

CSH and BREEAM Report

CSH AND BREEAM REPORT- THE HOPE AND ANCHOR, CROWNDALE ROAD

Client:

MADIGAN BROWNE

Author:

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Signature



Position Environmental Consultant

Reference: MB-Hope and Anchor-
CSH&BREEAM/R/1.0/AW

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1. ASSESSMENT INFORMATION

| | |
|------------------------------------|---|
| Nature of Assessment: | CSH and BREEAM Report-The Hope and Anchor, Crowndale Road |
| Project Name: | The Hope and Anchor |
| Project Address: | The Hope and Anchor, Crowndale Road, NW1 1TP |
| Client: | Madigan Browne |
| Client's Address: | 63 Grosvenor Street, London, W1K 3JG |
| Details of the Development: | Redevelopment of the site to provide a commercial unit and 8 residential units comprising 5x refurbished flats and 3x new build flats |

2. INTRODUCTION

This report has been prepared by Abbey Consultants on behalf of Madigan Browne in support of the planning application on The Hope and Anchor, Crowndale Road, NW1 1TP.

The Code for Sustainable Homes and BREEAM New Construction 2011 are environmental assessment methodologies for rating and certifying the performance of new homes and commercial units respectively. Madigan Browne are committed to seeking a Code level 4 for all new build dwellings and BREEAM Excellent for the commercial unit in the proposed development, as well as achieving a 40% reduction in CO₂ emissions over Building Regulations 2010.

Pre-Assessments have been completed for the above mentioned CSH and BREEAM schemes to demonstrate how the scheme will be able to meet the requirements for CSH level 4 and BREEAM Excellent as required by Camden Borough Council Planning Policies.

The proposed development of the site is for the refurbishment of the existing Hope and Anchor Public House and associated floors and the construction of 3 new build residential flats, 5 refurbished flats and commercial unit.

The existing development consists of the existing Hope and Anchor public house and associated floors, located off Crowndale Road in central London; just 5 minutes walk from Euston train station, providing easy access to a wide variety of locations throughout London. The proposed development will provide 8 dwellings in a highly accessible and desirable location in addition to the commercial unit, making more optimum use of the site.

Figure 2: Google Maps View of the Existing Site



Figure 3: Existing Pub Front



Figure 5: View of the Pub Entrance



Figure 4: View of the Pub Site off Bayham Street



3. PLANNING POLICY

3.1 NATIONAL POLICY

The UK has a legally binding target through the Kyoto protocol to reduce emissions from greenhouse gases. The National Planning Policy Framework sets out the Government's planning policies for England and how these are expected to be applied. It sets out the Government's requirements for the planning system only to the extent that it is relevant, proportionate and necessary to do so. It provides a framework within which local people and their accountable councils can produce their own distinctive local and neighbourhood plans, which reflect the needs and priorities of their communities.

The following items from the National Planning Policy Framework (NPPF) set out the Government's position in response to reducing carbon emissions:

NPPF - Chapter 10: Meeting the challenge of climate change, flooding and coastal change

95: To support the move to a low carbon future, local planning authorities should:

- Plan for new development in locations and ways which reduce greenhouse gas emissions;
- Actively support energy efficiency improvements to existing buildings; and
- When setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards.

96: In determining planning applications, local planning authorities should expect new development to:

- Comply with adopted Local Plan policies on local requirements for decentralised energy supply unless it can be demonstrated by the applicant, having regard to the type of development involved and its design, that this is not feasible or viable; and
- Take account of landform, layout, building orientation, massing and landscaping to minimise energy consumption.

97: To help increase the use and supply of renewable and low carbon energy, local planning authorities should recognise the responsibility on all communities to contribute to energy generation from renewable or low carbon sources. They should:

- have a positive strategy to promote energy from renewable and low carbon sources;
- design their policies to maximise renewable and low carbon energy development while ensuring that adverse impacts are addressed satisfactorily, including cumulative landscape and visual impacts;
- consider identifying suitable areas for renewable and low carbon energy sources, and supporting infrastructure, where this would help secure the development of such sources
- support community-led initiatives for renewable and low carbon energy, including developments outside such areas being taken forward through neighbourhood planning; and
- identify opportunities where development can draw its energy supply from decentralised, renewable or low carbon energy supply systems and for co-locating potential heat customers and suppliers.

98: When determining planning applications, local planning authorities should:

- Not require applicants for energy development to demonstrate the overall need for renewable or low carbon energy and also recognise that even small-scale projects provide a valuable contribution to cutting greenhouse gas emissions; and
- Approve the application if its impacts are (or can be made) acceptable. Once suitable areas for renewable and low carbon energy have been identified in plans, local planning authorities should also expect subsequent applications for commercial scale projects outside these areas to demonstrate that the proposed location meets the criteria used in identifying suitable areas.

3.2 REGIONAL POLICY

London Plan – Chapter 5: London’s response to climate change

Policy 5.1 introduces the target to achieve an overall reduction in carbon dioxide for London of 60% below 1990 levels by 2025, which leads to Policy 5.2 - Minimising Carbon Dioxide Emissions, expanding on this target for residential developments with the Be lean, Be clean, Be green Energy Hierarchy and the current target of 40% CO₂ improvement over 2010 Building Regulations.

Policy 5.2 – Minimising Carbon Dioxide Emissions

Planning Decisions

- A. Development proposals should make the fullest contribution to minimising carbon dioxide emissions in accordance with the following energy hierarchy:
 1. Be lean: use less energy
 2. Be clean: supply energy efficiently
 3. Be green: use renewable energy
- B. The Mayor will work with boroughs and developers to ensure that major developments meet the following targets for carbon dioxide emissions reduction in buildings. These targets are expressed as minimum improvements over the Target Emission Rate (TER) outlined in the national Building Regulations leading to zero carbon residential buildings from 2016.

Residential buildings:

| Year | Improvement on 2010 Building Regulations |
|-----------|--|
| 2010-2013 | 25 per cent (Code for Sustainable Homes level 4) |
| 2013-2016 | 40 per cent |
| 2016-2031 | Zero carbon |

3.3 LOCAL POLICY

London Borough of Camden Local Development Framework

DP22 – Promoting Sustainable Design and Construction

The Council will require development to incorporate sustainable design and construction measures. Schemes must:

- a) Demonstrate how sustainable development principles, including the relevant measures set out in paragraph 22.5 below, have been incorporated into the design and proposed implementation; and
- b) Incorporate green or brown roofs and green walls wherever suitable.

The Council will promote and measure sustainable design and construction by:

- c) Expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.;
- d) Expecting developments (except new build) of 500 sq m of residential floor space or above or 5 or more dwellings to achieve “very good” in EcoHomes assessments prior to 2013 and encouraging “excellent” from 2013;
- e) Expecting non-domestic developments of 500sqm of floor space or above to achieve “very good” in BREEAM assessments and “excellent” from 2016 and encouraging zero carbon from 2019. The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as:
- f) Summer shading and planting;

- g) Limiting run-off;
- h) Reducing water consumption;
- i) Reducing air pollution; and
- j) Not locating vulnerable uses in basements in flood-prone areas.

4. CODE FOR SUSTAINABLE HOMES PRE-ASSESSMENT



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Site Strategy - Hope and Anchor

| | |
|----------------|-------|
| | Flats |
| Targeted Score | 68.56 |
| Total Required | 68.00 |

Initial strategy following review of planning concept drawings.

| Credit Issue | Description of Credit Issue | Maximum Score | Flats | Weighted Value of credit | Strategy |
|--------------|-----------------------------|---------------|-------|--------------------------|--|
| Ene 1 | Dwelling Emission Rate | 10 | 4.6 | 1.17 | No SAP's have been completed at present, however the developer has targetted a minimum improvement of 40% over 2010 TER, in line with the requirements of the London Plan and LB Barnet planning policies. |
| Ene 2 | Fabric Energy Efficiency | 9 | 5 | 1.17 | Abbey consultants have assumed based on past experience that the Fabric Energy Efficiency of the building will be below 43 kWh/m2/year. This would achieve 5 credits. |
| Ene 3 | Energy Display Devices | 2 | 2 | 1.17 | <p>The Developer has confirmed that an Electricity and Primary heating fuel consumption data must be displayed to occupants by a correctly specified energy display device. This is a system comprising a self charging sensor(s) fixed to the incoming mains supply/supplies, to measure and transmit energy consumption data to a visual display unit. As a minimum the visual display unit must be capable of displaying the following information:</p> <p>Local time Current mains energy consumption (kilowatts and kilowatt hours) Current emissions (g/kg CO2) Current tariff Current Cost (in pounds and pence) Display accurate account balance information (amount in credit or debit) Visual presentation of data (non-numeric) to allow consumers to identify high and low levels of usage. Historical consumption data so that consumers can compare their current and previous usage. This should include cumulative consumption data in any of the following forms day/week/month/billing period.</p> |
| Ene 4 | Drying Space | 1 | 1 | 1.17 | <p>The developer has agreed to provide an over bath tidy dry, fixed over each bath within the apartments, with a drying line in excess of: 4m for the 2 bedroom apartments 6m for the 3 bedroom apartments</p> <p>Bathrooms will have controlled intermittent extract ventilation and will achieve a minimum extract rate of 30l/s and be controlled according to the requirements for intermittent extract ventilation defined in AD F.</p> |

| Credit Issue | Description of Credit Issue | Maximum Score | Flats | Weighted Value of credit | Strategy |
|--------------|---------------------------------|---------------|-------|--------------------------|--|
| Ene 5 | Energy Labelled White Goods | 2 | 1 | 1.17 | <p>The Developer has confirmed that a white goods package is not to be supplied as standard; however a leaflet describing the EU labelling scheme is also to be provided to all residents within the Home User Guide, allowing 1 credit to be achieved.</p> <p>If any white goods are to be provided they will comply with the following minimum energy ratings: Fridge/freezers A+ Rated Washing Machines A Rated with a maximum water consumption of 8.17 litres per Kg (Dry Load) Dishwashers A Rated with a maximum water consumption of 1.25 litres per place setting Washer Dryer/tumble dryer B Rated with a maximum water consumption of 8.17 litres per Kg (Dry Load)</p> |
| Ene 6 | External Lighting | 2 | 2 | 1.17 | All external space lighting including corridors and common areas to flats are to be Dedicated Low Energy fittings and controlled by PIR or timer switches. Any Security lighting will have a maximum wattage of 150W, be controlled by PIR and daylight cut-off sensors. |
| Ene 7 | Low or Zero Carbon Technologies | 2 | 1 | 1.17 | No SAP's have been completed at present, however the developer has targetted a minimum improvement of 40% over 2010 TER, in line with the requirements of the London Plan and LB Barnet planning policies, which is likely to achieve a credit in this section. |
| Ene 8 | Cycle Storage | 2 | 2 | 1.17 | The Developer has confirmed that secure cycle storage will be provided within a communal store containing a proprietary racking system at the rate of 2No cycle spaces for each two bedroom apartment and 1No cycle spaces for each 1 bedroom apartment, meeting the 4 spaces required. The communal stores will be secure and will comply with the secured by design requirements. |
| Ene 9 | Home Office | 1 | 0 | 1.17 | Credits not sought. |
| Wat 1 | Internal Water Use | 5 | 3 | 1.50 | <p>The developer has agreed that the following specification (or similar) will be adopted to achieve a reduction in water consumption to achieve a usage of no greater than 105 litres per person per day allowing 3 credits to be awarded.</p> <p>Cisterns: 6/4 Dual flush Bath: Maximum Volume to overflow 170 Litres Basin Taps: 5 Litres per minute Kitchen Taps: 12 Litres per minute Shower : 6 Litres per minute Washing Machine: Max consumption 8 litres per kg (dry load) Dishwasher : Max consumption 1.2 litres per place setting</p> <p>The figures shown above are for a unit where all fittings are the same.</p> |
| Wat 2 | External Water Use | 1 | 1 | 1.50 | As no communal garden spaces are being provided this credit is achieved by default. |

| Credit Issue | Description of Credit Issue | Maximum Score | Flats | Weighted Value of credit | Strategy |
|--------------|---------------------------------------|---------------|-------|--------------------------|--|
| Mat 1 | Environmental Impact of Materials | 15 | 9 | 0.30 | The material specification will be assessed under the Green Guide as produced by the BRE. Abbey Consultants estimate that 9 credits will be achieved for the flats. |
| Mat 2 | Responsible Sourcing - Basic | 6 | 4 | 0.30 | The Developer will ensure that at least 80% of material within the basic building elements will be responsibly sourced through suppliers who capable of providing BES6001, ISO140001, EMAS or COC certification. The following areas are considered: a) Frame b) Ground floor c) Upper floors (including separating floors) d) Roof e) External walls f) Internal walls (including separating walls) g) Foundation/substructure (excluding sub-base materials) h) Staircase Additionally, 100% of any timber in these elements must be legally sourced. The following areas are to be considered. |
| Mat 3 | Responsible Sourcing - Finishing | 3 | 2 | 0.30 | The Developer has agreed that all material , primarily timber , will be responsibly sourced. The percentages of timber within the scheme are sufficient for 2 credit to be assumed awarded. The following areas are considered: a) Stair b) Window c) External & internal door d) Skirting e) Panelling f) Furniture g) Fascia's h) Any other significant use |
| Sur 1 | Reduction Surface Water Run-off | 2 | 0 | 0.55 | As the impermeable area of the site is not going to increase, the mandatory element of this issue will be complied with. The geology of the underlying strata means that disposal of the surface water run off will not be possible via infiltration techniques and as a result the tradeable credits are unlikely to be achieved. |
| Sur 2 | Flood Risk | 2 | 2 | 0.55 | Initial investigations by Abbey Consultants indicate that the site falls into Flood Zone, as confirmed by an EA flood risk map; in addition the Developer has confirmed that a flood risk assessment will be produced for confirmation. |
| Was 1 | Household Waste Storage and Recycling | 4 | 4 | 0.80 | The developer has agreed that full recycling both internally (30 litres) and externally (suitable base and covered) is to be provided for all plots. As Camden Borough Council provide a post collection sorting service the internal bin will comprise of a single 30L bin. Access to external storage facilities is to satisfy all criteria listed in Checklist IDP. |

| Credit Issue | Description of Credit Issue | Maximum Score | Flats | Weighted Value of credit | Strategy |
|--------------|------------------------------------|---------------|-------|--------------------------|---|
| Was 2 | Construction Site Waste Management | 3 | 3 | 0.80 | <p>The developer has agreed, the site will have the benefit of a Site Waste Management Plan that contains :</p> <p>a) target benchmarks for resource efficiency b) procedures for minimizing non-hazardous waste. Specifying waste minimisation actions relating to at least 3 waste groups and support them by appropriate monitoring of waste c) procedures for minimizing hazardous waste d) monitoring, measuring and reporting of hazardous and non-hazardous waste site waste production according o defined waste groups.</p> <p><u>Plus for 3 credits</u></p> <p>The SWMP will include procedures for diverting waste from landfill though re-use on site, re-use on other sites, salvage, return to supplier (take back scheme), recovery and recycling through an approved waste contractor, compost</p> <p>and</p> <p>At least 85% by weight or by volume of non- hazardous waste will have been diverted from landfill.</p> |
| Was 3 | Composting | 1 | 1 | 0.80 | As Camden Borough Council offer a food waste collection scheme this credit is achieved for the flats by default. |
| Pol 1 | Global Warming Potential | 1 | 1 | 0.70 | All Insulants used within the roofs, walls, floors, cylinder, pipework, cold water storage tanks, external doors and loft access traps will have a GWP of less than 5: |
| Pol 2 | NOx emissions | 3 | 3 | 0.70 | All heating and hot water will be provided by gas boilers. All boilers specified will have NOx emissions of less than 40mg/kWh. |
| Hea 1 | Daylighting | 3 | 0 | 1.17 | Credits not sought. |
| Hea 2 | Sound Insulation | 4 | 4 | 1.17 | The developer has agreed to conduct a series of pre-completion sound tests for both airborne and impact sound and has made a commitment to achieve an improvement of 8db over the requirements of Part E. |
| Hea 3 | Private Space | 1 | 0 | 1.17 | As no communal garden spaces are being provided this credit cannot be achieved. |
| Hea 4 | Lifetime Homes | 4 | 4 | 1.17 | The developer has confirmed that all dwellings are to meet Lifetime Homes criteria. |

| Credit Issue | Description of Credit Issue | Maximum Score | Flats | Weighted Value of credit | Strategy |
|--------------|---------------------------------|---------------|-------|--------------------------|--|
| Man 1 | Home User Guide | 3 | 3 | 1.11 | The developer has agreed to provide each homeowner with a Home User Guide that complies with Checklist Man1 Parts 1 & 2 as issued by the BRE and therefore 3 credits will be achieved. |
| Man 2 | Considerate Constructors Scheme | 2 | 2 | 1.11 | The developer will ensure that the site will be registered under the Considerate Constructors Scheme and commit to achieving a score of in excess of 35 with no section scoring less than 7 enabling 2 credits to be awarded. |
| Man 3 | Construction Site Impacts | 2 | 2 | 1.11 | <p>The following is to be adopted on site:</p> <p>Monitor, report and set targets for CO2 production or energy use arising from site activities</p> <p>Monitor, report and set targets for water consumption from site activities</p> <p>Adopt best practice policies in respect of air (dust) pollution arising from site activities</p> <p>Adopt best practice policies in respect of water (ground and surface) pollution occurring on the site</p> |
| Man 4 | Security | 2 | 2 | 1.11 | An ALO will be appointed at an early stage in the design process and their advice will be followed to ensure that the properties comply with Section 2 of Secured By Design allowing 2 credits to be assumed awarded. |
| Eco 1 | Ecological Value | 1 | 1 | 1.33 | The developer has confirmed that an Ecology Report will be produced for Code for Sustainable Homes purposes from a suitably qualified ecologist. As the site is currently all buildings and hardstanding, it has been assumed that the site will be classified as being of low ecological value. |
| Eco 2 | Ecological Enhancements | 1 | 1 | 1.33 | The ecologist will make a number of recommendations within the ecology report. The developer has confirmed that all of the main recommendations and at least 30% of the additional recommendations made by the ecologist will be incorporated. |
| Eco 3 | Ecological Protection | 1 | 1 | 1.33 | Once the Ecological report is developed, the developer will ensure that any protection measures required by the Ecologist will be carried out. |
| Eco 4 | Change in Ecological Value | 4 | 2 | 1.33 | The ecologist will complete calculations to determine the change in species count. It can be assumed that the change will be at least neutral and therefore 2 credits would be awarded. |
| Eco 5 | Building Footprint | 2 | 0 | 1.33 | Calculations by Abbey Consultants based on the planning drawings confirm that the building footprint ratio will be approximately 2.81:1 and therefore no credits will be achieved. |
| | | Current Score | | 68.56 | |

5. BREEAM NON-DOMESTIC REFURBISHMENT PRE-ASSESSMENT

BREEAM 2011 New Construction Pre-Assessment Estimator

This assessment and indicative BREEAM rating is not a formal certified BREEAM assessment or rating and must not be communicated as such. The score presented is indicative of a buildings potential performance and is based on a simplified pre-formal BREEAM assessment and unverified commitments given at an early stage in the design process.

| | |
|---|---|
| Building name | Hope and Anchor Commercial |
| Indicative building score (%) | 70.08% |
| Indicative BREEAM rating | Pre-Assessment result indicates potential for BREEAM Excellent rating |
| Indicative minimum standards level achieved | Pre-Assessment result indicates the minimum standards for Excellent level |

| | | | | |
|------------|-------------------|--------|--------------------------|-------|
| MANAGEMENT | Section Weighting | 12.00% | Indicative Section Score | 7.09% |
|------------|-------------------|--------|--------------------------|-------|

Man01 Sustainable Procurement

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 8 | Available contribution to overall score | 4.36% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|---|-------------------|-----------------------------|----------------------|
| Will roles, responsibilities and a training schedule be defined in accordance with BREEAM? | No | 1 | 0 | N/A |
| Will a BREEAM AP be appointed at RIBA stage A/B and performance targets contractually agreed? | Yes | 1 | 1 | N/A |
| Will a BREEAM AP be appointed to monitor and report progress during RIBA stage B-E ? | Yes | 1 | 1 | N/A |
| Will a BREEAM AP be appointed to monitor and report progress during RIBA stage F-L? | Yes | 1 | 1 | N/A |
| Will a thermographic survey be conducted and any defects uncovered remedied? | No | 1 | 0 | N/A |
| Will compliant commissioning of building services be carried out? | No | 1 | 0 | N/A |
| Will compliant seasonal commissioning of building services be carried out? | No | 1 | 0 | N/A |
| Will water/energy consumption data be recorded and aftercare support provided for 12 months? | No | 1 | 0 | N/A |
| Will water/energy consumption be recorded/reported for 3 years post construction? | No | 1 | 0 | N/A |
| Total indicative BREEAM credits achieved | 3 | | | |
| Total indicative contribution to overall building score | 1.64% | | | |
| Total indicative BREEAM innovation credits achieved | 0 | | | |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level | | | |

Comments/notes:

Man02 Responsible Construction Practices

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 1.09% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|---|-------------------|-----------------------------|----------------------|
| Which considerate construction scheme will be used or required to be used by the principal contractor? | Considerate Constructors Scheme | | | |
| For the required scheme, what will be the target performance level set for the site/contractor? | A CCS score between 32 and 35.5. | | | N/A |
| Total indicative BREEAM credits achieved | 2 | | | |
| Total indicative contribution to overall building score | 1.09% | | | |
| Total indicative BREEAM innovation credits achieved | 0 | | | |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level | | | |

Comments/notes:

Man03 Construction Site Impacts

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 5 | Available contribution to overall score | 2.73% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will site energy consumption be metered/monitored? | Yes | 1 | 1 | N/A |
| Will site water consumption be metered/monitored? | Yes | 1 | 1 | N/A |
| Will the transport of construction materials and waste to/from site be measured/monitored? | Yes | 1 | 1 | N/A |
| Will timber be sourced in accordance with the Government's Timber Procurement Policy? | Yes | 1 | 1 | N/A |
| Will/does the principal contractor operate a compliant Environmental Management System? | Yes | 1 | 1 | N/A |
| Will the principal contractor adopt best practice pollution prevention policies & procedures? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | 5 | | | |
| Total indicative contribution to overall building score | 2.73% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

BREEAM 2011 New Construction Pre-Assessment Estimator

Man04 Stakeholder Participation

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 4 | Available contribution to overall score | 2.18% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will an appropriate level of consultation activities be undertaken? | Yes | 1 | 1 | N/A |
| Will an access statement be developed and appropriate building user facilities provided? | Yes | 1 | 1 | N/A |
| Will building user guides and relevant user information be provided? | Yes | 1 | 1 | |
| Will a post occupancy evaluation assessment be undertaken and information disseminated? | No | 1 | 0 | |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 3 |
| Total indicative contribution to overall building score | 1.64% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Man05 Life cycle cost and service life planning

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 3 | Available contribution to overall score | 1.64% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will a feasibility stage Life Cycle Cost (LCC) analysis be commissioned and completed? | No | 1 | 0 | N/A |
| Will a strategic and system level LCC be commissioned and completed? | No | 1 | 0 | N/A |
| Will a technical design LCC to be commissioned and completed? | No | 1 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 0 |
| Total indicative contribution to overall building score | 0.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

| | | | | |
|--------------------|-------------------|--------|--------------------------|--------|
| HEALTH & WELLBEING | Section Weighting | 15.00% | Indicative Section Score | 11.00% |
|--------------------|-------------------|--------|--------------------------|--------|

Hea01 Visual Comfort

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 4 | Available contribution to overall score | 4.00% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will all fluorescent lamps be fitted with high frequency ballasts? | Yes | N/A | N/A | N/A |
| Will all relevant building areas be designed to achieve the appropriate daylight factor(s)? | Yes | 2 | 2 | N/A |
| Will the design provide adequate glare control and view out for building users? | Yes | 1 | 1 | N/A |
| Will internal/external lighting be specified in accordance with the relevant CIBSE Guides/British Standards? | Yes | 1 | 1 | N/A |

| | | | | |
|---|--|---|---|-----|
| Will all relevant building areas be designed to achieve exemplary level daylight factor(s)? | | 1 | 0 | N/A |
|---|--|---|---|-----|

| | |
|---|---|
| Total indicative BREEAM credits achieved | 4 |
| Total indicative contribution to overall building score | 4.00% |
| Total indicative BREEAM innovation credits achieved | 0 |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Hea02 Indoor Air Quality

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 4 | Available contribution to overall score | 4.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will an air quality plan be produced? | Yes | 1 | 1 | N/A |
| Will the building be designed to minimise sources of internal air pollution? | Yes | 1 | 1 | N/A |
| Will the relevant products be specified to meet the VOC testing and emission levels required? | Yes | 1 | 1 | N/A |

BREEAM 2011 New Construction Pre-Assessment Estimator

Will formaldehyde and total VOC levels be measured post construction?
Will the building be designed to, or have the potential to provide, natural ventilation?

| | | | |
|----|---|---|-----|
| No | 1 | 0 | N/A |
| No | 1 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 2 |
| Total indicative contribution to overall building score | 2.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Hea03 Thermal Comfort

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

Response Credits available Indicative credits achieved Shell & Core option?

| | | | | |
|---|----|---|---|-----|
| Will thermal modelling of the design be carried out? | No | 1 | 0 | N/A |
| Will the modelling inform the development of a thermal zoning and control strategy? | No | 1 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 0 |
| Total indicative contribution to overall building score | 0.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Hea04 Water Quality

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 1.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | Yes |

Pre-Assessment question/criteria

Response Credits available Indicative credits achieved Shell & Core option?

| | | | | |
|--|-----|---|---|-----|
| Will all water systems be designed to comply with the relevant HSE Approved Code of Practice and Guidance? | Yes | 1 | 1 | N/A |
| Where humidification is to be provided, will a failsafe humidification system be specified? | N/A | | | N/A |
| Will a wholesome supply of accessible, clean and fresh drinking water be supplied for building users? | Yes | | | N/A |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 1 |
| Total indicative contribution to overall building score | 1.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Hea05 Acoustic Performance

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

Response Credits available Indicative credits achieved Shell & Core option?

| | | | | |
|--|-----|---|---|-----|
| Will/has a suitably qualified acoustician be appointed to provide appropriate design advice? | Yes | 2 | 2 | N/A |
| Will the building meet the relevant acoustic performance standards and testing requirements? | Yes | | | |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 2 |
| Total indicative contribution to overall building score | 2.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

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Hea06 Safety and Security

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Where external site areas are present, will safe access be designed for pedestrians and cyclists? | N/A | N/A | N/A | N/A |
| Will a suitably qualified security consultant be appointed and security considerations accounted for? | Yes | 2 | 2 | N/A |
| Total indicative BREEAM credits achieved | 2 | | | |
| Total indicative contribution to overall building score | 2.00% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

| | | | | |
|--------|-------------------|--------|--------------------------|--------|
| ENERGY | Section Weighting | 19.00% | Indicative Section Score | 10.64% |
|--------|-------------------|--------|--------------------------|--------|

Ene01 Reduction of CO₂ Emissions

| | | | |
|---|---|---|--------|
| No. of BREEAM credits available | 15 | Available contribution to overall score | 11.40% |
| No. of BREEAM innovation credits available | 5 | Minimum standards applicable | Yes |
| How do you wish to assess the number of BREEAM credits achieved for this issue? | Define a target number of BREEAM credits achieved | | |
| Select the target number of BREEAM credits for the Ene01 issue | 6 | BREEAM Innovation credits | |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 6 |
| Total indicative contribution to overall building score | 4.56% |
| Total indicative BREEAM innovation credits achieved | 0 |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Excellent level |

Comments/notes:

Ene02 Energy Monitoring

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 1.52% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|---|-------------------|-----------------------------|----------------------|
| Will a BMS or sub-meters be specified to monitor energy use from major building services systems? | Yes | 1 | 1 | Option 1 |
| Will a BMS or sub-meters be specified to monitor energy use by tenant/building function areas? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | 2 | | | |
| Total indicative contribution to overall building score | 1.52% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level | | | |

Comments/notes:

BREEAM 2011 New Construction Pre-Assessment Estimator

Ene03 External Lighting

| | | | | |
|--|----------|---|-----------------------------|----------------------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 0.76% | |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No | |
| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
| Will external light fittings and controls be specified in accordance with the BREEAM criteria? | Yes | 1 | 1 | Option 1 |
| Total indicative BREEAM credits achieved | 1 | | | |
| Total indicative contribution to overall building score | 0.76% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

Ene04 Low and Zero Carbon Technology

| | | | | |
|---|---|---|-----------------------------|----------------------|
| No. of BREEAM credits available | 5 | Available contribution to overall score | 3.80% | |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes | |
| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
| Compliant LZC feasibility study to be undertaken | Yes | 2 | 1 | N/A |
| What will be the intended scope of the feasibility study? | Operational stage carbon savings/emissions | | | |
| Target percentage net reduction in operational stage CO2 emissions | 40.00% | 2 | 2 | N/A |
| Please confirm the intended energy source of the Low and/or zero carbon system? | Solar | | | |
| Free cooling - credit not achievable (see note) | No | 1 | 0 | N/A |
| Total indicative BREEAM credits achieved | 3 | | | |
| Total indicative contribution to overall building score | 2.28% | | | |
| Total indicative BREEAM innovation credits achieved | 1 | | | |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level | | | |

Comments/notes:

Ene05 Energy Efficient Cold Storage

Assessment Issue Not Applicable

| | | | | | | |
|---|--|-----|---|-------------------|-----------------------------|----------------------|
| No. of BREEAM credits available | | N/A | Available contribution to overall score | | N/A | |
| No. of BREEAM innovation credits available | | N/A | Minimum standards applicable | | N/A | |
| Pre-Assessment question/criteria | | | Response | Credits available | Indicative credits achieved | Shell & Core option? |
| | | | | | | |
| | | | | | | |
| | | | | | | |
| Total indicative BREEAM credits achieved | | N/A | | | | |
| Total indicative contribution to overall building score | | N/A | | | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | | | |
| Indicative minimum standard(s) level | | N/A | | | | |

Comments/notes:

Ene06 Energy Efficient Transportation Systems

Assessment Issue Not Applicable

| | | | | |
|--|----------|---|-----------------------------|----------------------|
| No. of BREEAM credits available | N/A | Available contribution to overall score | N/A | |
| No. of BREEAM innovation credits available | N/A | Minimum standards applicable | N/A | |
| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
| | | | | |

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| | |
|---|-----|
| Total indicative BREEAM credits achieved | N/A |
| Total indicative contribution to overall building score | N/A |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Ene07 Energy Efficient Laboratory Systems

Assessment Issue Not Applicable

| | | | |
|--|-----|---|-----|
| No. of BREEAM credits available | N/A | Available contribution to overall score | N/A |
| No. of BREEAM innovation credits available | N/A | Minimum standards applicable | N/A |

Pre-Assessment question/criteria

| | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| | | | | |
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| | |
|---|-----|
| Total indicative BREEAM credits achieved | N/A |
| Total indicative contribution to overall building score | N/A |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Ene08 Energy Efficient Equipment

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 1.52% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| Which of the following will be present and likely to be a/the major contributor to 'unregulated' energy use: | Present | Significant majority contributor |
|--|---------|----------------------------------|
| Small power/plug in equipment? | Yes | Yes |
| Swimming pool? | No | |
| Communal laundry? | No | |
| Data centre? | No | |
| IT-intensive operation areas? | No | |
| Residential areas? | No | |
| Healthcare? | No | |
| Kitchen and catering facilities? | No | |

| | Indicative compliance? | Credits available | Indicative credits achieved | Shell & Core option? |
|--|------------------------|-------------------|-----------------------------|----------------------|
| Will the significant majority contributor(s) to 'unregulated' energy use (above) meet the BREEAM criteria? | Yes | 2 | 2 | Option 1 |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 2 |
| Total indicative contribution to overall building score | 1.52% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Ene09 Drying Space

Assessment Issue Not Applicable

| | | | |
|--|-----|---|-----|
| No. of BREEAM credits available | N/A | Available contribution to overall score | N/A |
| No. of BREEAM innovation credits available | N/A | Minimum standards applicable | N/A |

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| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Total indicative BREEAM credits achieved | | | | |
| Total indicative contribution to overall building score | | | | |
| Total indicative BREEAM innovation credits achieved | | | | |
| Indicative minimum standard(s) level | | | | |

Comments/notes:

| | | | | |
|------------------|--------------------------|--------------|---------------------------------|--------------|
| TRANSPORT | Section Weighting | 8.00% | Indicative Section Score | 6.22% |
|------------------|--------------------------|--------------|---------------------------------|--------------|

Tra01 Public Transport Accessibility

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 5 | Available contribution to overall score | 4.44% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| | |
|---|--|
| What is the building type category (for the purpose of Tra01 issue assessment)? | Retail |
| What is the degree of public transport provision for the building's location? | Excellent provision of public transport, i.e. large urban/metropolitan city centre |
| Building's indicative Accessibility Index | 18 |
| Does the building have a dedicated bus service? | |
| Total indicative BREEAM credits achieved | 5 |
| Total indicative contribution to overall building score | 4.44% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Tra02 Proximity to Amenities

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 0.89% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will the building be in close proximity of and accessible to applicable amenities? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | | 1 | | |
| Total indicative contribution to overall building score | | 0.89% | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | |
| Indicative minimum standard(s) level | | N/A | | |

Comments/notes:

Tra03 Cyclist facilities

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 1.78% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| | |
|---|-----------------------------------|
| What is the building type category (for the purpose of Tra03 issue assessment)? | Other Building - transport type 3 |
|---|-----------------------------------|

Pre-Assessment question/criteria

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will cycle storage spaces and cyclist facilities be provided for building staff? | No | 2 | 0 | N/A |
| Will cycle storage space for the relevant number of building visitors/beds be provided? | No | | | N/A |
| Total indicative BREEAM credits achieved | | 0 | | |
| Total indicative contribution to overall building score | | 0.00% | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | |
| Indicative minimum standard(s) level | | N/A | | |

Comments/notes:

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Tra04 Maximum Car Parking Capacity

Assessment Issue Not Applicable

| | | | |
|--|-----|---|-----|
| No. of BREEAM credits available | N/A | Available contribution to overall score | N/A |
| No. of BREEAM innovation credits available | N/A | Minimum standards applicable | N/A |

| | |
|---|--|
| Building type category (for the purpose of Tra04 issue)? | |
| Buildings indicative Accessibility Index (sourced from issue Tra01) | |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will the building meet BREEAM's maximum parking capacity criteria for this building type/Accessibility Index? | | | | |
| Total indicative BREEAM credits achieved | N/A | | | |
| Total indicative contribution to overall building score | N/A | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

Tra05 Travel Plan

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 0.89% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will a transport plan based on site specific travel survey/assessment be developed? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | 1 | | | |
| Total indicative contribution to overall building score | 0.89% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

| WATER | Section Weighting | 6.00% | Indicative Section Score | 3.00% |
|-------|-------------------|-------|--------------------------|-------|
|-------|-------------------|-------|--------------------------|-------|

Wat01 Water Consumption

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 5 | Available contribution to overall score | 3.75% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes |

Shell & Core option?

| | | |
|--|------------------------|----------|
| Select the level that corresponds closely to the target or likely water component specification? | Level 4 - Four credits | Option 1 |
|--|------------------------|----------|

| | | | |
|---|---|--|--|
| Total indicative BREEAM credits achieved | 4 | | |
| Total indicative contribution to overall building score | 3.00% | | |
| Total indicative BREEAM innovation credits achieved | 0 | | |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level | | |

Comments/notes:

Wat02 Water Monitoring

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 0.75% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|----------------------------------|----------|-------------------|-----------------------------|----------------------|
|----------------------------------|----------|-------------------|-----------------------------|----------------------|

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| | | | | |
|---|-----|---|---|-----|
| Will there be a water meter on the mains water supply to the building(s)? | Yes | 1 | 0 | N/A |
| Will metering/monitoring equipment be specified on the water supply to any relevant plant/building areas? | No | | | |
| Will all specified water meters have a pulsed output? | No | | | |
| If the site/building has an existing BMS connection, will all pulsed meters be connected to the BMS? | No | | | |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 0 |
| Total indicative contribution to overall building score | 0.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Wat03 Water Leak Detection and Prevention

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 1.50% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will a mains water leak detection system be installed on the building's mains water supply? | No | 1 | 0 | N/A |
| Will flow control devices be installed in each sanitary area/facility? | No | 1 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 0 |
| Total indicative contribution to overall building score | 0.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

Wat04 Water Efficient Equipment

Assessment Issue Not Applicable

| | | | |
|--|-----|---|-----|
| No. of BREEAM credits available | N/A | Available contribution to overall score | N/A |
| No. of BREEAM innovation credits available | N/A | Minimum standards applicable | N/A |

Pre-Assessment question/criteria

| | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| | | | | |

| | |
|---|-----|
| Total indicative BREEAM credits achieved | N/A |
| Total indicative contribution to overall building score | N/A |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

| | | | | |
|------------------|--------------------------|---------------|---------------------------------|---------------|
| MATERIALS | Section Weighting | 12.50% | Indicative Section Score | 10.42% |
|------------------|--------------------------|---------------|---------------------------------|---------------|

Mat01 Life Cycle Impacts

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 5 | Available contribution to overall score | 5.21% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| | |
|---|---|
| How do you wish to assess the number of BREEAM credits achieved for this issue? | Define a target number of BREEAM credits to be achieved |
| Select the number of BREEAM credits being targeted for the Mat01 issue | 4 BREEAM Innovation credits |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 4 |
| Total indicative contribution to overall building score | 4.17% |
| Total indicative BREEAM innovation credits achieved | 0 |
| Indicative minimum standard(s) level | N/A |

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Comments/notes:

Mat02 Hard Landscaping and Boundary Protection

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 1.04% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will ≥80% of all external hard landscaping and boundary protection achieve a Green Guide A or A+ rating? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | | 1 | | |
| Total indicative contribution to overall building score | | 1.04% | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | |
| Indicative minimum standard(s) level | | N/A | | |

Comments/notes:

Mat03 Responsible Sourcing

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 3 | Available contribution to overall score | 3.13% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes |

Pre-Assessment question/criteria

| How do you wish to assess the number of BREEAM credits achieved for this issue? | Define a target number of BREEAM credits | | |
|--|--|---------------------------|---|
| Select the number of BREEAM credits being targeted for the Mat03 issue | 3 | BREEAM Innovation credits | 0 |
| Will all timber used on the project be sourced in accordance with the UK Govt's Timber Procurement Policy? | Yes | | |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 3 |
| Total indicative contribution to overall building score | 3.13% |
| Total indicative BREEAM innovation credits achieved | 0 |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Mat04 Insulation

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.08% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Is the building targeting an insulating index of 2 or more? | Yes | 1 | 1 | N/A |
| Will the building's insulating materials be responsibly sourced? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | | 2 | | |
| Total indicative contribution to overall building score | | 2.08% | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | |
| Indicative minimum standard(s) level | | N/A | | |

Comments/notes:

BREEAM 2011 New Construction Pre-Assessment Estimator

Mat05 Designing for Robustness

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 1.04% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | N/A |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will suitable durability/protection measures be specified and installed to vulnerable areas of the building? | No | 1 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 0 |
| Total indicative contribution to overall building score | 0.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

| | | | | |
|--------------|--------------------------|--------------|---------------------------------|--------------|
| WASTE | Section Weighting | 7.50% | Indicative Section Score | 6.25% |
|--------------|--------------------------|--------------|---------------------------------|--------------|

Wst01 Construction Waste Management

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 4 | Available contribution to overall score | 5.00% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | Yes |

Pre-Assessment question/criteria

| | |
|---|---|
| How do you wish to assess the number of BREEAM credits achieved for this issue? | Define a target number of BREEAM credits to be achieved |
| Select the number of BREEAM credits being targeted for the Wst01 issue | 3 BREEAM Innovation credits |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 3 |
| Total indicative contribution to overall building score | 3.75% |
| Total indicative BREEAM innovation credits achieved | 0 |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Wst02 Recycled Aggregates

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 1.25% |
| No. of BREEAM innovation credits available | 1 | Minimum standards applicable | No |

Pre-Assessment question/criteria

| | |
|---|---|
| How do you wish to assess the number of BREEAM credits achieved for this issue? | Define a target number of BREEAM credits to be achieved |
| Select the number of BREEAM credits being targeted for the Wst02 issue | 1 BREEAM Innovation credits |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 1 |
| Total indicative contribution to overall building score | 1.25% |
| Total indicative BREEAM innovation credits achieved | 0 |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

BREEAM 2011 New Construction Pre-Assessment Estimator

Wst03 Operational Waste

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 1.25% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | Yes |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| Will appropriate facilities for the storage of operational recyclable waste volumes be provided? | Yes | 1 | 1 | N/A |
| If relevant, will a static waste compactor(s) or baler(s) be specified/installed? | N/A | | | N/A |
| If relevant, will a vessel for composting suitable organic waste be specified/installed? | N/A | | | N/A |

| | |
|---|---|
| Total indicative BREEAM credits achieved | 1 |
| Total indicative contribution to overall building score | 1.25% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

Wst04 Speculative Floor and Ceiling Finishes

Assessment Issue Not Applicable

| | | | |
|--|-----|---|-----|
| No. of BREEAM credits available | N/A | Available contribution to overall score | N/A |
| No. of BREEAM innovation credits available | N/A | Minimum standards applicable | N/A |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| | | | | |
| Total indicative BREEAM credits achieved | N/A | | | |
| Total indicative contribution to overall building score | N/A | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

| | | | | |
|--------------------|-------------------|--------|--------------------------|-------|
| LAND USE & ECOLOGY | Section Weighting | 10.00% | Indicative Section Score | 6.00% |
|--------------------|-------------------|--------|--------------------------|-------|

LE01 Site Selection

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will at least 75% of the proposed development's footprint be located on previously been developed land? | Yes | 1 | 1 | N/A |
| Is the site deemed to be significantly contaminated? | No | 1 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 1 |
| Total indicative contribution to overall building score | 1.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

LE02 Ecological Value of Site and Protection of Ecological Features

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 1.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|----------------------------------|----------|-------------------|-----------------------------|----------------------|
|----------------------------------|----------|-------------------|-----------------------------|----------------------|

BREEAM 2011 New Construction Pre-Assessment Estimator

Can the land within the construction zone be defined as 'land of low ecological value'?
Will all features of ecological value surrounding the construction zone/site boundary be protected?

| | | | |
|-----|---|---|-----|
| Yes | 1 | 1 | N/A |
| Yes | | | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 1 |
| Total indicative contribution to overall building score | 1.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

LE03 Mitigating Ecological Impact

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | Yes |

Pre-Assessment question/criteria

What is the likely change in ecological value (plant species richness) as a result of the sites development? No negative change or improvement in plant species richness

| | |
|---|---|
| Total indicative BREEAM credits achieved | 2 |
| Total indicative contribution to overall building score | 2.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | Pre-Assessment result indicates the minimum standards for Outstanding level |

Comments/notes:

LE04 Enhancing Site Ecology

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 3 | Available contribution to overall score | 3.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

Will a suitably qualified ecologist be appointed to report on enhancing and protecting site ecology?
Will the suitably qualified ecologists general recommendations be implemented?
What is the targeted/intended improvement in ecological value as a result of enhancement actions?

| Response | Credits available | Indicative credits achieved | Shell & Core option? |
|----------|-------------------|-----------------------------|----------------------|
| No | 3 | 0 | N/A |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 0 |
| Total indicative contribution to overall building score | 0.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

LE05 Long Term Impact on Biodiversity

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 2 | Available contribution to overall score | 2.00% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

Pre-Assessment question/criteria

Will the building meet BREEAM's mandatory criteria for this BREEAM issue?
Will a Biodiversity Champion be appointed to monitor/minimise impacts of site activities on biodiversity?
Will the contractor provide training for the site workforce on how to protect ecology during the project?
Will the contractor record actions to protect biodiversity and monitor their effectiveness during construction?
Will a new ecologically valuable habitat, appropriate to the local area, be created?
Where flora/fauna habitats exist on site, will the contractor programme site works to minimise disturbance?

| Response | Credits available | Indicative credits achieved | Shell & Core option? |
|----------|-------------------|-----------------------------|----------------------|
| Yes | 2 | 2 | N/A |
| Yes | | | |
| N/A | | | |
| N/A | | | |
| N/A | | | |
| N/A | | | |

| | |
|---|-------|
| Total indicative BREEAM credits achieved | 2 |
| Total indicative contribution to overall building score | 2.00% |
| Total indicative BREEAM innovation credits achieved | N/A |
| Indicative minimum standard(s) level | N/A |

Comments/notes:

BREEAM 2011 New Construction Pre-Assessment Estimator

| | | | | |
|------------------|--------------------------|---------------|---------------------------------|--------------|
| POLLUTION | Section Weighting | 10.00% | Indicative Section Score | 8.46% |
|------------------|--------------------------|---------------|---------------------------------|--------------|

Pol01 Impact of Refrigerants

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 3 | Available contribution to overall score | 2.31% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|---|-----------------------------|----------------------|
| Will refrigerant containing systems be installed in the assessed building? | Yes | 2 | 2 | Option 1 |
| Is the Global Warming Potential of the specified refrigerant(s) likely to be 10 or less? | Yes | | | |
| What is the target range Direct Effect Life Cycle CO ₂ eq. emissions for the system? | | kgCO ₂ eq/kW coolth capacity | | |
| Will a refrigerant leak detection and containment system be specified/installed? | No | 1 | 0 | Option 1 |
| Total indicative BREEAM credits achieved | 2 | | | |
| Total indicative contribution to overall building score | 1.54% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

Pol02 NO_x Emissions

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 3 | Available contribution to overall score | 2.31% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Shell & Core option? |
|---|--------------|----------------------|
| Please enter the target/maximum NO _x emission level for space heating system | 40.00 mg/kWh | Option 1 |
| Total indicative BREEAM credits achieved | 3 | |
| Total indicative contribution to overall building score | 2.31% | |
| Total indicative BREEAM innovation credits achieved | N/A | |
| Indicative minimum standard(s) level | N/A | |

Comments/notes:

Pol03 Surface Water Run off

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 5 | Available contribution to overall score | 3.85% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|--|----------|-------------------|-----------------------------|----------------------|
| What is the actual/likely annual probability of flooding for the assessed site? | Low | 2 | 2 | N/A |
| Will a compliant Flood Risk Assessment be undertaken? | Yes | | | N/A |
| Will the site meet the BREEAM criteria for peak rate surface water run off? | Yes | 1 | 1 | N/A |
| Will the site meet the criteria for surface water run off volume, attenuation and/or limiting discharge? | Yes | 1 | 1 | N/A |
| Will the site be designed to minimise watercourse pollution in accordance with the BREEAM criteria? | No | 1 | 0 | N/A |
| Total indicative BREEAM credits achieved | 4 | | | |
| Total indicative contribution to overall building score | 3.08% | | | |
| Total indicative BREEAM innovation credits achieved | N/A | | | |
| Indicative minimum standard(s) level | N/A | | | |

Comments/notes:

Pol04 Reduction of Night Time Light Pollution

| | | | |
|--|---|---|-------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 0.77% |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No |

BREEAM 2011 New Construction Pre-Assessment Estimator

| Pre-Assessment question/criteria | Response | Credits available | Indicative credits achieved | Shell & Core option? |
|---|----------|-------------------|-----------------------------|----------------------|
| Will the external lighting be designed to reduce light pollution? | Yes | 1 | 1 | N/A |
| Total indicative BREEAM credits achieved | | 1 | | |
| Total indicative contribution to overall building score | | 0.77% | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | |
| Indicative minimum standard(s) level | | N/A | | |

Comments/notes:

Pol05 Noise Attenuation

| | | | | | |
|---|---|---|-------------------|-----------------------------|----------------------|
| No. of BREEAM credits available | 1 | Available contribution to overall score | 0.77% | | |
| No. of BREEAM innovation credits available | 0 | Minimum standards applicable | No | | |
| Pre-Assessment question/criteria | | Response | Credits available | Indicative credits achieved | Shell & Core option? |
| Will there be, or is there noise-sensitive areas/buildings within 800m radius of the development? | | Yes | 1 | 1 | |
| Will a noise impact assessment be completed and, if applicable, noise attenuation measures specified? | | Yes | | | N/A |
| Total indicative BREEAM credits achieved | | 1 | | | |
| Total indicative contribution to overall building score | | 0.77% | | | |
| Total indicative BREEAM innovation credits achieved | | N/A | | | |
| Indicative minimum standard(s) level | | N/A | | | |

Comments/notes:

| INNOVATION | Section Weighting | 10.00% | Indicative Section Score | 1.00% |
|------------|-------------------|--------|--------------------------|-------|
|------------|-------------------|--------|--------------------------|-------|

Inn01 Innovation

| No. of BREEAM innovation credits available | 10 | Available contribution to overall score | 10.00% |
|---|--------------------------|---|-----------------------------|
| | | Minimum standards applicable | No |
| Pre-Assessment question/criteria | Exemplary level achieved | Credits available | Indicative credits achieved |
| Man01 Sustainable Procurement | No | 1 | 0 |
| Man02 Responsible Construction Practices | No | 1 | 0 |
| Hea01 Visual Comfort | No | 1 | 0 |
| Ene01 Reduction of CO2 Emissions | No | 5 | 0 |
| Ene04 Low and Zero Carbon Technology | Yes | 1 | 1 |
| Ene05 Energy Efficient Cold Storage | N/A | N/A | N/A |
| Wat01 Water Consumption | No | 1 | 0 |
| Mat01 Life Cycle Impacts | No | 1 | 0 |
| Mat03 Responsible Sourcing of Materials | No | 1 | 0 |
| Wst01 Construction Waste Management | No | 1 | 0 |
| Wst02 Recycled Aggregates | No | 1 | 0 |
| Total indicative BREEAM credits achieved | | 1 | |
| Total indicative contribution to overall building score | | 1.00% | |
| Indicative minimum standard(s) level | | N/A | |

Comments/notes: