

# Preliminary Assessment

## BREEAM 2008 Offices

### Whitfield Street

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# Executive Summary

## BREEAM 2008 Offices

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#### Introduction:

Eight Associates have been appointed, as registered BREEAM assessors, to produce a preliminary assessment of the new offices development at Whitfield Street in Westminster, Central London. The information this report contains is based on meetings and discussions with the design team in April 2014.

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#### Score Summary:

The current predicted score of the development is **66.60%**, which equates to a VERY GOOD rating, which would require a minimum score of at least 55%.

*Please ensure that a sufficient safety margin (3-5%) is allowed for within the assessment for Formal Certification Stages, to ensure the desired rating is fully achieved.*

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#### Score Summary – Policy CPG3

Policy CPG3 advises that as a minimum, the following percentage of un-weighted BREEAM credits should be achieved:

- 40% of the credits under Materials
- 60% of the credits under Water
- 60% of the credits under Energy

The scheme achieves the following:

	Required	Achieved	Comments	
Energy	14 of 24 credits 60%	14 of 24 credits 60%	✓	Requirements fully met
Water	4 of 6 credits 60%	5 of 6 credits 83%	✓	Requirements fully met
Materials	6 of 13 credits 40%	10 of 13 credits 77%	✓	Requirements fully met

The requirements of Policy CPG3 have been achieved.

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# Score Breakdown

## BREEAM 2008 Offices

### Whitfield Street

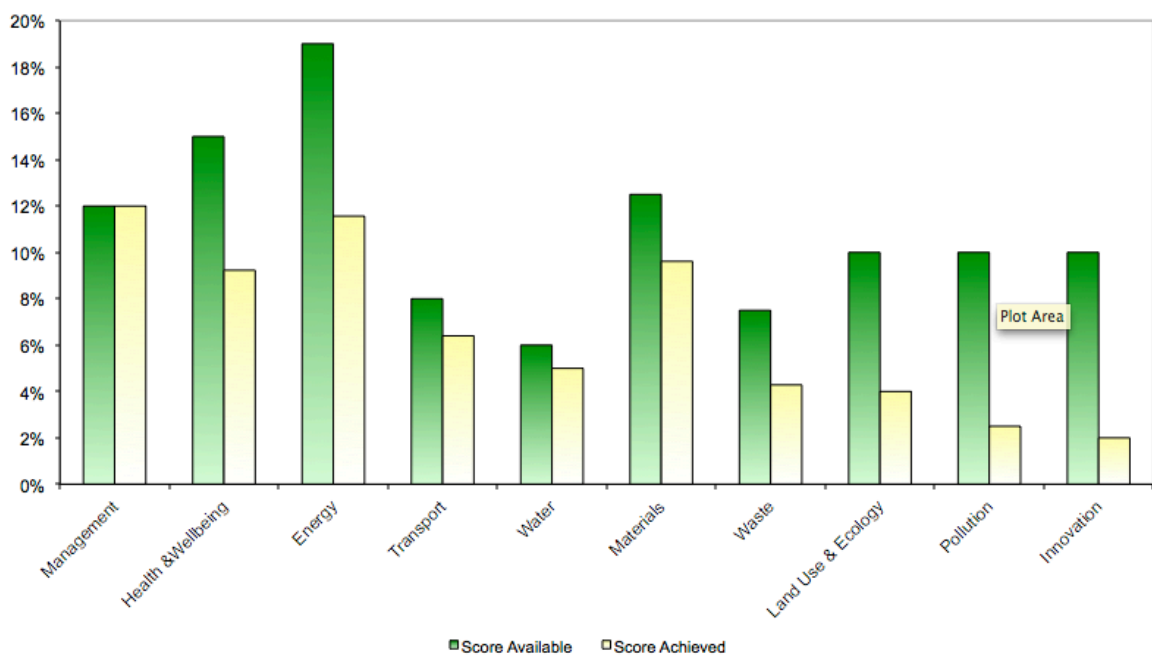
#### Summarised Score:

The following score summary represents the schemes preliminary score based on the assumptions in the following pages.

	Credits available	No. Achieved	% Achieved	Weighting Factor	Credits Score
Management	10	10	100.00	0.12	12.00
Health & Well-being	13	8	61.54	0.15	9.23
Energy	23	14	60.87	0.19	11.56
Transport	10	8	80.00	0.08	6.40
Water	6	5	83.33	0.06	5.00
Materials	13	10	76.92	0.125	9.62
Waste	7	4	57.14	0.075	4.29
Land Use & Ecology	10	4	40.00	0.1	4.00
Pollution	12	3	25.00	0.1	2.50
Innovation	10	2	20.00	0.1	2.00
<b>Total</b>					<b>66.60%</b>
				<b>Rating</b>	<b>VERY GOOD</b>

#### Graphic Breakdown:

Assessed Building's BREEAM Performance by Section



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# Management

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#### Man 01 – Commissioning

MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 2 of 2

The contractor will appoint a specialist commissioning agent to comply with CIBSE and BSRIA guidelines, in line with the M&E specification requirements. Seasonal commissioning will be carried out three times in the first year of occupancy (in the summer, winter and either spring or autumn); this will include interviewing building occupants and rectifying any problems identified.

*Two of the available two credits are targeted.*

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#### Man 02 – Considerate Constructors

MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 2 of 2

The contractor will be required to register the development under the Considerate Constructors Scheme (CCS) and will be committed to achieve at least 35 points (including at least 7 in each section).

*Two of the available two credits are targeted*

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#### Man 03 – Construction Site Impacts

The contractor will be required to comply with the following: 4 of 4

- 1) Monitor, report and set targets for energy and water use on site
- 2) Adopt best practice policies in respect of air (dust) pollution and water (ground and surface) pollution on site
- 3) A valid environmental purchasing policy is in place and will ensure that materials are locally sourced, responsibly sourced, reused etc. and waste is minimised.
- 4) A valid and certified Environmental Management System in place (ISO14001 or similar)

At least 80% of all site timbers will be responsibly sourced and 100% legally sourced.

*Four of the available four credits are targeted.*

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#### Man 04 – Building User Guide

MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 1 of 1

A non-technical building user guide will be produced for the attention of the facilities manager, detailing how the building operates and the environmental performance of the building, in line with BRE requirements.

*The available credit is targeted.*

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#### Man 08 – Security

The design team has confirmed that they will consult with a Police Architectural Liaison Officer (ALO) and follow their recommendations to ensure the development is designed in line with the principles and guidance of Secured by Design. 1 of 1

*The available credit is targeted.*

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# Health and Wellbeing

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#### Hea 01 – Daylighting

The design team has confirmed that daylighting calculations have not yet been undertaken for the development. **0 of 1**

*The available credit is not targeted.*

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#### Hea 02 – View Out

The design team has confirmed that all relevant building areas are not within a 7m distance of a wall with a window providing an adequate view out, where the window is at least 20% of the total inside wall area. **0 of 1**

*The available credit is not targeted.*

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#### Hea 03 – Glare Control

The design team has confirmed that occupant controllable blinds will be fitted to all windows and relevant glazed areas within the office areas. **1 of 1**

*The available credit is targeted.*

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#### Hea 04 – High Frequency Lighting

**MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 1 of 1**

The design team has confirmed that all fluorescent luminaires will be fitted with high frequency ballasts.

*The available credit is targeted.*

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#### Hea 05 – Internal and External Lighting Levels

The design team has confirmed that the Illuminance levels are specified in line with the CIBSE Code for Lighting 2006. This must include CIBSE LG7 for the offices and CIBSE LG6 for the outdoor areas. **1 of 1**

*The available credit is targeted.*

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# Health and Wellbeing

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#### Hea 06 – Lighting Zones and Controls

The design team confirmed that lighting zones to allow separate user control will be specified for all relevant areas, in compliance with the BREEAM requirements. Relevant areas include –

- Office and circulation space
- In office areas, zones of no more than 4 workspaces
- Work stations adjacent to windows separately zones or controlled

Seminar rooms zoned for presentations and audience areas

1 of 1

*The available credit is not targeted.*

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#### Hea 07 – Potential for Natural Ventilation

The design team has confirmed this credit is unlikely to be achieved due to insufficient openable window area.

0 of 1

*The available credit is not targeted.*

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#### Hea 08 – Indoor Air Quality

The design team has confirmed this credit is unlikely to be achieved due to the distance between intakes and external sources of pollution.

0 of 1

*The available credit is not targeted.*

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#### Hea 09 – Volatile Organic Compounds

The design team has confirmed products with low VOC levels will be specified for all key internal finishes.

1 of 1

*The available credit is targeted.*

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#### Hea 10 – Thermal Comfort

The design team have confirmed that thermal modelling will not be carried out in line with CIBSE AM11, to ensure that thermal comfort levels meet the requirements set out in CIBSE Guide A.

0 of 1

*The available credit is not targeted.*

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#### Hea 11 – Thermal Zoning

The design team has confirmed that the heating/cooling system in the offices is zoned to allow separate occupant control of each perimeter area (within 7m of an external wall) and the central zone (over 7m from the external walls).

1 of 1

*The available credit is targeted.*

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# Health and Wellbeing

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#### Hea 12 – Microbial Contamination

MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 1 of 1

The design team has confirmed that no cooling towers, evaporative condensers or humidification systems are specified; domestic hot water systems are specified in line with TM13 guidelines to minimise Legionnaire's risk.

*The available credit is targeted.*

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#### Hea 13 – Acoustic Performance

The design team has confirmed that the offices will meet the acoustic performance standards in accordance with BS EN ISO 140-4:1998 and Approved Document E. Pre-completion acoustic testing will be carried out by a UKAS accredited acoustic consultant to demonstrate and ensure compliance before occupation. 1 of 1

*The available credit is targeted.*

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# Energy

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#### Ene 01 – Reduction of CO<sub>2</sub> Emissions

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#### MINIMUM OF SIX CREDITS REQUIRED FOR BREEAM EXCELLENT RATING

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At present it is likely that at least 7 credits will be achieved under this issue, achieving an EPC rating of no less than 44.

*Seven of the available fifteen credits are targeted.*

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#### Ene 02 – Sub-metering of Substantial Energy Uses

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#### MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 1 of 1

Separate accessible labelled sub-metering of substantive energy uses will be provided via pulsed meters. Substantive energy uses include: space heating, domestic hot water, cooling plant, major fans, small power and lighting (small power and lighting can be combined).

*The available credit is targeted.*

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#### Ene 03 – Sub-metering of High Energy Load Areas and Tenancy

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The design team has confirmed that sub-meters will be provided for each floor plate for each energy use mentioned above. 1 of 1

*The available credit is targeted.*

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#### Ene 04 – External Lighting

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Daylight sensors or time-switches will be fitted to all external lighting, which will have efficacies as follows: 1 of 1

- Lighting to accessways and pathways: not less than **50** lamp lumens per circuit watt and colour rendering index greater than or equal to 60. Or 60 lamp lumens per circuit watt and colour rendering index less than 60.
- Lighting to the car park and any associated roads, flood lighting and sign lighting: **70** lamp lumens per circuit watt and colour rendering index greater than or equal to 60. Or 80 lamp lumens per circuit watt and colour rendering index less than 60.

*The available credit is targeted.*

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# Energy

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#### Ene 05 – Low and Zero Carbon Technologies

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#### MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 2 of 3

The design team has confirmed that a feasibility study in line with BREEAM requirements has been carried out. The recommendations of the study will be followed to specify suitable local low or zero carbon technologies to gain two credits.

*Two of the available three credits are targeted.*

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#### Ene 08 – Lifts

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#### The lifts specified for the development will be fully BREEAM compliant. 2 of 2

- An analysis of transport demand and patterns for the building will be carried out to determine the optimum number and size of lifts and counterbalancing ratio of the lifts.
- Energy efficient measures including LED lighting, stand-by mode and drive controllers will also be specified.

*Two of the available two credits are targeted.*

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# Transport

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#### Tra 01 – Provision of Public Transport

At present it is assumed that full credits will be awarded under this issue, as the development is located within close proximity to Kew Garden train station and several bus stops. **3 of 3**

*Three of the available three credits are targeted.*

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#### Tra 02 – Proximity to Amenities

The development is located within close proximity of a grocery shop, post box and cash machine, accessible by a safe pedestrian route. **1 of 1**

*The available credit is targeted.*

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#### Tra 03 – Cyclist Facilities

The design team has not confirmed that a cycle store compliant with BREEAM requirements will be provided for the development. **0 of 2**

*None of the available two credits are targeted.*

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#### Tra 04 – Pedestrian and Cycle Safety

The design team confirmed that the development does not have any external areas and any cyclist and pedestrian access to the site is made by directly from the public right of way. Credit achieved by default. **1 of 1**

*The available credit is targeted.*

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#### Tra 05 – Travel Plan

The development of a BREEAM compliant travel plan has been confirmed as part of the development. **1 of 1**

*The available credit is targeted.*

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#### Tra 06 – Maximum Car Parking Capacity

The design team has confirmed that there are no car parking spaces for the development. Credits met by default. **2 of 2**

*Two of the available two credits are targeted.*

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# Water

## BREEAM 2008 Offices

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#### Wat 01 – Water Consumption

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#### MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 2 of 3

The design team has confirmed that it is likely that the following specification will be incorporated within the development, which will result in two credits being achieved:

- 6/3 litre dual flush WCs
- Waterless urinals
- Wash basin taps with flow rate of max. 3 litres / min
- Showers with flow rate of max. 7 litres / min at 3 bar supplied pressure

With the above specification, the predicted net water usage for the development is 4.34 m<sup>3</sup>/person/year.

*Two of the three available credits are targeted for this issue.*

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#### Wat 02 – Water Meter

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#### MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING 1 of 1

The design team has confirmed that a pulsed water meter will be fitted on the mains supplies to the building.

*The available credit is targeted.*

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#### Wat 03 – Major Leak Detection

The design team has confirmed that a major leak detection system will be installed in the development. The major leak detection system must cover all mains water supply between and within the building AND the site boundary and cover the following - 1 of 1

- Activated when a continuous flow of water passes through the water meter at a flow rate above a pre-set minimum
- Able to identify different flow rates and be programmable
- Designed to avoid false alarms caused by normal operation of large-water consuming plant (e.g. chillers)

*The available credit is targeted.*

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#### Wat 04 – Sanitary Supply Shut Off

The design team confirmed that solenoid valves are to be fitted on the water supply to each toilet area controlled by either infra-red movement detectors OR sensors / switches placed at entry doors. 1 of 1

*The available credit is targeted.*

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# Materials

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<b>Mat 01 – Materials Specification (major building elements)</b>	The design team has confirmed that many of the building’s existing elements will be retained. Where new materials are required, A or A+ rated materials (as per the Green Guide Specification) will be specified.	<b>2 of 4</b>
	<i>Two of the available four credits are targeted.</i>	
<b>Mat 02 – Hard Landscaping and Boundary Protection</b>	The design team has confirmed that there are no hard landscaping and boundary protection areas. The credit is achieved by default.	<b>1 of 1</b>
	<i>The available credit is targeted.</i>	
<b>Mat 03 – Re-use of Building Facade</b>	The design team has confirmed that at least 50% of the proposed structure and 80% of the proposed façade will be reused in line with BREEAM requirements.	<b>1 of 1</b>
	<i>The available credit is targeted.</i>	
<b>Mat 04 – Re-use of Building Structure</b>	The design team has confirmed that at least 80% of the existing primary structure will be reused, without significant strengthening or alteration works.	<b>1 of 1</b>
	<i>The available credit is targeted.</i>	
<b>Mat 05 – Responsible Sourcing of Materials</b>	The design team has confirmed that all timber will be FSC or PEFC certified. In addition, all non-timber products, where possible, will be ISO4001 or BES 6001 certified (or equivalent) for both extraction and manufacturing stages.	<b>2 of 3</b>
	<i>Two of the available three credits are targeted.</i>	
<b>Mat 06 – Insulation</b>	The design team have confirmed that all insulation will be A or A+ rated according to the Green Guide. In addition, all insulation will be responsibly sourced in line with requirements set out in credit Mat 05.	<b>2 of 2</b>
	<i>Two of the available two credits are targeted.</i>	
<b>Mat 07 – Designing for Robustness</b>	The design team is committed to designing for robustness; materials and features will be specified so as to protect vulnerable parts of the internal and external areas of the building.	<b>1 of 1</b>
	<i>The available credit is targeted.</i>	

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# Waste

## BREEAM 2008 Offices

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#### Wst 01 – Construction Site Waste Management

The design team will develop a Site Waste Management Plan (SWMP) in line with statutory guidance and BREEAM requirements to reduce waste throughout the construction phases. **3 of 4**

Following this plan, the contractor is committed to generating less than 12.9m<sup>3</sup> of waste per 100m<sup>2</sup> of floor area AND is committed to divert at least 75% by weight or 65% by volume of non-hazardous construction waste generated on site from landfill and to either reuse, reclaim, return to the supplier or recycle.

*Three of the available four credits are targeted.*

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#### Wst 02 – Recycled Aggregates

The design team cannot confirm the amount of recycled and secondary aggregate specified is over 25% (by weight or volume) of the total high-grade aggregate uses for the building. **0 of 1**

*The available credit is not targeted.*

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#### Wst 03 – Recyclable Waste Storage

**MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING.** **0 of 1**

The design team has not confirmed that an area of at least 2m<sup>2</sup> will be provided per 1,000m<sup>2</sup> of floor area as dedicated storage space to cater for recyclable materials generated by the building during occupation. It will be located in an accessible place on site and will be appropriately labelled.

*The available credit is not targeted.*

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#### Wst 06 – Floor Finishes

The design team has confirmed that all carpets and other floor finishes will be specified by the future occupant to meet full credit requirements. **1 of 1**

*The available credit is targeted.*

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# Land Use & Ecology

## BREEAM 2008 Offices

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LE 01 – Re-use of Land	The land that the development will be built upon was previously developed, with the existing building comprising at least 75% of the total new development.  <i>The available credit is targeted.</i>	1 of 1
LE 02 – Contaminated Land	The site has no known contamination.  <i>The available credit is not targeted.</i>	0 of 1
LE 03 – Ecological value of site AND Protection of ecological features	The design team has confirmed that the land is of low ecological value.  <i>The available credit is targeted.</i>	1 of 1
LE 04 – Mitigating Ecological impact	<b>MINIMUM OF ONE CREDIT REQUIRED FOR BREEAM EXCELLENT RATING</b>  The design team has confirmed that the change in ecological value (average no. of native plant species per hectare) is equal to or better than 0.  <i>Two of the available two credits are targeted.</i>	2 of 2
LE 05 – Enhancing Site Ecology	The design team cannot confirm at this stage that a suitably qualified ecologist will be appointed and their recommendations followed.  <i>None of the available three credits are targeted.</i>	0 of 3
LE 06 – Long term impact on biodiversity	The design team cannot confirm at this stage that a Suitably Qualified Ecologist will be appointed to: <ul style="list-style-type: none"><li>– Advise on how to improve the ecological value of the site;</li><li>– 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; and</li><li>– Produce a landscape and habitat management plan to cover at least the first five years after project completion.</li></ul> <i>None of the available two credits are targeted.</i>	0 of 2

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# Pollution

## BREEAM 2008 Offices

### Whitfield Street

Pol 01 – Refrigerant GWP – Building Services	Refrigerants with a GWP of more than 5 are likely to be included within the specification.	0 of 1
	<i>The available credit is not targeted.</i>	
Pol 02 – Preventing refrigerant leaks	The design team cannot confirm that refrigerant leak detection systems in line with BREEAM requirements will be provided.	0 of 2
	<i>Zero of the available two credits are targeted.</i>	
Pol 04 – NO <sub>x</sub> Emissions from heating source	The heating system provided is unlikely to have less than 100mg/kWh NO <sub>x</sub> emissions.	0 of 3
	<i>None of the available three credits are targeted.</i>	
Pol 05 – Flood Risk	The design team has confirmed that a site specific flood risk assessment will not be undertaken as part of the planning application and it is assumed that the site is in an area of low flood risk.	0 of 3
	<i>None of the available three credits are targeted.</i>	
Pol 06 – Minimising Watercourse Pollution	The design team has confirmed that there are no areas likely to cause watercourse pollution in the development and, therefore, SUDs and oil/petrol separators will not be specified on site. Credit awarded by default.	1 of 1
	<i>The available credit is targeted.</i>	
Pol 07 – Reduction in Night Time Light Pollution	The design team confirmed that external lighting will comply with ILE light pollution guidelines (2005) to limit the upward flow of light and to restrict light glow. This will include lights being switched off between 2300 and 0700 (apart from security lighting).	1 of 1
	<i>The available credit is targeted.</i>	
Pol 08 – Noise Attenuation	The design team has confirmed that a noise impact assessment will be carried out by a fully registered and qualified acoustician in compliance with BS 4142:1997. Results / recommendations from the assessment will ensure the rating level of the noise source(s) from the site and building is equivalent to or less than the background noise level.	1 of 1
	<i>The available credit is targeted.</i>	

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# Innovation

## BREEAM 2008 Offices

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Innovation – BREEAM Accredited Professional or Suitably Qualified BREEAM Assessor

Eight Associates are fully qualified BREEAM Accredited Professionals.

2 of 2

Up to two 'innovation' credits can be achieved for the use of Accredited Professionals within the design team from RIBA Stage B. The design team have confirmed that the BREEAM AP will have the opportunity to attend Design Team Meetings from RIBA Stage B through to Stage K.

*Two of the available two credits are targeted.*

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