



BREEAM UK New Construction Statement London Realty – Lambeth College

Background

Base Energy has been appointed by Crestwood Environmental Ltd to develop an initial BREEAM Pre-Assessment strategy associated with the proposals for 2no. temporary (2-3 years) accommodation blocks at Lambeth College.

The accommodation blocks will be comprised of Portakabin Ultima modules and will provide operational space (classrooms, washrooms, and ancillary teaching space) in one block, and canteen, kitchen, and washroom facilities in the second block.

Lambeth Council Local Plan 2020-2035

Within the Local Plan, Policy EN4: Sustainable Design and Construction states:

“B. All development, including construction of the public realm, highways and other physical infrastructure, will be required to meet high standards of sustainable design and construction feasible, relating to the scale, nature and form of the proposal.

C. i. All new non-residential development and non-self-contained residential accommodation must meet at least BREEAM ‘Excellent’.

ii. All major non-residential refurbishment of existing buildings and conversions over 500m² floorspace (gross) must meet at least BREEAM Non-Domestic Refurbishment ‘Excellent’.”

BREEAM UK New Construction Assessment

BREEAM is a performance-based assessment method and certification scheme for new non-residential buildings. The main aim of BREEAM is to mitigate the life cycle impacts of new buildings on the environment in a robust and cost-effective manner.

Under BREEAM NC there are nine categories of sustainable design, within which are a number of sub-categories. Credits are awarded where evidence can be provided to demonstrate compliance with the criteria in the sub-categories. There are also additional credits available for innovation where, the building goes beyond best practice in terms of a particular aspect of sustainability.

The credits are then converted into a percentage ‘points’ total and this determines the BREEAM rating achieved.

A BREEAM ‘Excellent’ rating requires a minimum of 70%, and a vast majority of credits would need to be targeted to achieve this rating.

Minimum Standards

There are certain sub-categories within the BREEAM UK NC where minimum standards must be met. These are dependent upon the rating of BREEAM to be achieved, and include:

- Reduction of Energy Use
- Energy Monitoring
- Responsible Sourcing of Materials
- Water Consumption
- Water Monitoring



Optional Elements

There are certain optional elements of the assessment where the required evidence includes supporting reports and calculations. It is worth bearing in mind that if the credits in these categories are needed to increase the overall point's total, additional consultant fees may be required.

RIBA Stages

It is important to note that within certain categories, BREEAM stipulates the RIBA stage by which the criteria should be addressed. This needs to be reflected in the evidence.

Lambeth College BREEAM

In our role as experienced BREEAM Assessors, we are very aware that the applicability and feasibility of many BREEAM credits are dependent upon both the scale and nature of the development proposals, and the constraints of the existing site. We certainly would not suggest a BREEAM strategy at Pre-Assessment stage which may potentially present our Client with problems once planning permission is granted.

In this instance, we feel it is essential to consider that the proposed blocks are pre-fabricated. This will limit the number of credits which we can target, as not only will there be no scope to amend the layouts or to incorporate many of the specifications as required for BREEAM, many of the credits will be beyond the control of our Client.

Furthermore, we are mindful that the blocks are for temporary use, perhaps 2-3 years. To achieve any BREEAM rating, there are significant costs associated with designing a building to meet BREEAM requirements, and there are additional costs associated with studies, reports, calculations, appointments which would be needed to achieve BREEAM 'Excellent'.

Having reviewed the proposed module layouts against the BREEAM criteria, we would discount credits in the following categories as we believe that they are either not applicable or would not be feasible to achieve:

- Life cycle cost analysis – this is to provide an indication of future replacement costs over a period of analysis as required by the client (e.g. 20, 30, 50 or 60 years).
- Indoor air quality – emissions from construction products / post construction indoor air quality measurements.
- Low carbon design.
- Environmental impacts from construction products (building life cycle assessment) including a review of different superstructure design options, and an appraisal of a combined total of at least six significantly different substructure or hard landscaping design options.
- Environmental impacts from construction products (Environmental Product Declarations).
- Responsible sourcing of construction products.
- Material efficiency (targets and report on opportunities and methods to optimise the use of materials).
- Construction waste management (pre-demolition audit, diversion of resources from landfill)
- Recycled and sustainably sourced aggregates.
- Land use and ecology – the BREEAM requirements for Ecology are more detailed and complex than the requirements for planning and given the site layout we feel that these credits would be difficult to achieve.



Without targeting and ultimately achieving credits within these categories, higher BREEAM ratings are very challenging (and often impossible) to achieve.

It should also be noted that to achieve BREEAM 'Excellent', there are minimum standards which must be achieved, one of which is within Ene 01 Reduction of energy use and carbon emissions.

Base Energy has also been appointed to carry out an Energy Statement and SBEM (BRUKL) calculations, and it has come to light that the fabric U-values provided by Portakabin do not meet the minimum thermal performance required in order to achieve a BRUKL Pass. Whilst best efforts have been made to include efficient heating and lighting, without an efficient fabric it will be extremely difficult to achieve the 35% improvement as required by Part L of the Latest Building Regulations, let alone meet the Ene 01 minimum standards for BREEAM 'Excellent'. Green energy production is also not feasible due to the short lifespan on the blocks and any green technology would not achieve a payback within the 2-year lifespan of the temporary buildings.

That said, it is very important to note that our client is keen to ensure that the building is as sustainable as possible, and Portokabin Ultima includes the following:

- Exceeds air-permeability regulations by 70%.
- The roof deck is of one-piece construction and is impact resistant. It is covered with solar-reflective, profiled aluminium-zinc coated steel to reduce heat gain.
- The windows have PVC-U frames and are double-glazed with low energy glass for optimum thermal performance · Walls, doors and roof are insulated with environmentally friendly CFC-free Envirofoam, a rigid polymer insulation material that is lightweight and yet enhances long-life structural strength and ensures an energy-efficient building.
- The highly insulated, steel-framed Portakabin modular building system features a composite panel construction that ensures continuity of insulation across the building envelope.
- Energy efficient lighting and heating controlled by wireless controllers.
- Purpose-provided passive natural ventilation.
- The majority of materials are from certified sustainable and managed sources.
- Insulation material used in wall and roof panels of our sustainable buildings contains no HCFCs and has an ozone-depletion potential of zero.

Additionally, Portakabin operates with ISO 14001:2015 certification, directing high standards of environmental management and commitment to zero harm in all operational areas.

Whilst the above would not achieve a BREEAM 'Excellent' rating, the measures would ensure that the blocks are being sustainably developed in a practical and deliverable manner with real quantifiable benefits to the building and building users.

I trust that the above is sufficient in justifying why we recommend that the building is not subject to BREEAM 'Excellent', but please do let me know if I can provide any further information to assist.

Carina Hassall
Senior Sustainability Consultant (BREEAM Licensed Assessor CC41)



SSIP
ACCREDITED

smas*
WORKSAFE

Landscape
Institute
Registered practice

interface
www.interface.co.uk
ISO 14001
CERTIFICATION

interface
www.interface.co.uk
ISO 9001
CERTIFICATION

CEnv
Chartered Environmentalist
EMPLOYER CHAMPION



ENVIRONMENT

LANDSCAPE

NOISE

LIGHTING

ECOLOGY

HERITAGE

WATER

TREES

MINERALS / WASTE

AIR QUALITY

LAND QUALITY

VISUALISATION

www.crestwoodenvironmental.co.uk

Tel: 01902 229 563
