breeam

ENVIRONMENTAL ASSESSMENT CONSORTIUM
SUPPORTING SUSTAINABLE CONSTRUCTION

Bespoke BREEAM 2008 Whitbread Assessment

Premier Inn, Bicester Whitbread

Planning Submission Report

1 December 2011

Environmental Assessment Consortium
c/o Rickaby Thompson Associates Ltd
Witan Court
296 Witan Gate West
Central Milton Keynes
MK9 1EJ
Telephone 01908 679520
Fax 01908 201406
E-mail enquiries@rickabythompson.co.uk
Website www.eaconsortium.co.uk

Prepared on behalf of Environmental Assessment Consortium by

Name Ian Orme

Position Director

Signature 

Approved on behalf of Environmental Assessment Consortium by

Name Catherine Arotsky

Position Senior Energy Consultant

Date 30 November 2011

Signature 

Environmental Assessment Consortium
c/o Rickaby Thompson Associates Ltd
Witan Court
296 Witan Gate West
Central Milton Keynes
MK9 1EJ

Telephone 01908 679520
Fax 01908 201406

E-mail enquiries@rickabythompson.com
Website www.eaconsortium.co.uk

Contents

INTRODUCTION

Rickaby Thompson Associates who are part of the Environmental Assessment Consortium has been commissioned to carry out a BREEAM (BRE Environmental Assessment Method) assessment of the proposed Premier Inn, Bicester for Whitbread using the criteria developed for Whitbread by BRE under the BREEAM (2008) criteria. The new development consists of two buildings an 80 bed Premier Inn and a 220 cover Brewers Fayre restaurant.

BREEAM

BREEAM (BRE's Environmental Assessment Method) is a voluntary scheme that aims to quantify and reduce the environmental burdens of buildings by rewarding those designs that take positive steps to minimise their environmental impacts.

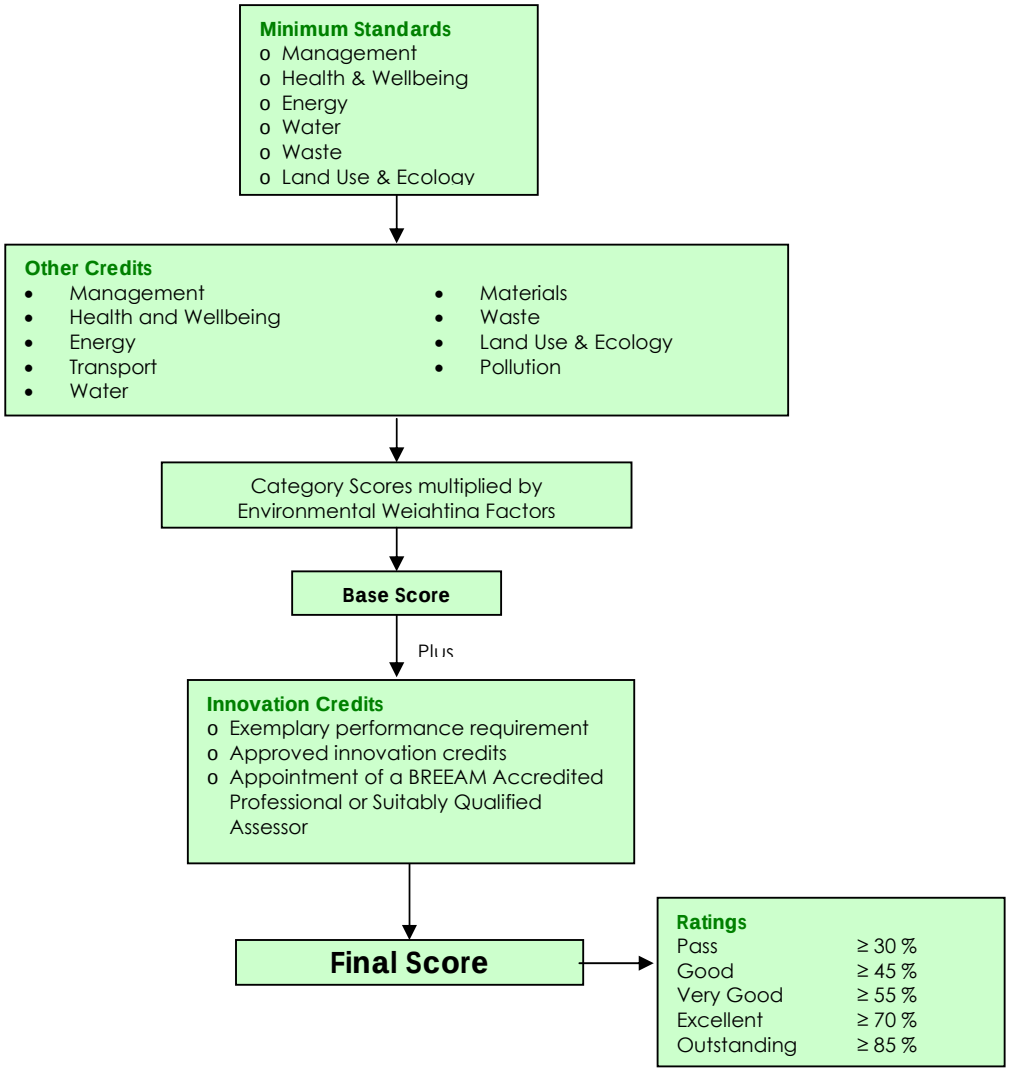
There are number of standard schemes under which certain building types can be assessed. These include Offices, Schools, Retail, Education and Court buildings. Where a non domestic building cannot be assessed using one of these schemes it can be assessed under the Bespoke BREEAM scheme or a scheme developed for specific clients such as Whitbread.

BREEAM Scoring

Building projects are assessed at the design stage and post-construction using a system of environmental issues grouped within the following categories:

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

On receipt of sufficient evidence and on completion of the post construction assessment the final certification report is prepared and sent to BRE who issue the final BREEAM certificate. The certificate details the performance of the assessed building against the environmental issues covered by the relevant BREEAM Scheme. The building's performance is expressed as a BREEAM rating of PASS, GOOD, VERY GOOD, EXCELLENT or OUTSTANDING. The following outlines the BREEAM scoring process:


Minimum Standards
o Management
o Health & Wellbeing
o Energy
o Water
o Waste
o Land Use & Ecology
Other Credits
• Management
• Health and Wellbeing
• Energy
• Transport
• Water
• Materials
• Waste
• Land Use & Ecology
• Pollution
Category Scores multiplied by Environmental Weighting Factors
Base Score
Plus
Innovation Credits
o Exemplary performance requirement
o Approved innovation credits
o Appointment of a BREEAM Accredited Professional or Suitably Qualified Assessor
Final Score
Ratings
Pass ≥ 30 %
Good ≥ 45 %
Very Good ≥ 55 %
Excellent ≥ 70 %
Outstanding ≥ 85 %

BREEAM issues and credits

The BREEAM categories contain a number of environmental issues, which reflect the choices available when procuring, designing and constructing a building.

Each category has a set number of 'credits' available and these credits are awarded where the building demonstrates that it complies with the requirements set by BREEAM.

Mandatory Requirements

The following outlines the minimum requirements to meet specific ratings:

BREEAM Issue		BREEAM Rating/Minimum number of credits				
		Pass	Good	Very Good	Excellent	Outstanding
Man 1	Commissioning	1	1	1	1	2
Man 2	Considerate Constructors				1	2
Man 4	Building User Guide				1	1
Man 9	Publication of building information (BREEAM Education only)					1
Man 10	Development as a learning resource (BREEAM Education only)					1
Hea 4	High frequency lighting	1	1	1	1	1
Hea 12	Microbial Contamination	1	1	1	1	1
Ene 1	Reduction of CO_2 Emissions				6	10
Ene 2	Sub-metering of substantial energy uses			1	1	1
Ene 5	Low or zero carbon technologies				1	1
Wat 1	Water consumption		1	1	1	2
Wat 2	Water meter		1	1	1	1
Wst 3	Storage or recyclable waste				1	1
LE 4	Mitigating ecological impact			1	1	1

Innovation Credits

In addition to the categories above the BRE has introduced innovation credits into the BREEAM 2008 schemes. Innovation credits provide recognition for designs which innovate in the field of sustainable performance, above and beyond the level that is currently recognised and rewarded by standard BREEAM issues. Innovation credits are awarded for either complying with pre-defined BREEAM issue exemplary level requirements, through the appointment of a BREEAM Accredited Professional or Suitably Qualified Assessor or via application to BRE Global to have a particular building feature, system or process approved as 'innovative'. These innovation credits do not have an environmental weighting, but each one achieved will contribute an additional 1% to the final score up to a maximum of 10%.

Environmental weightings, final score and BREEAM Rating

Once each BREEAM credit has been assessed the category percentage scores are determined (based on the number of credits achieved over those available within a category), and an environmental weighting applied (as shown below). The weighted category scores are then totalled to give an overall score, and any additional score for innovation is added to give the final BREEAM score, which is used to determine the BREEAM rating. The environmental weightings for BREEAM 2008 are as follows:

Issue Category	Issue Weighting (%)
Management	12
Health and Wellbeing	15
Energy	19
Transport	8
Water	6
Materials	12.5
Waste	7.5
Land Use and Ecology	10
Pollution	10

The BREEAM rating bands for BREEAM Offices are as follows:

BREEAM Rating	Score (%)
Pass	≥30
Good	≥45
Very Good	≥55
Excellent	≥70
Outstanding*	≥85

*Additional requirements apply to achieve an 'Outstanding' rating.

BREEAM RATING

The BREEAM Rating is based on the number of credits achieved under each section multiplied by the Environmental Weighting Factor (outlined above plus the innovation credits). The bespoke methodology also weights some credits by area. The Rating is given as Pass, Good, Very Good, Excellent or Outstanding according to the percentage score achieved.

A preliminary review of the proposed development of Premier Inn, Bicester for Whitbread has been carried out utilising the BREEAM Bespoke (2008) procedure developed for Whitbread. The numbers of credits likely to be obtained in each category are given in the following table:

Credit Category	Environmental weighting	% Likely to be achieved	Weighted Score
Management	12.00%	53.85%	6.46%
Health & Wellbeing	15.00%	59.39%	8.91%
Energy	19.00%	46.03%	9.46%
Transport	8.00%	58.33%	4.67%
Water	6.00%	65.50%	3.75%
Materials	12.50%	53.33%	6.67%
Waste	7.50%	66.86%	5.01%
Land Use & Ecology	10.00%	60.00%	6.00%
Pollution	10.00%	50.00%	5.00%
		Total	55.93%
Innovation credits achieved			1.00%
Total BREEAM Score			**56.93%**

The development is likely to achieve sufficient credits to obtain a ***Very Good*** rating with an overall score of 56.93% after correcting the totals for each category with the appropriate weightings. A summary of the credits likely to be obtained is provided from page 9 onwards. This indicates the credits the development is likely to achieve.

This is an estimate based on the credits the design team have indicated that they will target at this stage. The credit distribution in the final certification may be different.

CREDIT SUMMARY TABLE

Ref	Title	Max credits available		Whole Building / Site	Reception / Foyer	Offices	Staff Rooms	Kitchen / Servery	Café / Dining	Bar	Laundry storage rm.	Guest rooms
% of area (estimate)				**100**	**1**	**1**	**1**	**1**	**3**	**2**	**1**	**90**
Management Credits												
Man 1	Commissioning	2		1								
Man 2	Considerate Constructors	2		2								
Man 3	Construction Site Impacts	4		2								
Man 4	Building User Guide	1		1								
Man 6	Consultation	2		×								
Man 8	Security	1		1								
Man 9	Publication of Building Information	1		×								
Health and Wellbeing												
Hea 1	Daylighting	1			×	×	×	×	×	×		1
Hea 2	View Out	1				×						
Hea 3	Glare Control	1				1	1					
Hea 4	High Frequency Lighting	1		1								
Hea 5	Internal & External Lighting Levels	1		1								
Hea 6	Lighting Zones	1			1	1	1	1	1	1		
Hea 7	Potential for Natural Ventilation	1		×								
Hea 8	Indoor air quality	1		×								
Hea 9	Volatile Organic Compounds	1		×								
Hea 10	Thermal Comfort	1		×								
Hea 11	Thermal Zoning	1		1								
Hea 12	Microbial Contamination	1		1								
Hea 13	Acoustic Performance	1			1	1	1	1	1	1		
Energy												
Ene 1	Reduction of CO_2 Emissions	15		5								
Ene 2	Sub Metering of Substantial Energy Uses	1		1								
Ene 3	Sub Metering of Areas	1		1								
Ene 4	External Lighting	1		1								
Ene 5	Low/zero carbon technologies	3		1								
Ene 8	Lifts	2		2								

Ref	Title	Max credits available		Whole Building / Site	Reception / Foyer	Offices	Staff Rooms	Kitchen / Servery	Café / Dining	Bar	Laundry storage rm.	Guest rooms
Ene 15	Provision of energy efficient white goods	1										1
Transport Credits												
Tra 1	Provision of Public Transport	5		1								
Tra 2	Proximity to Amenities	1		1								
Tra 3	Cyclist Facilities	2		2								
Tra 4	Pedestrian & Cyclist Safety	1		1								
Tra 5	Travel Plan	1		1								
Tra 7	Travel Information Space	1		1								
Tra 8	Deliveries & Maneuvering	1		×								
Water Credits												
Wat 1	Water Consumption	3		2								
Wat 2	Water Meter	1		1								
Wat 3	Major Leak Detection	1		×								
Wat 4	Sanitary Supply Shut Off	1		×								
Wat 5	Water Recycling	1		1								
Wat 6	Irrigation	1		1								
Materials & Waste Credits												
Mat 1	Materials Specification - Major Building Elements	6		4								
Mat 2	Hard Landscaping & Boundary Protection	1		1								
Mat 3	Reuse of Building Façade	1		×								
Mat 4	Reuse of Building Structure	1		×								
Mat 5	Responsible Sourcing of Materials	3		×								
Mat 6	Insulation	2		2								
Mat 7	Designing for Robustness	1		1								
Waste Credits												
Wst 1	Construction Site Waste Management	4		3								
Wst 2	Recycled Aggregates	1		×								

Ref	Title	Max credits available		Whole Building / Site	Reception / Foyer	Offices	Staff Rooms	Kitchen / Servery	Café / Dining	Bar	Laundry storage rm.	Guest rooms
Wst 3	Recyclable Waste Storage	1		1								
Wst 5	Composting	1						1				
Land Use and Ecology Credits												
LE1	Reuse of Land	1		×								
LE2	Contaminated Land	1		×								
LE3	Ecological Value of Land & Protection of Ecological Features	1		1								
LE4	Mitigating Ecological Impact	2		2								
LE5	Enhancing Site Ecology	3		1								
LE6	Long Term Impact on Biodiversity	2		2								
Pollution Credits												
Pol 1	Refrigerant GWP - Building Services	1		×								
Pol 2	Preventing Refrigerant Leaks	2		×								
Pol 4	NO_x Emissions of Heating Source	3		×								
Pol 5	Flood Risk	3		3								
Pol 6	Minimising Watercourse Pollution	1		1								
Pol 12	Reduction of Night Time Light Pollution	1		1								
Pol 13	Noise Attenuation	1		1								
Innovation Credits												
Man 2	Considerate Constructors	1		×								
Hea 1	Daylighting	1		×								
Ene 1	Reduction of CO_2 emissions	2		×								
Ene 5	Low or Zero Carbon Technologies	1		×								
Wat 2	Water Meter	1		1								
Mat 1	Materials Specification	1		×								
Mat 5	Responsible Sourcing of Materials	1		×								
Wst 1	Construction Site Waste Management	1		×								

CREDIT REVIEW

The following outlines each of the credits and how the design might meet the criteria.

MANAGEMENT

Man 1 Commissioning 1 credit likely of 2 credits available

Credit criteria

One credit where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be carried out in line with current best practice.

Two credits where, in addition to the above, evidence provided demonstrates that seasonal commissioning will be carried out during the first year of occupation, post construction (or post fit out).

Credit Commentary

The design team indicated that they would undertake commissioning in-line with the BREEAM requirements. The design team indicated that they may undertake seasonal commissioning. One credit is therefore assumed, however two credits may be achieved.

Man 2 Considerate Constructors 2 credits likely of 2 credits available

Credit criteria

One credit where evidence provided demonstrates that there is a commitment to comply with best practice site management principles.

Two credits where evidence provided demonstrates that there is a commitment to go beyond best practice site management principles.

Innovation: An innovation credit can be awarded where, at post construction, a Considerate Constructors Scheme certificate can be provided demonstrating that the site achieved CCS Code of Considerate Practice with a score of at least 36.

Credit Commentary

The design team have indicated that they would seek to achieve a Considerate Constructor's score of at least 32 in order to achieve 2 credits. The design team would target a score of 36 to obtain an additional innovation credit, however for the purposes of this review, two credits are assumed.

Man 3 Construction Site Impacts 2 credits likely of 4 credits available

Credit criteria

One credit where evidence provided demonstrates that 2 or more of items a-g (listed below) are achieved.

Two credits where evidence provided demonstrates that 4 or more of items a-g (listed below) are achieved.

Three credits where evidence provided demonstrates that 6 or more of items a-g are achieved:

a. Monitor, report and set targets for CO_2 or energy arising from site activities

b. Monitor, report and set targets for CO_2 or energy arising from transport to and from site

c. Monitor, report and set targets for water consumption arising from site activities

d. Implement best practice policies in respect of air (dust) pollution arising from the site

e. Implement best practice policies in respect of water (ground and surface) pollution occurring on the site

f. Main contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site

g. Main contractor operates an Environmental Management System.

One additional credit where evidence provided demonstrates that at least 80% of site timber is responsibly sourced and 100% is legally sourced.

Credit Commentary
The design team have indicated that once a contractor is appointed this credit will be further reviewed. Previous experience of Whitbread developments suggests that two credits are likely to be achieved, however four credits may be achieved.

Man 4 Building user guide 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates the provision of a simple guide that covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building.

Credit Commentary
The design team have indicated that they are likely to include a simple building user guide in-line with the BREEAM requirements.

Man 6 Consultation 0 credits likely of 2 credits achieved

Credit criteria
Two credits available as follows:

One credit is achieved where evidence provided demonstrates that consultation has been, or is being, undertaken and feedback given to the local community and building users. In addition, advice should also have been sought from any relevant national and local history, archaeological bodies or military history groups regarding the heritage value of the building/site/surroundings.

Two credits are achieved where, in addition to the above, evidence provided demonstrates that changes to the design and/or action has been taken as a result of the above consultation process. This should include the protection of any parts of the building (or site) having historic or heritage value in accordance with independent advice from the relevant body.

Credit Commentary
The design team have indicated that whilst consultation has been undertaken this may not fully comply with the BREEAM criteria. For the purposes of this review, it has been assumed that these credits will not be achieved.

Man 8 Security 1 credits likely of 1 credit available

Credit criteria

One credit where evidence provided demonstrates that an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted at the design stage and their recommendations incorporated into the design of the building and its parking facilities (if relevant).

Credit Commentary

The design team have indicated that they are likely to consult an Architectural Liaison Officer or Crime Prevention Design Advisor to discuss the security of the site. The design team have indicated that they are likely to meet the requirements and therefore will target this credit.

Man 9 Publication of Building Information 0 credits likely of 1 credit available

Credit criteria

One credit is achieved where evidence provided demonstrates that the design team commit to publicising information about the development via the internet, newsletters, site visits, presentations etc.

Credit Commentary

The assessor understands that this credit is being investigated however for the purpose of this review, it has been assumed that this credit will not be achieved.

HEALTH AND WELLBEING

Hea 1 Daylighting — 1 (partial) credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that at least 80% of floor area in each occupied space is adequately daylit.

Innovation: An innovation credit is awarded where at least 80% of the offices floor area has an average daylight factor of 3% in multi-storey buildings and 4% in single-storey buildings.

Credit Commentary
The Premier Inn at Bicester is likely to meet the BREEAM criteria for daylighting in the guest bedrooms. At this stage, the assessor is unable to confirm whether the daylight criteria can be met for other spaces. For the purposes of this review, it has been assumed that credit would be achieved in the guest rooms.

Hea 2 View Out — 0 credits likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that all relevant building areas have an adequate view out.

Credit Commentary
For the purpose of this review, it has been assumed that this credit will not be achieved.

Hea 3 Glare Control — 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that an occupant-controlled shading system (e.g. internal or external blinds) is fitted in relevant building areas.

Credit Commentary
The design team have indicated that occupant controllable blinds will be incorporated where required to minimise any risk of glare.

Hea 4 High frequency lighting — 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.

Credit Commentary
The design team have indicated that high frequency lighting is likely to be specified.

Hea 5 Internal and external lighting levels 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained illuminance levels (in lux) recommended by CIBSE.

Credit Commentary
The design team have indicated that the internal and external lighting levels will be designed in-line with those recommended by CIBSE. This credit is likely to be achieved.

Hea 6 Lighting zones & controls 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that, in all relevant building areas, lighting is appropriately zoned and occupant controllable.

Credit Commentary
The design team have indicated that they are likely to include lighting controls to ensure that occupants can control their lighting in all the relevant building areas. This credit is likely to be achieved.

Hea 7 Potential for natural ventilation 0 credits likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that fresh air is capable of being delivered to the occupied spaces of the building via a natural ventilation strategy, and there is sufficient user-control of the supply of fresh air.

Credit Commentary
Due to the location and use of the building, it will not be naturally ventilated. It is unlikely that the credit criteria will be met for all functional spaces.

Hea 8 Indoor air quality 0 credits likely of 1 credit available

Credit criteria
One credit where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.

Credit Commentary
Whilst the design team wish to ensure good air quality, the credit criteria are unlikely to be met due to the proximity of the car park. For the purposes of this review, it has been assumed that this credit is unlikely to be achieved.

Hea 9 Volatile Organic Compounds 0 credits likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that the emissions of VOCs and other substances from key internal finishes and fittings comply with best practice levels.

Credit Commentary
This is a new credit for BREEAM 2008 and the design team are investigating whether this credit can be achieved. The design team indicated that they would minimise the use of products containing VOCs wherever possible, however for the purposes of this review, we have assumed this credit may not be achieved.

Hea 10 Thermal comfort — 0 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that thermal comfort levels in occupied spaces of the building are assessed at the design stage to evaluate appropriate servicing options, ensuring appropriate thermal comfort levels are achieved.

Credit Commentary
The design team have indicated that whilst thermal modelling is likely to be undertaken, it cannot be confirmed at this stage, therefore it has been assumed that this credit is unlikely to be achieved.

Hea 11 Thermal zoning — 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that local occupant control is available for temperature adjustment in each occupied space to reflect differing user demands.

Credit Commentary
This credit requires adequate controls to ensure that the perimeter and core are separately controlled. The design team have indicated that appropriate thermal zoning will be incorporated. This credit is likely to be achieved.

Hea 12 Microbial contamination — 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that the risk of waterborne and airborne Legionella contamination has been minimised.

Credit Commentary
This design team have indicated that the design will be in-line with CIBSE and ACoP guidelines on the avoidance of Legionella for both waterborne and airborne contamination. This credit is likely to be achieved.

Hea 13 Acoustic Performance — 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that the building achieves appropriate indoor ambient noise levels in offices areas.

Credit Commentary
The design team have indicated that they would ensure the building meets the appropriate indoor ambient noise levels. This credit is likely to be achieved.

ENERGY

Ene 1 Reduction of CO_2 Emissions 5 credits likely of 15 credits available

Credit criteria

Up to fifteen credits are available where evidence provided demonstrates an improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO_2 emissions. Credits are awarded based on the EPC rating as follows:

Number of Credits	CO_2 Index (EPC Rating)
1	63
2	53
3	47
4	45
5	43
6	40
7	37
8	31
9	28
10	25
11	23
12	20
13	18
14	10
15	0
1 innovation credit	<0
2 innovation credits	True zero carbon building

Credit Commentary

The building is designed for high levels of energy efficiency. Based on previous similar buildings, it is likely that an EPC of at least 43 will be achieved, therefore five credits are targeted.

Ene 2 Sub-metering of Substantial Energy Uses 1 credit likely of 1 credit available

Credit criteria

One credit where evidence provided demonstrates the provision of direct sub-metering of energy uses within the building.

Credit Commentary

The design team have indicated that they are likely to include sub-metering of substantial energy uses in order to monitor the energy use in the building and determine where savings could be made over time. This credit is likely to be achieved.

Ene 3 Sub-metering of high energy load Areas and Tenancy 1 credits likely of 1 credit available

Credit criteria

One credit where evidence provided demonstrates sub-metering of energy consumption by tenancy/building function area is installed within the building.

Credit Commentary
The design team have indicated that they are likely to sub-meter high energy load areas and tenancy in-line with the credit requirements, therefore this credit is likely to be achieved.

Ene 4 External Lighting 1 credit likely of 1 credit available

Credit criteria
One credit where energy-efficient external lighting is specified and all light fittings are controlled for the presence of daylight.

Credit Commentary
The design team have indicated that they are likely to incorporate external lighting which would be designed in accordance with the BREEAM criteria. This credit is likely to be achieved.

Ene 5 Low zero carbon technologies 1 credits likely of 3 credits available

Credit criteria
One credit where evidence provided demonstrates that a feasibility study considering local (on-site and/or near site) low or zero carbon (LZC) technologies has been carried out and the results implemented.

Two credits where evidence provided demonstrates that the first credit has been achieved and there is a 10% reduction in the building's CO_2 emissions as a result of the installation of a feasible local LZC technology.

Three credits where evidence provided demonstrates that the first credit has been achieved and there is a 15% reduction in the building's CO_2 emissions as a result of the installation of a feasible local LZC technology.

Or alternatively: A maximum of one credit where evidence provided demonstrates that a contract with an energy supplier is in place to provide sufficient electricity used within the assessed building/development to meet the above criteria from a 100% renewable energy source. (Note: a standard Green Tariff will not comply)

Innovation: An innovation credit is achieved where a local LZC energy technology has been installed in line with the recommendations of a compliant feasibility study and this method of supply results in a 20% reduction in the building's CO_2 emissions.

Credit Commentary
The design team have indicated that they are likely to prepare a renewable energy feasibility study. This is likely to target a significant reduction in CO_2 emissions through the use of renewables, however the exact contribution cannot be confirmed at this stage. For the purposes of this report, at least one credit is likely to be achieved, however further credit may also be achieved.

Ene 8 Lifts 2 credits likely of 2 credits available

Credit criteria
Up to two credits are available where evidence provided demonstrates the installation of energy-efficient lift(s).

One credit is achieved where an analysis of transport demand and patterns for the building has been carried out by the design team to determine the optimum number and size of lifts and counterbalancing ratio on the basis of anticipated passenger demand AND the energy

consumption for at least two types of lift or lift strategy 'fit for purpose' has been estimated and the system with the lowest energy consumption specified.

The second credit is achieved where, the first credit is achieved, and of the following energy-efficient features, the three that offer the greatest potential energy saving are specified:

a. The lifts operate in a stand-by mode during off-peak and idle periods. For example the power side of the lift controller and other auxiliary equipment such as lift car lighting and ventilation fan switch off when the lift is not in motion.

b. Where lift motors use a drive controller capable of variable-speed, variable-voltage, variable-frequency control of the drive motor.

c. The lift has a regenerative unit so that energy generated by the lift (due to running up empty and down full) is returned back to the grid or used elsewhere on site.

d. The lift car uses energy-efficient lighting and display lighting (>60 Lumens/watt or fittings that consume less than 5W e.g. LEDS).

Credit Commentary

The design team have indicated that they review the lift requirement in terms of transport patterns and demand and that they are likely to include at least three of the listed energy saving features (offering the greatest energy saving). Both credits are therefore likely to be achieved in this section.

TRANSPORT

Tra 1 Provision of public transport 1 credits likely of 5 credits available

Credit criteria
Up to three credits are awarded on a sliding scale based on the assessed buildings' accessibility to the public transport network.

Credit Commentary
The design team have indicated that this is a new development with currently only limited availability of public transport. Based on the assessment made by RGP the current provision of bus services is three services serving a bus stop within 500m of the proposed development. Using the BREEAM transport calculator an Accessibility Index of 1.80 is achieved. This would not achieve nay credit however, it is anticipated that as development of the whole area increases that future provision for bus routes will be made. The prepared travel plan indicates that two bus stops have been constructed as part of the infra-structure works. The assessor has estimated that at least one of the possible five credits will be achieved at the post construction stage of the assessment.

Tra 2 Proximity to amenities 1 credit likely of 1 credit available

Credit criteria
One credit is achieved where evidence provided demonstrates that the building is located within 500m of safe walking distance of:

a. Grocery shop and/or food outlet
b. Post box
c. Cash machine

Credit Commentary
The proposed development is within close proximity of Bicester town centre and retail village. The proposed development includes a restaurant and therefore compliant with a food outlet. The design team have indicated that it is likely that a cash machine will be incorporated and there is likely to be provision to post letters at reception. This credit is likely to be achieved.

Tra 3 Cyclist Facilities 2 credits likely of 2 credits available

Credit criteria
One credit where evidence provided demonstrates that covered, secure and well-lit cycle storage facilities are provided for all building users.

Two credits where, in addition to the above, adequate changing facilities are provided for staff use.

Credit Commentary
The travel plan being prepared by RGP includes an assessment of the current provision for access to the proposed development by bicycle and available cycle routes. The design team have indicated that they are likely to provide facilities for staff to cycle to work. This is likely to include secure cycle storage, lockers and showers. Two credits are likely to be achieved.

Tra 4 Pedestrian and cycle safety 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that the site layout has been designed in accordance with best practice to ensure safe and adequate pedestrian and cycle access.

Credit Commentary
RGP have indicated that the general area is well served by high quality cycle routes and access ways. The design team have indicated that they are likely to meet the credit requirements to ensure pedestrian and cyclists' safety. This credit is likely to be achieved.

Tra 5 Travel plan 1 credit likely of 1 credit available

Credit criteria
One credit is achieved where evidence is provided to demonstrate that a travel plan has been developed and tailored to the specific needs of the building users.

Credit Commentary
A copy of the preliminary travel plan prepared by RGP has been provided to the assessor. The assessor has reviewed this document and is happy that the plan addresses the BREEAM credit criteria; therefore this credit is likely to be achieved.

Tra 7 Travel information point 1 credit likely of 1 credit available

Credit criteria
One credit is achieved where evidence provided demonstrates there is a dedicated space within the development for the provision of up-to-date public transport and taxi information.

Credit Commentary
The design team have indicated that they are likely to provide a travel information point in line with the BREEAM criteria. This credit is likely to be achieved.

Tra 8 Deliveries and manoeuvring 0 credit likely of 1 credit available

Credit criteria
One credit is achieved where evidence provided demonstrates that vehicle access areas have been designed to ensure adequate space for manoeuvring delivery vehicles and provide space away from manoeuvring area for storage of refuse skips and pallets.

Credit Commentary
Due to the site layout it may not be possible to fully comply with the credit requirements. For the purposes of this review, this credit is not targeted but may be achieved.

WATER

Wat 1 Water Consumption 2 credits likely of 3 credits available

Credit criteria
Up to three credits where evidence provided demonstrates that the specification includes taps, urinals, WCs and showers that consume less potable water in use than standard specifications for the same type of fittings.

Credit Commentary
Whitbread have a standard sanitaryware specification which includes dual flush WCs, low flow showers and low flow taps. The specification is sufficient to achieve at least two of the available three credits.

Wat 2 Water meter 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that a water meter with a pulsed output will be installed on the mains supply to each building/unit.

Credit Commentary
The design team have indicated that they are likely to incorporate a water meter with a pulsed output, which would achieve this credit. The design team have also indicated that they are likely to incorporate a sub-meter to monitor water use in this kitchen. This complies with the exemplary level requirements in for this credit, therefore an innovation credit could be achieved.

Wat 3 Major leak detection 0 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that a leak detection system is specified or installed on the building's water supply.

Credit Commentary
The design team have indicated that they may incorporate major leak detection but for the purposes of this review this credit has not been targeted.

Wat 4 Sanitary supply shut off 0 credits likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that proximity detection shut-off is provided to the water supply to all toilet areas.

Credit Commentary
The design team have indicated that they will investigate the requirements associated with this credit, but for the purposes of this review, it has been assumed that this credit may not be achieved.

Wat 5 Water recycling 1 credits likely of 1 credit available

Credit criteria
One credit is achieved where evidence provided demonstrates the specification of systems that collect, store and, where necessary treat, rainwater or greywater for WC and urinal flushing purposes.

Credit Commentary
Whitbread utilise a greywater recycling strategy wherever possible in their hotels to minimise potable water use. The greywater recycling strategy recycles water from some baths and bathroom sinks to flush toilets. The system is designed to meet 100% of the flushing demand. On this basis, it is likely that this credit would be achieved.

Wat 6 Irrigation 1 credit likely of 1 credit available

Credit criteria
One credit is achieved where evidence provided demonstrates that a low-water irrigation strategy/system has been installed, or where planting and landscaping is irrigated via rainwater or reclaimed water.

Credit Commentary
The design team have indicated that there will be no mains-supplied irrigation systems and that planting will rely solely on manual watering. This credit is likely to be achieved.

MATERIALS

Mat 1 Materials Specification (major building elements) 4 credits likely of 6 credits available

Credit criteria
Up to six credits are available, determined by the Green Guide to Specification ratings for the major building elements.

Credit Commentary
In the assessor's experience of Whitbread projects and based on the specifications, it is likely that at least four credits will be achieved.

Mat 2 Hard landscaping and boundary protection 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that at least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.

Credit Commentary
The design team have indicated that they will investigate the materials utilised for hard landscaping and boundary protection and aim to specify materials which are A or A+ rated. It is likely one credit will be achieved.

Mat 3 Re-use of building façade 0 credits likely of 1 credit available

Credit criteria
One credit is awarded where evidence provided demonstrates that at least 50% of the total façade (by area) is reused and at least 80% of the reused façade (by mass) comprises in-situ reused material.

Credit Commentary
This is a new building, with no scope to re-use the building façade.

Mat 4 Re-use of building structure 0 credits likely of 1 credit available

Credit criteria
One credit is awarded where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's volume.

Credit Commentary
This is a new building, with no scope to re-use the building structure.

Mat 5 Responsible sourcing of materials 0 credit likely of 3 credits available

Credit criteria

Up to 3 credits are available where evidence provided demonstrates that 80% of the assessed materials in the following building elements are responsibly sourced:

a. Structural Frame
b. Ground floor
c. Upper floors (including separating floors)
d. Roof
e. External walls
f. Internal walls
g. Foundation/substructure
h. Staircase

Additionally 100% of any timber must be legally sourced.

Innovation: An innovation credit can be achieved where, in addition to the standard BREEAM requirements, 95% of the applicable materials, comprised within the applicable building elements, have been responsibly sourced.

Credit Commentary

The design team have indicated that they will seek to source materials responsibly, however, for the purposes of this review the assessor has assumed this credit will not be targeted.

Mat 6 Insulation 1 credit likely of 2 credits available

Credit criteria

One credit where evidence provided demonstrates that thermal insulation products used in the building have a low embodied impact relative to their thermal properties, determined by the Green Guide to Specification ratings.

One credit where evidence provided demonstrates that thermal insulation products used in the building have been responsibly sourced.

Credit Commentary

It is the assessor's experience that both credits are likely to be achieved in this section. The design team will need to ensure that appropriate thermal insulation materials are specified and the appointed contractor will need to ensure that only suppliers that can meet the BREEAM criteria for ISO14001 certification are used.

Mat 7 Designing For Robustness 1 credit likely of 1 credit available

Credit criteria

One credit where protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements.

Credit Commentary

The design team have indicated that they are likely to incorporate measures to minimise damage to the building as a result of high pedestrian traffic, vehicular and trolley movements. This credit is likely to be achieved.

WASTE

Wst 1 Construction Site Waste Management

3 credits likely of 4 credits available

Credit criteria

Up to three credits are available where evidence provided demonstrates that the amount of non-hazardous construction waste (m3/100m2 or tonnes100m2) generated on site by the development is the same as or better than good or best practice levels.

One credit where evidence provided demonstrates that a significant majority of non-hazardous construction waste generated by the development will be diverted from landfill and reused or recycled.

Innovation: An innovation credit is achieved where non-hazardous construction waste generated by the building's development meets or exceeds the resource efficiency benchmark required to achieve three credits (as outlined in the guidance).

Where at least 90% by weight (80% by volume) of non-hazardous construction waste and 95% of demolition waste by weight (85% by volume) (if applicable) generated by the build has been diverted from landfill and either:

a. Reused on site (in-situ or for new applications)
b. Reused on other sites
c. Salvaged/reclaimed for reuse
d. Returned to the supplier via a 'take-back' scheme
e. Recovered from site by an approved waste management contractor and recycled.

Credit is only awarded where all key waste groups are identified for diversion from landfill at pre-construction stage SWMP.

Credit Commentary

The design team have indicated that they will minimise construction waste and endeavour to meet the credit requirements for at least three credits.

Wst 2 Recycled aggregates

0 credits likely of 1 credit available

Credit criteria

One credit where evidence provided demonstrates the significant use of recycled or secondary aggregates in 'high-grade' building aggregate uses.

Credit Commentary

The design team have indicated that they will seek to utilise recycled aggregates, however they may be unable to fully meet the BREEAM criteria. For the purpose of this review it has been assumed that this credit will not be achieved.

Wst 3 Recyclable waste storage

1 credit likely of 1 credit available

Credit criteria

One credit where a central, dedicated space is provided for the storage of the building's recyclable waste streams.

Credit Commentary
The design team have indicated that there will be an area specifically for the storage of recyclable waste. Whitbread's policies require that waste is recycled wherever possible. This credit is likely to be achieved.

Wst 5 Composting 1 credits likely of 1 credit available

Credit criteria
One credit is achieved where evidence provided demonstrates there is a vessel on site for composting food waste, and adequate storage for such waste generated by the building's users and operation.

OR

Where space or access is limited, there is a dedicated space for compostable food waste to be stored prior to removal and composting at an alternative site.

Credit Commentary
The design team will make provision for a suitable dedicated space for compostable food waste to be stored prior to removal for composting at an alternative location. This credit can be achieved by the development.

LAND USE AND ECOLOGY

LE1 Re-use of land 0 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that the majority of the footprint of the proposed development falls within the boundary of previously developed land.

Credit Commentary
The design team have indicated that the development is not located within the footprint of an existing building/hard landscaping, therefore this credit is not achieved.

LE2 Contaminated land 0 credits likely of 1 credit available

Credit criteria
One credit is awarded where evidence provided demonstrates that the land used for the new development has, prior to development, been defined as contaminated and where adequate remedial steps have been taken to decontaminate the site prior to construction.

Credit Commentary
The design team have indicated that the site is not contaminated, therefore this credit is unlikely to be achieved.

LE3 Ecological value of site AND Protection of ecological features 1 credit likely of 1 credit available

Credit criteria
One credit is awarded where evidence provided demonstrates that the construction zone is defined as land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works.

Credit Commentary
The development is on a Greenfield site. A full assessment of the BREEAM criteria will be carried out by a suitable qualified ecologist however, based on the available information it is unlikely that the land is oh high ecological value. This credit is likely to be achieved.

LE4 Mitigating Ecological impact 2 credits likely of 2 credits available

Credit criteria
One credit where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is minimal.

Two credits where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of development.

Credit Commentary
As the change in ecological value is likely to be at least zero, two credits are likely to be achieved.

LE5 Enhancing Site Ecology 1 credits likely of 3 credits available

Credit criteria

One credit where the design team (or client) has appointed a suitably qualified ecologist to advise and report on enhancing and protecting the ecological value of the site;

- and implemented the professional's recommendations for general enhancement
- and protection of site ecology.

Two credits where, in addition to the above, there is a positive increase in the ecological value of the site of up to (but not including) 6 species.

Three credits where, in addition to the above, evidence is provided to demonstrate a positive increase in the ecological value of the site of 6 species or greater.

Credit Commentary

The design team have indicated that they are likely to seek guidance from a suitably qualified ecologies. Therefore the first credit is likely to be achieved. Additional credit is achieved where the change in ecological value is improved as a result of planting. It is likely that additional credit will be achieved but for the purposes of this review, only the first credit has been targeted.

LE6 Long term impact on biodiversity 2 credits likely of 2 credits available

Credit criteria

One credit where the client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements.

Two credits where the client has committed to achieving the mandatory requirements listed below and at least four of the additional requirements.

Credit Commentary

Credit is achieved in this section for consultation with a suitably qualified ecologist. The design team have indicated that they are likely to consult a suitably qualified ecologist who will advise on achieving credit in this section. For the purposes of this review, it has been assumed that both credits will be targeted and achieved.

POLLUTION

Pol 1 Refrigerant GWP - Building services 0 credits likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less than 5 or where there are no refrigerants specified for use in building services.

Credit Commentary
The design team have indicated that the global warming potential of the refrigerant is greater than 5 therefore credit will not be achieved.

Pol 2 Preventing refrigerant leaks 0 credits likely of 2 credits available

Credit criteria
One credit where evidence provided demonstrates that refrigerant leaks can be detected or where there are no refrigerants specified for the development.

One credit where evidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves. Or where there are no refrigerants specified for the development.

Credit Commentary
The design team have indicated that refrigerant leak detection is unlikely to be specified in-line with the credit criteria.

Pol 4 NO_x emissions from heating source 0 credits likely of 3 credits available

Credit criteria
One credit where evidence provided demonstrates that the maximum dry NO_x emissions from delivered space heating energy are ≤100 mg/kWh (at 0% excess O2).

Twp credits where evidence provided demonstrates that the maximum dry NO_x emissions from delivered space heating energy are ≤70 mg/kWh (at 0% excess O2).

Three credits where evidence provided demonstrates that the maximum dry NO_x emissions from delivered space heating energy are ≤40 mg/kWh (at 0% excess O2).

Credit Commentary
The design team have indicated that heating will be provided through air source heat pumps which utilise electricity to heat the room. Electricity has NO_x emissions in excess of 100mg/kWh therefore credit will not be achieved.

Pol 5 Flood risk 3 credits likely of 3 credits available

Credit criteria
Two credits where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding.

One credit where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium or high annual probability of flooding AND the ground level of the building, car parking and access is above the design flood level for the site's location.

One further credit where evidence provided demonstrates that surface water run-off attenuation measures are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site due to development.

Credit Commentary
The proposed building is in an area of low flood risk (according to the Environment Agency flood risk maps), therefore the first two credits are likely to be achieved. The development is on a Greenfield site and the volume of run off post development will need to be the same as the volume of run-off pre-development for the third credit to be achieved.

Pol 6 Minimising watercourse pollution 1 credit likely of 1 credit available

Credit criteria
One credit here evidence provided demonstrates that effective on site treatment such as Sustainable Drainage Systems (SUDs) or oil separators have been specified in areas that are or could be a source of watercourse pollution.

Credit Commentary
The design team have indicated that they are likely to incorporate oil interceptors to good practice. This is likely to achieve this credit.

Pol 12 Reduction of Night Time Light Pollution 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institute of Lighting Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.

Credit Commentary
The design team have indicated that they are likely to design all external lighting in-line with the Institute of Lighting Engineers guidance on the reduction of obtrusive light. This credit is likely to be achieved.

Pol 13 Noise Attenuation 1 credit likely of 1 credit available

Credit criteria
One credit where evidence provided demonstrates that new sources of noise from the development do not give rise to the likelihood of complaints from existing noise-sensitive premises and amenity or wildlife areas that are within the locality of the site.

Credit Commentary
The design team have indicated that they will endeavour to ensure that noise generated by the building will not give rise to the likelihood of complaints from noise sensitive premises. This credit is likely to be achieved.