

Preliminary Assessment

BREEAM 2014 New Construction

75 Norcutt Road

Document information:

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Executive Summary

BREEAM 2014 New Construction

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Introduction

Eight Associates have been appointed, as registered BREEAM assessors, to carry out an assessment of the proposed new student accommodation development at 75 Norcutt Road, London. This assessment is under BREEAM 2014 New Construction (Multi-Residential) Methodology.

This summary is a pre-assessment of the development and details the anticipated score following the information provided by the design team at a meeting held in February 2017 and subsequent discussions.

Project summary

Planning Requirements for this type of new build development are as follows:

- 'Excellent' BREEAM rating.

Score summary

The site reviewed currently achieves a score of **73.7%**, which equates to an **EXCELLENT** rating.

Eight Associates recommend a safety margin of at least 3-5% to safeguard any rating at formal assessment.

BREEAM Introduction

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The BREEAM standard

BREEAM (Building Research Establishment's Environmental Assessment Method) is the world's first sustainability rating scheme for the built environment. It sets the standard for best practice in sustainable design and has become the de facto measure used to describe a building's environmental performance.

To date BREEAM has been used to certify over 260,000 building assessments across the building life cycle and is being applied in over 50 countries.

BREEAM is developed, operated and maintained by BRE Global Ltd and the operation and direction of the method is overseen by an independent Sustainability Board, representing a wide cross-section of construction industry stakeholders. Further information about BREEAM, including copies of the BREEAM standards, can be found at www.breeam.org.

Aims of BREEAM

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

BREEAM New Construction

BREEAM New Construction is a performance-based assessment method and certification scheme for new buildings. The primary aim of BREEAM New Construction is to mitigate the life cycle impacts of new buildings on the environment in a robust and cost effective manner. It attempts to quantify and reduce the environmental burdens of buildings by rewarding those designs that take positive steps to minimise their environmental impacts.

Projects are assessed at design and post-construction stages using a system of environmental issues grouped within the following sections:

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

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Process of the assessment

Under BREEAM New Construction 2014, assessments take place over two phases:

- a. Design Stage (DS): This is based on the final design for the development and the intentions of the design team. Submission before the completion of RIBA Stage 4.
- b. Post Construction Stage (PCS): This is based on the built development and requires the BREEAM assessor to carry out a site visit. Submission at RIBA Stage 6.

An interim certificate will be provided following submission of the Design Stage Assessment, with final certification being awarded following the completion of the PCS Assessment.

Ratings

The assessment process results in a rating on a scale of PASS, GOOD, VERY GOOD, EXCELLENT and OUTSTANDING. The rating bands for each are as follows:

Rating	Minimum score required
Pass (P)	30%
Good (G)	45%
Very Good (VG)	55%
Excellent (E)	70%
Outstanding (O)	85%

Mandatory credits

Some credits, or criteria within credits, are mandatory to achieve certain ratings:

BREEAM Issue	P	G	VG	E	O
Man 03: Responsible construction practices	-	-	-	1	2
Man 04: Commissioning & handover	-	-	-	Criterion 10 ¹	Criterion 10
Man 05: Aftercare	-	-	-	1	1
Ene 01: Reduction of CO ₂ emissions	-	-	-	5	8
Ene 02: Energy monitoring	-	-	1	1	1
Wat 01: Water consumption	-	1	1	1	2
Wat 02: Water monitoring	-	Criterion 1 ²	Criterion 1	Criterion 1	Criterion 1
Mat 03: Responsible sourcing	Criterion 1 ³	Criterion 1	Criterion 1	Criterion 1	Criterion 1
Wst 01: Construction waste	-	-	-	-	1
Wst 03: Operational waste	-	-	-	1	1

¹ A Building User Guide must be developed prior to handover, for distribution to the building occupiers and premises managers.

² A water meter must be specified on the mains water supply to each building

³ All timber and timber-based products used on the project must be legally harvested and traded.

Full details for each credit follow later in this document.

Score Breakdown

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Rating summary

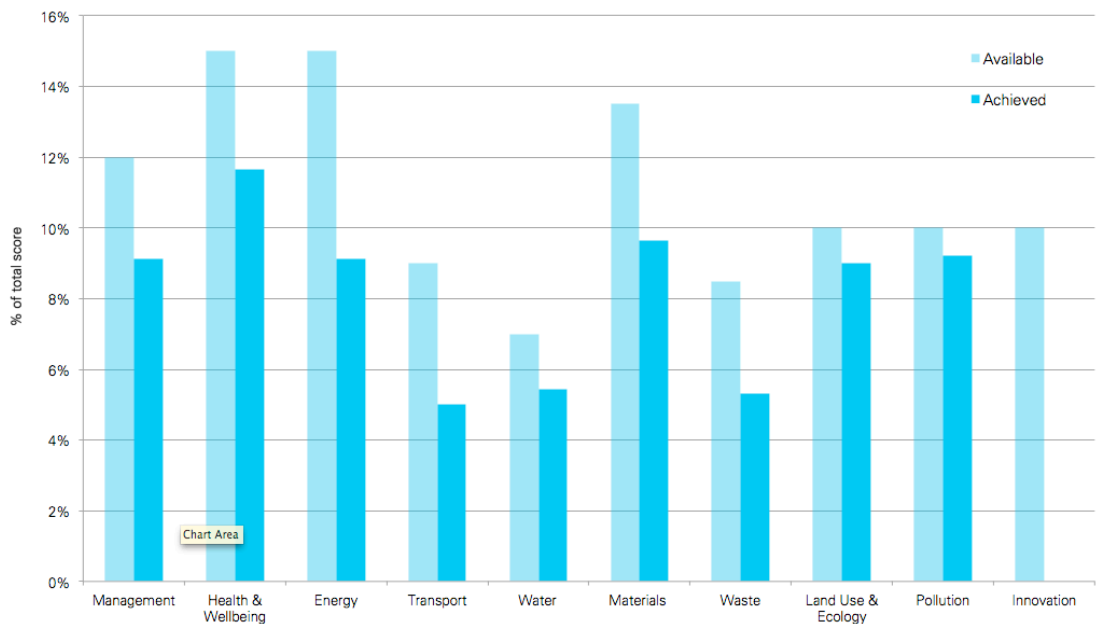
The following summary represents the scheme's preliminary score based on the assumptions in the following pages. Please contact the assessor if a score sheet is required.

CURRENT SCORE:

Section	Achieved	Available	%	Weighting	Score
Management	16	21	76%	12.0%	9.14%
Health & Wellbeing	14	18	78%	15.0%	11.66%
Energy	14	23	61%	15.0%	9.13%
Transport	5	9	56%	9.0%	5.00%
Water	7	9	78%	7.0%	5.44%
Materials	10	14	71%	13.5%	9.64%
Waste	5	8	63%	8.5%	5.31%
Land Use & Ecology	9	10	90%	10.0%	9.00%
Pollution	12	13	92%	10.0%	9.23%
Innovation	0	10	0%	10.0%	0.00%
Total:				73.50%	
Rating:				EXCELLENT	

Graphic breakdown

The graph below shows the credits currently targeted (dark blue), action credits (red) and remaining credits in each BREEAM section (light blue).



Management

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Man 01: Project brief and design

Stakeholder Consultation (two credits)

3 of 4

It has been confirmed that the design team will meet to identify roles and responsibilities, as well as contributions for each key phase of the project.

Detailed consultation with local stakeholders has not formed part of the project brief in accordance with BREEAM requirements.

Sustainability Champion (two credits)

The design team has confirmed that a BREEAM Accredited Professional (AP) will be involved to monitor and report progress against the established BREEAM targets by attending key project team meetings during all stages of the design and construction.

In total, three out of four credits are currently targeted for this issue.

Man 02: Life cycle cost and service life planning

Elemental Life Cycle Cost (two credits)

1 of 4

An elemental life cycle cost (LCC) analysis is not currently proposed for the project.

Component Life Cycle Cost option appraisal (one credit)

A component level LCC analysis is not currently proposed for this project.

Capital cost reporting (one credit)

The design team has committed to report the capital cost for the building in pounds per square metre (£k/m²), including any contingencies in line with BREEAM requirements.

In total, one out of four credits are currently targeted for this issue.

Management

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Man 03: Construction site impacts

Mandatory requirements:

At least one credit must be awarded under Considerate Construction in order to achieve an Excellent rating.

Timber (pre-requisite)

All timber is to be legally harvested and traded.

This is a pre-requisite for this issue, no credits can be awarded unless this requirement is met.

Environmental Management (one credit)

The principal contractor will be required to operate an ISO 14001 certified environmental management system and adhere to Pollution Prevention Guidelines.

Sustainability Champion (Construction) (one credit)

The contractor will be required to appoint a Sustainability Champion (a qualified BREEAM AP or BRE Site Sustainability Manager) to ensure on-going compliance with the relevant sustainability performance on site. They will ideally be based on site or be able to undertake regular spot checks to ensure risks are minimised.

Considerate Construction (two credits)

The contractor will be required to register the project under the Considerate Constructors Scheme (CCS) and will be committed to achieve at least 35 points, with a minimum of 7 points in each section.

Monitoring of Construction-site impacts (two credits)

The design team has confirmed that the Sustainability Champion (see above) will be responsible for monitoring, recording and reporting the following:

- Energy (kWh) and water (m³) consumption arising from the use of construction plant, equipment and site accommodation.
- Transport resulting from delivery of construction materials to site and removal of construction waste from site. The following information must be recorded:
 - Litres of fuel used
 - Distance travelled (km)
 - Carbon dioxide emissions (kgCO₂ eq)

In total, six of six credits are currently targeted for this issue.

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Management

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Man 04: Commissioning and handover

Mandatory requirements:

A Building User Guide must be produced in order to achieve an Excellent rating (even if this issue is not targeted).

Commissioning (two credits)

A member of the design team will be appointed to monitor commissioning in line with best practice (CIBSE, BSRIA and Building Regulations), with a specialist commissioning agent appointed for any complex systems.

Testing and inspecting building fabric (one credit)

The design team has confirmed that a thermographic survey will not be carried out at post construction stage.

Handover (one credit)

The production of a non-technical building user guide in line with the BREEAM requirements is planned. In addition, a training schedule will be prepared for building occupiers / facilities managers to aid handover.

In total, three of four credits are currently for this issue.

3 of 4

Man 05: Aftercare

Mandatory requirements:

Seasonal Commissioning must be carried out in order to achieve an Excellent rating.

Aftercare support (one credit)

There will be operational infrastructure and resources in place to provide aftercare support to the building occupier and to coordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months, once the building is occupied.

Seasonal Commissioning (one credit)

Seasonal commissioning activities will be completed over a minimum 12-month period, once the building becomes substantially occupied.

Post Occupancy Evaluation (one credit)

St Mary's University will make a commitment to carry out a post occupancy evaluation (POE) exercise one year after initial building occupation to enable monitoring of the buildings performance for future students.

Three of three credits are currently targeted for this issue.

3 of 3

Health & Well-being

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Hea 01: Visual comfort

Glare Control (one credit)

The design team have confirmed that curtains are likely to be installed within the student accommodation. This will not meet the BREEAM requirements, as the glare control strategy does not avoid increasing lighting energy consumption.

3 of 4

Daylighting (one credit)

The design team has confirmed that daylighting calculations will be carried out by an appropriate consultant to confirm that the relevant building areas meet good practice daylight factors.

View Out (one credit)

The design team has confirmed that all workstations will be 7m from a wall that has a window or permanent opening providing an adequate view out. In addition, windows or openings will comprise at least 20% of the surrounding wall area.

Internal and external lighting levels, zoning and controls (one credit)

The design team has confirmed the following will be met for the scheme:

- Where specified, all fluorescent and compact fluorescent lamps will be fitted with high frequency ballasts
- Internal lighting will provide illuminance levels in accordance with the SLL Code of Lighting 2012 (and any other relevant industry standard)
- External lighting will be specified in accordance with BS 5489-1:2013 Lighting of roads and public amenity areas and BS EN 12464-2:2014 Light and lighting – Lighting of workplaces – Part 2: lighting levels.
- For areas where computer screens are regularly used the lighting design will comply with the appropriate sections of CIBSE Lighting Guide 7.
- Internal lighting to be appropriately zoned and controlled to allow for separate occupant control within relevant building areas

In total, three of four credits are currently targeted for this issue.

Health & Well-being

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Hea 02: Indoor air quality

Indoor Air Quality Plan (one credit)

4 of 5

The design team has confirmed that an indoor air quality plan will be provided in line with BREEAM requirements.

Ventilation (one credit)

The scheme will meet fresh air rates in line with ventilation requirements. In addition, air intakes and extracts must be at least 10 metres apart and intakes 20 metres from sources of external pollution.

Volatile Organic Compound (VOC) emission levels (products) (one credit)

The design team has confirmed that all key internal finishes will be specified with low VOC levels in line with BREEAM requirements.

Volatile Organic Compound (VOC) emission levels (post-construction) (one credit)

The design team has confirmed that the credit for this part of the issue will not be targeted at design stage - testing to measure VOC and formaldehyde concentration levels at post-construction stage will not be undertaken.

Adaptability – Potential for natural ventilation (one credit)

The design team has confirmed that occupied spaces within the building will have openable windows, and are therefore designed to be capable of providing fresh air entirely via natural ventilation.

In total, four of five credits are currently targeted for this issue.

Hea 04: Thermal comfort

Thermal modelling, in line with CIBSE AM11 will be undertaken for the development using full dynamic thermal analysis software. Summer and winter operative temperature ranges in occupied spaces will be in accordance with the criteria set out in CIBSE Guide A Environmental design.

2 of 3

The thermal modelling will not include an allowance for a projected climate change environment.

The thermal modelling results will inform the thermal comfort strategy and the heating zones and controls.

Two of three credits are currently targeted for this issue.

Health & Well-being

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Hea 05: Acoustic performance

The design team has confirmed that the building will be designed to ensure that airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 5dB lower than the performance standards in Approved Document E.

3 of 4

The above will be confirmed via a programme of pre-completion testing, carried out by a compliant test body.

Three of four credits are currently targeted for this issue.

Hea 06: Safety and security

Safe Access (one credit)

The development is designed to allow safe access (for cyclists and pedestrians) from the site boundary to the building entrance. The site has one car parking space, with a safe manoeuvring area, and waste storage is located on the site boundary for safe waste collection.

2 of 2

Security of site and building (one credit)

The design team has confirmed that a suitably qualified security consultant from the local police will be consulted during the planning process and recommendations will be incorporated into the design.

Two of two credits are currently targeted for this issue.

Energy

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Ene 01: Reduction of CO₂ emissions

Mandatory requirement:

At least six credits must be achieved in order to secure an Excellent rating.

An Energy Performance Certificate will be produced at design stage, based on Part L 2013 standards. Based on the building services and fabric specified, it is assumed that at least six of the available twelve credits under this issue will be achieved. **6 of 12**

Please note that the BREEAM guidance requests a copy of the Building Regulations Output (BRUKL Output Document) based on the design stage of analysis and an as-built copy of the document for the PCR stage.

Six of twelve credits are currently targeted for this issue.

Ene 02: Energy monitoring

Mandatory requirement:

One credit is required for sub-metering of major energy consuming systems in order to achieve an Excellent rating.

Pulsed sub-meters will be provided to ensure that all major energy-consuming systems are separately sub-metered. They will be metered using an appropriate energy monitoring and management system. Energy consuming uses will be identifiable to the building users, for example through labelling or data outputs. **1 of 1**

One of one credit is currently targeted for this issue.

Ene 03 – External Lighting

The design team has confirmed that all external lighting will have an average initial luminous efficacy of greater than 60 luminaire lumens per circuit Watt. All external light fittings will be automatically controlled to prevent operation during daylight hours. **1 of 1**

One of one credit is currently targeted for this issue.

Energy

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Ene 04: Low carbon design

Passive Design Analysis (one credit)

3 of 3

The project team will carry out an analysis of the proposed building design/development to influence decisions made during Concept Design stage and identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services.

The building will use passive design measures to reduce the total heating, cooling, mechanical ventilation and lighting loads and energy consumption in line with the findings of the passive design analysis, and the analysis will demonstrate a meaningful reduction (of at least 5%) in the total energy demand.

Free Cooling (one credit)

The design team has confirmed that the building has been designed without the need for cooling, and will be naturally ventilated.

Low Carbon Technologies (one credit)

A feasibility study will be carried out by an independent energy specialist to establish the most appropriate local low or zero carbon energy source for the development, and an LZC technology will be specified in line with the recommendations of this report (resulting in at least a 5% reduction in CO₂ emissions).

Three of three credits are currently targeted for this issue.

Ene 06: Energy efficient transportation systems

The design team have confirmed that an analysis of the transport demand and usage patterns for the building will be carried out to determine the optimum number and size of lifts required for the development.

3 of 3

The energy consumption will be calculated for one of the following, and the transportation system with the lowest energy consumption will be specified:

- a) At least two types of system (for each lift type required); OR
- b) An arrangement of systems (e.g. hydraulic, traction, machine room-less lift (MRL)); OR
- c) A system strategy that is 'fit for purpose'.

In addition, energy efficient features will be specified for the lifts. This may include low energy lighting, a stand-by mode during off-peak and idle periods, and a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor.

Three of three credits targeted.

Energy

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Ene 08: Energy efficient equipment

Energy efficient features (two credits)

0 of 2

The development will have A-A++ rating white goods installed, however the development will also include commercial sized laundry appliances. The design team have confirmed that these are unlikely to be specified with heat recovery or greywater use for some of the washing process.

The credits for this issue are not currently targeted.

Transport

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Tra 01: Public transport accessibility	The public transport Accessibility Index for the building is not likely to be greater than 2 due to the limited number of local bus services within 500m of the site, therefore one credit has been targeted.	1 of 3
	<i>One of three credits is currently targeted for this issue.</i>	
Tra 02: Proximity to amenities	The development has some local amenities, but these are over 500m from the site, and do not meet BREEAM requirements.	0 of 2
	<i>The credits are not currently targeted for this issue.</i>	
Tra 03: Cyclist facilities	<p>Cycle storage (one credit)</p> <p>The design team has confirmed that BREEAM-compliant cycle storage will be provided. One space will be provided for at least every two bedrooms within the development. The cycle storage will be covered overhead to protect from the weather, secured in fixed racks, any lighting will comply with BREEAM criteria and be located within 100m of the development.</p>	1 of 1
	<i>One of one credit is currently targeted for this issue.</i>	
Tra 04: Maximum car parking capacity	The design team has confirmed that only one disabled parking space will be located on site, therefore the maximum car parking capacity for the site will meet the required BREEAM benchmarks.	2 of 2
	<i>Two of two credits are currently targeted for this issue.</i>	
Tra 05: Travel plan	A site-specific travel plan will be developed as part of the feasibility and design stages, which will consider all types of travel relevant to the building type and users.	1 of 1
	<i>One of one credit is currently targeted for this issue.</i>	

Water

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Wat 01: Water consumption

Mandatory requirement:

At least one credit is required in order to achieve an Excellent rating

The design team has confirmed that they will aim for a 25% improvement in water consumption over compared to BREEAM's notional baseline performance, and ensure the water consumption is no more than 105 litres/person/day. The following maximum water consumption rates will be met:

2 of 5

WCs: 6/4 litre, dual flush volume

Wash basin taps: 5 litres /minute

Showers: 8 litres /minute

Kitchen taps: 5 litres /minute

Two of five credits is currently targeted for this issue

Wat 02: Water Monitoring

Mandatory requirement:

A water meter must be specified (even if this issue is not targeted) in order to achieve an Excellent rating

The design team has confirmed that a pulsed water meter will be installed on the mains water supply to each building.

1 of 1

Water-consuming plant or building areas consuming 10% or more of the building's total water demand, will be fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area.

The available credit is currently targeted for this issue.

Wat 03: Water leak detection and prevention

The design team will fit a major leak detection system on the mains water supply within the development and between the building and the utilities water meter is installed, in line with BREEAM requirements.

2 of 2

Solenoid shut-off valves will be specified on the guest WC area to avoid minor water leaks.

Two of two credits are currently targeted for this issue.

Wat 04: Water efficient equipment

The design team has confirmed that the irrigation method for external planting will make use of natural precipitation or manual watering.

1 of 1

The available credit is currently targeted for this issue.

Materials

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Mat 01: Life cycle impacts

It is assumed that the majority of the roof, internal walls, external walls, windows, upper floors, and floor finishes will achieve at least an 'A' rating under the Green Guide to Specification. These credits will be reviewed once the materials specification has been confirmed.

4 of 6

Four of six credits are currently targeted for this issue.

Mat 02: Hard landscaping and boundary protection

It is assumed that the majority of the hard landscaping and boundary protection will achieve at least an 'A' rating under the Green Guide to Specification.

1 of 1

The available credit is currently targeted for this issue.

Mat 03: Responsible sourcing of materials

Mandatory requirement:

The pre-requisite for this issue must be complied with (even if this issue is not targeted) in order to achieve an Excellent rating.

Pre-requisite

The design team has confirmed that all timber used on the project will be sourced in accordance with the UK Government's Timber Procurement Policy.

2 of 4

Sustainable Procurement Plan (one credit)

The principle contractor will produce a sustainable procurement plan and procure all material in accordance with the plan.

Responsible Sourcing of Materials (3 credits)

The design team has confirmed that, where possible, key building elements will be responsibly sourced (e.g. all timber FSC certified, and any bricks, pavers, concrete, glass, metals, plaster etc. covered by BRE Global, BES60001 certification, or EMS certified for both the key process and supply chain extraction process).

In total, two of four credits are currently targeted for this issue.

Mat 04: Insulation

The design team has confirmed that any insulation specified and installed for the external walls, ground floor, roof and building services will be A+ rated under the Green Guide.

1 of 1

The available credit is currently targeted for this issue.

Materials

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Mat 05: Designing for robustness

Protecting Vulnerable Parts of the Building from Damage

1 of 1

Materials and features will be specified to protect vulnerable parts of both the internal and external areas of the building.

Protecting Exposed Parts of the Building from Material Degradation

The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors.

The available credit is currently targeted for this issue.

Mat 06: Material efficiency

A report will be carried out to identify opportunities and appropriate measures to optimise material efficiency through building design, procurement, construction, maintenance and end of life, in consultation with the relevant parties.

1 of 1

The available credit is currently targeted for this issue.

Waste

BREEAM 2014 New Construction

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Wst 01: Construction site waste management

Construction resource efficiency (three credits)

3 of 4

The design team has confirmed that a BREEAM compliant Site Waste Management Plan will be produced and will ensure the non-hazardous waste generated by the building's design and construction (excluding demolition and excavation waste) is less than 7.5m³ (or 6.5 tonnes) per 100m² of gross internal floor area. *Two of three credits are targeted.*

Diversion of resources from landfill (one credit)

It is currently foreseen that 70% by volume (80% by weight) of non-hazardous waste generated by the project will be diverted from landfill. *One of one credit targeted.*

In total, three of four credits are currently targeted for this issue.

Wst 02: Recycled aggregates

The total amount of recycled and/or secondary aggregate specified will be greater than 25% (by weight or volume) of the total high-grade aggregate specified for the development.

1 of 1

The available credit is currently targeted for this issue.

Wst 03: Operational waste

Mandatory requirement:

One credit is required in order to achieve an Excellent rating.

The design team have confirmed that a dedicated recyclable waste storage area will be provided for the scheme. The space will be clearly labelled and accessible. Composting facilities (and a water outlet) will be provided on the site. A compactor / baler is not required for the building function.

1 of 1

The available credit is currently targeted for this issue.

Wst 05: Adaptation to climate change

The design team has confirmed that a climate change adaptation strategy is not to be undertaken for the development at present.

0 of 1

The credit for this issue is not currently targeted.

Wst 06: Functional Adaptability

The design team has confirmed that the credit for this issue is not currently targeted as the development is being designed for its specific purpose of a multi-residential development, and there are limited adaptable features designed into the proposals.

0 of 1

The credit for this issue is not currently targeted.

Land Use and Ecology

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LE 01: Site selection	<p>Previously developed land (one credit) The development is situated on previously developed land.</p> <p>Contaminated land (one credit) The site was not contaminated prior to development and therefore no remediation will take place.</p> <p><i>One of two credits is currently targeted for this issue.</i></p>	1 of 2
LE 02: Ecological value of site and protection of ecological features	<p>The development contains no features of ecological value that require protection. Furthermore, the site can be classed as having low ecological value.</p> <p><i>Two of two credits are currently targeted for this issue.</i></p>	2 of 2
LE 03: Minimising impact on existing site ecology	<p>The design team has confirmed that there will be no negative change in ecological value of the site as a result of the development.</p> <p><i>Two of two credits are currently targeted for this issue.</i></p>	2 of 2
<p>Mandatory requirement: One credit is required in order to achieve an Excellent rating.</p>		
LE 04: Enhancing site ecology	<p>The design team has confirmed that a suitably qualified ecologist will be appointed and the recommendations in their Ecology Report for the enhancement of site ecology will be implemented in the final design. The ecologist will need to confirm that the ecological value of the site has increased as a result of the development.</p> <p><i>Two of two credits are currently targeted for this issue.</i></p>	2 of 2
LE 05: Long term Impact on biodiversity	<p>The design team has confirmed that a Suitably Qualified Ecologist will be appointed to:</p> <ul style="list-style-type: none"> - Advise on how to improve the ecological value of the site. - Confirm that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process. - Produce a landscape and habitat management plan to cover at least the first five years after project completion. <p>Additionally, the contractor will be required to meet four out of five additional measures for the improvement of long-term biodiversity.</p> <p><i>Two of two credits are currently targeted for this issue.</i></p>	2 of 2

Pollution

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Pol 01: Impact of refrigerants

Impact of refrigerants (three credits)

3 of 3

No refrigerants will be installed within the development; therefore all the available credits can be achieved.

Three of three credits are currently targeted for this issue.

Pol 02: NO_x emissions

The system for meeting the heating and hot water demand of the building will have NO_x emissions $\leq 40\text{mg/kWh}$.

3 of 3

Three of three credits are currently targeted for this issue.

Pol 03: Surface water run-off

Flood risk (two credits)

4 of 5

A site-specific Flood Risk Assessment will be undertaken for the site, confirming the site is situated in a low flood risk area.

Surface water run-off (two credits)

The design team has confirmed that measures will be specified to ensure that the peak run off rate for the developed site is no greater than for the pre-developed site AND that the post development run-off volume, over the development lifetime, is no greater than it would have been prior to the site's development. The design team has also confirmed that flooding of property will not occur in the event of local drainage system failure.

Minimising watercourse pollution (one credit)

It is not yet known if the credit for minimising watercourse pollution will be targeted at design stage. Attenuation measures and a SuDS strategy are to be installed, however it is not yet known if these will ensure there is no discharge from the site for rainfall depths of up to 5mm.

In total, four of five credits currently targeted for this issue.

Pollution

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**Pol 04: Reduction of night time light
pollution**

The design team has confirmed that external lighting will be designed and installed in compliance with ILP Guidance. All external lighting will have the capacity to be switched off automatically between 11pm and 7am. **1 of 1**

The available credit is currently targeted for this issue.

Pol 05: Noise attenuation

A Suitably Qualified Acoustic Consultant will conduct a noise impact assessment in compliance with BS7445:1991. Where noise sources from the development are greater than +5dB (during the day) and +3dB (during the night) compared to the background noise level, attenuation measures will be specified. **1 of 1**

The available credit is currently targeted for this issue.
