to change schedules. c.iii: Provides instant on/off override. d: Homes over 150m² must have temperature sensors in a main bedroom, in addition to the main living room.	Stage 3/4	Is the temperature to be kept within a fixed range?	Developer/ M&E

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

					Targeted	Targeted + Potential	Achieved				
Credit information			Evidence information	Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)											
1	0	0		11.3 Smart Homes	05 Advanced smart metering (crit 12-14)	None	technologies, and respond to the growing demand for digital connectivity and smart systems throughout the home.	1 credit: crit 10 to crit 11 have been achieved. Provide additional smart heating functionality that: a: Uses multi-zone heating; the ability to independently measure and control the internal temperature of multiple zones for all principal rooms within the home. b: Uses external temperature sensing. c: Allows 'away from home' or geo-location control. d: Allows active frost protection. e: Uses stored environmental and behavioural data to tailor experience. Occupancy sensing that can be used to trigger heating schedules (such as 'away from home' modes).		Not targeted. Expected beyond current scope.	Developer/ M&E
1	0	1			06 Basic smart lighting (crit 15-16)			1 credit: crit 2 to crit 9 have been achieved. Accessible smart home devices or systems have been installed at no additional cost to the occupant (such as subscription fees) that: a: Monitor and control the internal lighting in principal rooms, using pre-set lighting controls for energy savings and comfort, and have the ability to be controlled remotely via a smart phone app. b: Allow for remote dimming control of individual lights in principal rooms. c: Occupancy sensing that is used to trigger lighting schedules.		Not targeted. Expected beyond current scope but app to control lighting being investigated.	Developer/ M&E
1	0	0			07 Smart energy management (crit 17-18)			1 credit: crit 15 and crit 16 are met. Accessible smart home devices or systems have been installed at no additional cost to the occupant (such as subscription fees) that: a: Monitor, control and report energy use of individual devices via a smartphone app in at least the principle rooms, using smart plugs or sufficient energy disaggregation methods. b: Provide additional lighting functionality that automatically senses ambient light levels and adjusts light levels to meet pre-set requirements. c: Monitor and display the operational status and availability of LZCTs where these are installed.		Not targeted. Expected beyond current scope.	Developer/ M&E
1	0	0			08 Additional smart solutions (Crit 19-20)			1 credit: crit 10 to crit 11 and crit 15 to crit 16 have been achieved. Accessible smart home devices or systems have been installed at no additional cost to the occupant for at least three of the following: a: Monitor air quality in all principle rooms and either report information to a smart phone app or to an in-home display. b: Enable voice control of the smart heating and smart lighting devices, independent from a smartphone. c: Monitor and report humidity in the kitchen, bathroom and a main bedroom. d: Smart ventilation or filtering, linked with an air quality sensor that measures at least three of the following: Carbon monoxide, Carbon dioxide, humidity, particulates, volatile organic compounds (VOCs). e: Gesture control for smart devices. f: Geofencing; ability to control devices based on the location of the user. g: Other controls.		Not targeted. Expected beyond current scope.	Developer/ M&E
2	2	0		11.4 Post Occupancy Evaluation	01 Occupant satisfaction feedback and bill data (crit 1-2)	None	To provide improved feedback on the performance and the occupants' experience of the home, to inform stakeholders in the future	2 credits: Where a commitment has been made for an appropriately qualified professional to carry out the following: 1 Within 6 weeks of occupation: 1.a: Occupants are formally offered to be involved with the POE, in an accessible format or in person. 1.b: The formal offer must include the following, as appropriate: b.i: Details of the actions to be carried out with the occupant's permission. b.ii: Benefits of the POE to the occupants, including any services available to them as part of the POE (for example, incentives or if the Aftercare issue has been pursued), to encourage occupant involvement. b.iii: Broader reasons for POEs to be carried out and the importance for house building. b.iv: Approximate timescales for any home visits or opportunities for occupant feedback. b.v: Contact details for the company and persons responsible for carrying out POEs. b.vi: Details of how occupant feedback and any performance data will be used 1.c: Request occupant contact details including an up-to-date phone number and e-mail address, to help encourage their involvement. 1.d: Contact occupants after the 6-week period, prior to when the POE is scheduled to be carried out, where the first offer has not been accepted or declined. 2 Between 12 and 18 months after occupation: a: Collect occupant feedback. b: Request the annual energy and water bills for the first year of occupation. c: Analyse occupant feedback, and energy and water bills to evaluate the performance of the home in practice, compared to its design intent, to improve future projects. d: Disseminate the POE results and lessons learnt to key stakeholders, in order to share good practice. e: Send POE data to BRE in the format outlined in the Methodology section for		POE offered after 6weeks occupation. Collected after 12-18 months. Commitment required at design stage	Developer

HQM ONE ENGLAND
6892 BATTERSEA PARK ROAD

1 Star Minimum requirements only 2 Star 100 credits **3 Star 150** credits 4 Star 240 credits 5 Star 400 credits

Credit information			Evidence information		Targeted	Targeted + Potential	Achieved				
				Rating	250	296	1.43478836				
Credits available	Credits targeted	Potential credits	Evidence assessed	Percentage	50.0%	59.2%	143.5%				
				Credit issue	Title	Minimum requirements	Aim	Summary of criteria	Stage	Comments and actions	Responsible party
For full details of credit compliance requirements, refer to the Home Quality Mark ONE Technical Manual (version SD239 Scotland)											
3	0	0			02 Energy and temperature monitoring (crit 3-4)		and to help reduce performance gaps in homes.	3 credits: crit 1 to crit 2 have been achieved. Where an appropriately qualified professional has also been appointed to do the following: a: Collect and monitor the following data for at least one year, recorded hourly: a.i: Energy consumption data in kWh/person or kWh/m². a.ii: Internal temperature in °C, recorded in the main bedroom and living room as a minimum. b: Compare actual and predicted energy costs using the home's Energy Performance Certificate (EPC). c: Analyse results and outline future lessons, as part of crit 2 , to improve the performance of future projects.		Not targeted.	Developer
2	0	0			03 Advanced POE (crit 5-6)			2 credits: Where crit 1 to crit 4 have been met. Where the appropriately qualified professional will also undertake at least one other POE method (see Methodology) as part of the data being collected and analysed for crit 1 to crit 4.		Not targeted.	Developer
3	0	0			04 Independent third party (crit 7-8)			3 credits: Where crit 1 and crit 2 have been achieved. Where an independent third party (see definitions) has been appointed as the appropriately qualified professional and is contractually obliged to fulfil any POE commitments referred to in crit 1 to crit 6.		Not targeted, additional cost.	Developer
				UE	4.4%						