



BREEAM UK New Construction 2014

ADATA, 36 New Lane, Havant PO9 2JL

Planning Submission Report

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EXECUTIVE SUMMARY

This report describes the BREEAM pre-assessment of the proposed new warehouse with offices for ADATA Ltd. at 36 New Lane, Havant using the criteria developed by BRE under the BREEAM 2014 scheme. This project will provide an industrial unit of footprint area approximately 1,980m² with approximately 250m² of ancillary offices on two floors.

A 'Very Good' rating is expected against the BREEAM 2014 Simple Buildings criteria, with an overall score of 58%. (The minimum score required to achieve the 'Very Good' rating is 55%).

The specification for the new building has been reviewed against all of the applicable BREEAM criteria and revised where necessary to ensure that a high enough score for the 'Very Good' rating will be achieved.

The report describes each of the sustainability issues that are assessed across nine categories (Management, Health and Wellbeing, Energy, Transport, Water, Materials, Waste, Land Use and Ecology and Pollution) and explains the scoring system and how this is translated into a BREEAM rating. It demonstrates which of the credits are expected to be achieved and explains how the criteria will be met in each case. It also indicates where credits cannot be achieved for this project due to the constraints of the site and its location.

INTRODUCTION

Alan Pither Ltd. has been commissioned to carry out a BREEAM (BRE Environmental Assessment Method) pre-assessment of the proposed new warehouse with offices for ADATA Ltd. at 36 New Lane, Havant using the criteria developed by BRE under the BREEAM 2014 scheme.

This project will provide an industrial unit of approximately 1,980m² footprint area with approximately 250m² of ancillary offices on two floors.

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, Industrial, Retail, Education and Court buildings. Where a non domestic building cannot be assessed using one of these schemes it can be assessed under the BREEAM Other Buildings scheme or a bespoke scheme developed for specific clients. However, in this case it is clear that this is an industrial building and therefore the standard BREEAM criteria for industrial buildings can be used.

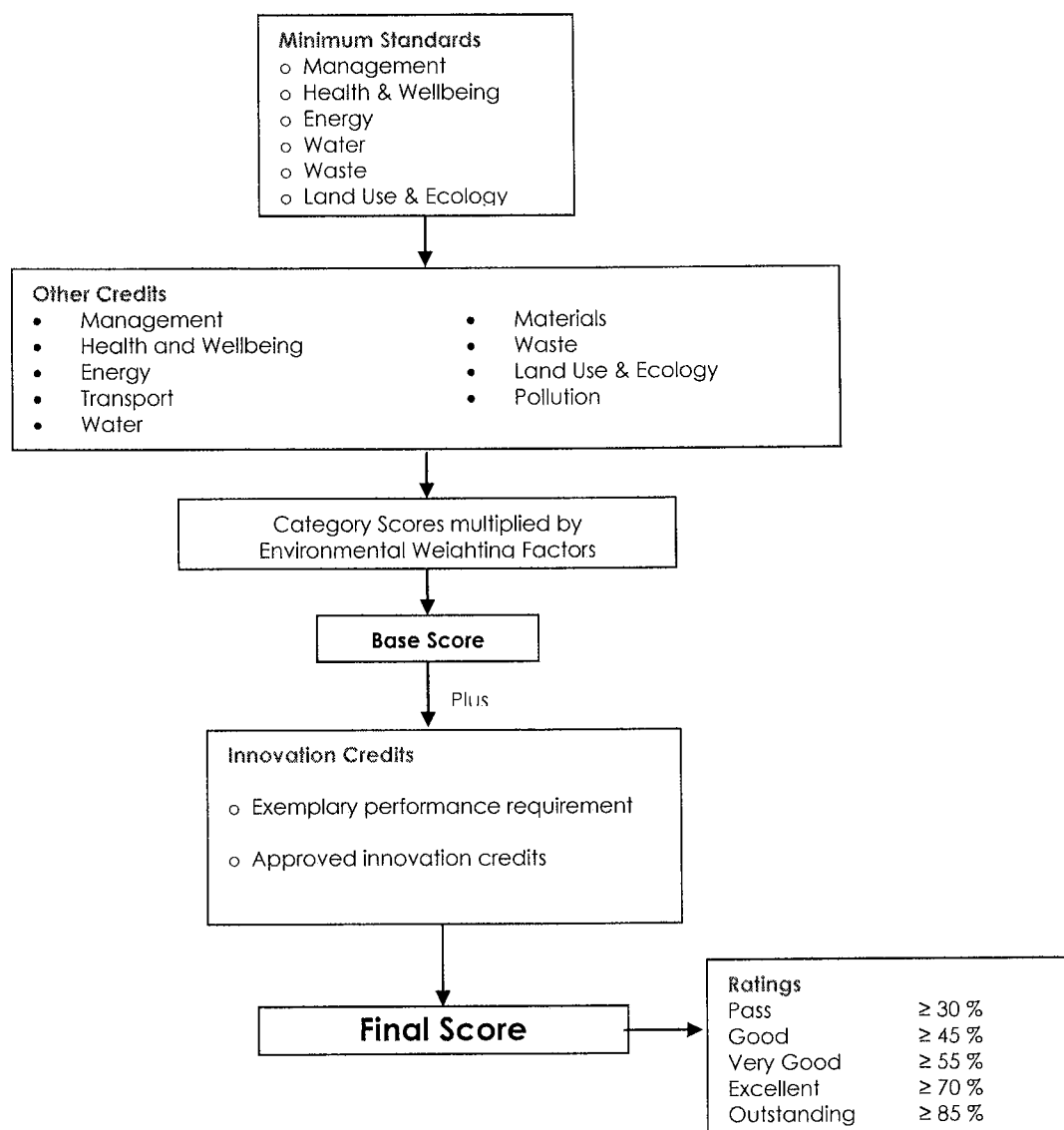
The current version of BREEAM is BREEAM 2014 and the relevant version of this is BREEAM UK New Construction 2014. This building additionally qualifies as a 'Simple Building' since the building services are not complex. Therefore, this report uses the BREEAM UK New Construction 2014 Simple Buildings scheme criteria as the basis of the pre-assessment.

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:



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 03	Responsible Construction Practices (Considerate construction)				1	2
Man 04	Commissioning and handover (Building user guide)				1	1
Man 05	Aftercare (Seasonal Commissioning)				1	1
Ene 01	Reduction of energy use and CO ₂ emissions				5	8
Ene 02	Energy Monitoring (Sub-metering)			1	1	1
Wat 01	Water consumption		1	1	1	2
Wat 02	Water monitoring (criterion 1 only)		1	1	1	1
Mat 03	Responsible sourcing of materials (criterion 1 only)	1	1	1	1	1
Wst 01	Construction waste management					1
Wst 03	Operational waste				1	1
LE 03	Minimising impact on existing site ecology			1	1	1

Innovation Credits

In addition to the categories above the BRE has introduced innovation credits into the BREEAM 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 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 fully fitted out buildings under BREEAM 2014 are as follows:

Issue Category	Issue Weighting (%)
Management	12
Health and Wellbeing	15
Energy	15

Transport	9
Water	7
Materials	13.5
Waste	8.5
Land Use and Ecology	10
Pollution	10
Innovation (additional)	10

The BREEAM rating bands for BREEAM 2014 are as follows:

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

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 at 36 New Lane, Havant has been carried out utilising the BREEAM New Construction 2014 Simple Buildings procedure. 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%	58.33%	7.00%
Health & Wellbeing	15.00%	58.33%	8.75%
Energy	15.00%	40.00%	6.00%
Transport	9.00%	66.67%	6.00%
Water	7.00%	75.00%	5.25%
Materials	13.50%	50.00%	6.75%
Waste	8.50%	75.00%	6.37%
Land Use & Ecology	10.00%	62.50%	6.25%
Pollution	10.00%	57.14%	5.71%
		Total	58.08%
Innovation credits achieved			0.00%
Total BREEAM Score			58.08%

The proposed development has an overall score of 58.0% after correcting the totals for each category with the appropriate weightings. This exceeds the 55% required to obtain a **Very Good** rating so, if all the credits targeted are achieved the development will achieve the Very Good rating required by planning. A summary of the credits likely to be obtained is provided from page 11 onwards. 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	Credits likely to be achieved	Innovation credits targeted
Management Credits				
Man 01	Project brief and design	2	1	0
Man 02	Life cycle cost and service life planning	1	1	
Man 03	Responsible Construction Practices	4	0	0
Man 04	Commissioning and handover	2	2	
Man 05	Aftercare	3	3	
Health and Wellbeing Credits				
Hea 01	Visual Comfort	4	4	0
Hea 02	Indoor Air Quality	3	2	0
Hea 03	Safe containment in laboratories	N/A	-	
Hea 04	Thermal Comfort	3	0	
Hea 05	Acoustic Performance	N/A	-	
Hea 06	Safety and Security	2	1	
Energy Credits				
Ene 01	Reduction of CO ₂ Emissions	12	3	0
Ene 02	Energy Monitoring	2	2	
Ene 03	External Lighting	1	1	
Ene 04	Low Carbon Design	3	0	
Ene 08	Energy Efficient Equipment	2	2	
Transport Credits				
Tra 01	Public Transport Accessibility	3	1	
Tra 02	Proximity to Amenities	1	1	
Tra 03	Cyclist Facilities	2	2	
Tra 04	Maximum car parking capacity	N/A	-	
Tra 05	Travel Plan	N/A	-	
Water Credits				
Wat 01	Water Consumption	5	3	0
Wat 02	Water Monitoring	1	1	
Wat 03	Water Leak Detection	2	2	
Wat 04	Water Efficient equipment	N/A	-	
Material Credits				
Mat 01	Life Cycle Impacts	2	2	0
Mat 02	Hard Landscaping & Boundary Protection	1	1	
Mat 03	Responsible sourcing of materials	4	0	0
Mat 04	Insulation	1	1	
Mat 05	Designing for Durability and Resilience	1	1	
Mat 06	Material Efficiency	1	0	
Waste Credits				
Wst 01	Construction Waste Management	4	4	0
Wst 02	Recycled Aggregates	1	1	0
Wst 03	Operational Waste	1	1	
Wst 05	Adaptation to Climate Change	1	0	0

Ref	Title	Max credits available	Credits likely to be achieved	Innovation credits targeted
Wst 06	Functional Adaptability	1	0	
Land Use and Ecology Credits				
LE01	Site Selection	2	1	
LE02	Ecological Value of Land & Protection of Ecological Features	2	2	
LE03	Minimising Impact on Existing Site Ecology	2	2	
LE04	Enhancing Site Ecology	2	0	
LE05	Long Term Impact on Biodiversity	N/A	-	
Pollution Credits				
Pol 01	Impact of refrigerants	N/A	-	
Pol 02	NO _x Emissions	1	0	
Pol 03	Surface water run off	5	3	0
Pol 04	Reduction of Night Time Light Pollution	1	1	
Pol 05	Noise Attenuation	N/A	-	
Innovation Credits				
Man 01	Project brief and design	2	0	
Man 03	Responsible Construction Practices	2	0	
Hea 01	Visual Comfort	1	0	
Hea 02	Indoor Air Quality	2	0	
Ene 01	Reduction of energy use and carbon emissions	5	0	
Wat 01	Water consumption	1	0	
Mat 01	Life Cycle Impacts	1	0	
Mat 03	Responsible Sourcing of Materials	1	0	
Wst 01	Construction Waste Management	1	0	
Wst 02	Recycled Aggregates	1	0	
Wst 05	Adaptation to Climate Change	1	0	
Pol 03	Surface water run off	1	0	

CREDIT REVIEW

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

MANAGEMENT

Man 01 Project brief and design

1 credit likely of 4 credits

Credit criteria

There are up to four credits available for stakeholder consultation and a Sustainability Champion. (In the Simple Buildings scheme the two Sustainability Champion credits are classified as Innovation credits but the criteria are the same)

One credit where evidence provided demonstrates that from the RIBA stage 2 (Concept Design) or equivalent the client, building occupier, design team and contractor are involved in contributing to the decision making process for the project. As a minimum this includes meeting to identify and define their roles, responsibilities and contributions during design, construction, commissioning and handover and occupation and demonstrating how this process has influenced the final design.

A further one credit where all relevant third party stakeholders have been consulted by the design team and this covers the minimum consultation content defined by BREEAM.

One credit where evidence provided shows that a BREEAM Accredited Professional (AP) is appointed to facilitate the setting of BREEAM related performance targets for the project at Stages 1/2.

A further one credit where the AP is engaged to monitor and report progress against the BREEAM targets by attending key project team meetings during the production information, tendering and construction stages.

Credit Commentary

The design team has indicated that they have had meetings with the relevant parties to define roles and responsibilities. Summaries of the issues discussed and the changes to the design as a result of these meetings can be provided as evidence so the credit for stakeholder consultation (project delivery) will be achieved. There are currently no plans to consult more widely or to engage a sustainability champion so the remaining credits are unlikely to be achieved.

One credit has been assumed.

Man 02 Life cycle cost and service life planning

1 credit likely of 1 credit

Credit criteria

One credit is available where the capital cost of the building in £/m² is reported in the BREEAM assessment report.

Credit Commentary

The design team has confirmed that they are prepared to provide details of the capital cost of the building in £/m² so that this credit can be achieved.

One credit has been assumed.

Man 03 Responsible Construction Site Practices**0 credits likely of 4 credits**

(In the Simple Buildings scheme one of the two monitoring of construction site impacts credits is classified as an Innovation credit but the criteria are similar)

Pre-requisite

All timber and timber-based products used on the project is legally harvested and traded timber. It is intended that this pre-requisite will be met.

Credit criteria – environmental management

One credit where evidence demonstrates that the main contractor operates an Environmental Management System (EMS) and implements best practice pollution prevention policies and procedures on the site.

Credit Commentary – environmental management

Leominster Construction does not operate an Environmental Management System so the first credit cannot be achieved.

Credit criteria – considerate construction

One credit where evidence provided demonstrates that the principal contractor has used a 'compliant' considerate construction scheme and where the contractor achieves compliance with the criteria of the scheme. This is achieved with a considerate constructors scheme score between 25 and 34.

Two credits where evidence provided demonstrates that the contractor significantly exceeds compliance with the criteria of the scheme. This is achieved with a considerate constructors scheme score between 35 and 39.

Innovation: An innovation credit can be awarded where the principal contractor's performance against the compliant scheme has been confirmed by independent assessment and verification and the contractor achieves compliance with the criteria of the compliant scheme to an exemplary level of practice, i.e. a CCS score of 40 or more.

Credit Commentary – considerate construction

The design team have indicated that they are not intending to register with a considerate construction scheme so these credits cannot be achieved.

Credit criteria – monitoring of construction site impacts

Up to two credits are available as follows. Responsibility must be assigned to an individual for monitoring, recording and reporting data resulting from all construction processes.

First credit where evidence demonstrates that the contractor will monitor, report and set targets for energy and water consumption arising from site activities and report via the BREEAM scoring and reporting tool.

Second credit (innovation credit) where evidence demonstrates that the contractor will monitor and record data on transport resulting from delivery of construction materials and waste from the site and report via the BREEAM scoring and reporting tool.

Credit Commentary – monitoring of construction site impacts

It may be possible to achieve one credit by monitoring and reporting site construction energy and water consumption but we have assumed that this will not be achieved at this stage. The design team have confirmed that they are not intending to monitor and report data on transport of materials and waste.

No credits have been assumed.

Man 04 Commissioning and handover**2 credits likely of 2 credits**

Credit criteria

Two credits are available as follows:

One credit is available where commissioning and testing is carried out in accordance with Building Regulations, BSRIA and CIBSE guidelines, an appropriate project team member is appointed to monitor and programme pre-commissioning, commissioning and, where necessary, re-commissioning on behalf of the client and the principal contractor accounts for the commissioning and testing programme within the budget and main programme of works.

One credit (handover) is available where evidence demonstrates that a Building User Guide is provided which covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building and a training schedule is prepared for the building occupiers/premises managers.

Credit Commentary

One credit can be achieved for commissioning the building services to appropriate standards and accounting for this in the budget and programme of works.

The design team have indicated that they are intending to provide a Building User Guide and a training schedule for the building occupiers.

Therefore, it is anticipated that two credits will be achieved.

Man 05 Aftercare**3 credits likely of 3 credits**

Credit criteria

Three credits available as follows:

One credit is achieved where evidence provided demonstrates that aftercare support will be provided to the building occupiers and there is a mechanism to collect the energy and water consumption data for at least 12 months after occupation, compare this with what was expected and analyse any discrepancies with a view of adjusting systems if they are not operating as expected/designed. Minimum standards to aftercare support must always be achieved.

One credit is achieved where seasonal commissioning is completed over a minimum 12 month period once the building becomes occupied. A specialist commissioning manager is required for complex systems and an external consultant/facilities manager for simple systems.

One credit is achieved (Post Occupancy Evaluation (POE)) where evidence provided demonstrates that the client has made a commitment to carry out a POE one year after occupancy and should include a review of the design and construction process together with feedback from building users.

Credit Commentary

The design team have indicated that they are intending to carry out seasonal commissioning and it is therefore anticipated that this credit can be achieved.

An additional two credits can be achieved if a commitment to provide aftercare support for the first 12 months and for post occupancy evaluation after one year of occupation is provided.

We have assumed three credits will be achieved.

HEALTH AND WELLBEING

Hea 01 Visual Comfort

4 credits likely of 4 credits

Credit criteria

Four credits are available in the case of an industrial building.

First credit (glare control) where evidence provided demonstrates that an occupant-controlled shading system (e.g. internal or external blinds) is fitted in relevant building areas (i.e. occupied spaces).

Second credit (daylighting) where evidence provided demonstrates that relevant building areas meet good practice daylighting criteria. At least 80% of floor area in each occupied space must be adequately daylighted, with an average daylight factor of 2% plus additional daylighting uniformity criteria.

Third credit (view out) where evidence provided demonstrates that all relevant building areas (i.e. offices) have an adequate view out.

Fourth credit (internal and external lighting) 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, including that all fluorescent and compact fluorescent lamps are fitted with high frequency ballasts and internal lighting is zoned to no more than 4 workplaces in office areas.

Credit Commentary

Blinds will be installed to the windows in the office and reception areas to provide glare control. Provisional calculations of the daylight factor in the office areas have been carried out and these indicate that average daylight factors of >2% can be achieved. This is based on a number of assumptions but the credit for daylighting should be achieved. The credit for view out will be achieved as the office width is less than 7 metres. The lighting specification will be developed to ensure that illuminance levels are in accordance with SLL Code for Lighting 2012 and CIBS Lighting Guide 7, that lighting controls are zoned to no more than 4 workplaces in the office areas that and all fluorescent lamps will have high frequency ballasts. Therefore it has been assumed that all four of these four credits will be achieved.

Hea 02 Indoor Air Quality

2 credits likely of 3 credits

Credit criteria

Two credits are available for minimising sources of air pollution, plus a third credit for ensuring there is the potential for the natural ventilation of the building.

Minimising sources of air pollution

First credit awarded where evidence provided demonstrates that the building has been designed to minimise the concentration and recirculation of pollutants.

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

Potential for Natural Ventilation

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

There is to be car parking immediately outside the building (i.e. within 10m of openable windows) so the first credit for minimising sources of air pollution cannot be achieved.

We have assumed that a credit will be available for volatile organic compound emission levels by ensuring that all paints and varnishes are specified to meet the VOC content limits defined in the EU Directive 2004/42/CE ('Paints Directive') and other materials e.g. wood panels, floor coverings and adhesives and suspended ceiling tiles will meet the relevant British Standards.

If the openable window areas in the spaces designed to be occupied are at least 5% of the floor area and there is potential for cross ventilation, then the adaptability credit can also be achieved.

Two credits have been assumed.

Hea 03 Safe containment in laboratories**Not applicable**

There are no laboratories present in this building.

Hea 04 Thermal Comfort**0 credits likely of 3 credits****Credit criteria**

Three credits are available as follows:

First 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. Thermal comfort assessment must specify TOR (time out of range).

Second credit where evidence provided demonstrates that the thermal modelling additionally meets the BREEAM thermal comfort criteria for a projected climate change scenario.

Third credit where evidence provided demonstrates that local occupant control is available for temperature adjustment in each occupied space to reflect differing user demands (the first credit must be achieved for this to be achieved).

Credit Commentary

There are no plans for detailed thermal modelling of the design of this building. It has therefore been assumed that these credits will not be achieved.

Hea 05 Acoustic Performance**Not applicable**

This is not applicable to simple buildings.

Hea 06 Safety and Security**1 credits likely of 2 credits****Credit criteria**

Two credits are available as follows:

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

Second credit where evidence provided demonstrates that a suitably qualified security specialist has been consulted prior to Concept Design (RIBA stage 2 or equivalent) and their recommendations incorporated into the design of the building and its parking facilities (if relevant).

Credit Commentary

The first credit for safe access for cyclists and pedestrians cannot be achieved with the site layout currently shown on the drawings since delivery areas are directly accessed through pedestrian and cyclist routes.

The design team has confirmed that a security needs assessment will be obtained from the police at an early stage and that their recommendations will be implemented. We therefore have assumed that this second credit will be achieved.

One of the two credits available for this issue will therefore be achieved.

ENERGY**Ene 01 Reduction of CO₂ Emissions****3 credits likely of 12 credits available****Credit criteria**

Up to twelve credits are available where evidence provided demonstrates minimised operational energy demand, primary energy consumption and CO₂ emissions. Credits are awarded based on the energy performance ratio (EPR_{NC}), which demonstrates performance progressively better than the Target Emissions Rate (TER) required for Building Regulations approval, as follows:

Number of Credits	EPR _{NC}
1	0.075
2	0.15
3	0.225
4	0.30
5	0.375
6	0.45
7	0.525
8	0.60
9	0.675
10	0.75
11	0.825
12	0.90 and zero net regulated emissions

Zero net CO₂ emissions is defined as a BER of zero. At least 5 of the above credits must be achieved as a minimum requirement for the BREEAM 'Excellent' rating.

In addition there are up to 5 innovation credits available for achieving even higher standards, i.e. an $EPR_{NC} \geq 0.9$ and zero net CO₂ emissions plus a percentage (as detailed in the table below) of the modelled regulated operational energy consumption generated by carbon neutral technologies and used to meet energy demand from unregulated building systems or processes.

1 innovation credit	10%
2 innovation credits	20%
3 innovation credits	50%
4 innovation credits	80%
5 innovation credits	>100%, i.e. a 'true zero or negative carbon' building

Credit Commentary

The design stage energy assessment for compliance with Part L2A has been carried out by an accredited Energy Assessor and the draft BRUKL report for the building design has been provided. The details from this have been entered into the BREEAM Ene 01 calculator and this shows that 3 credits will be achieved. A further credit may be achieved if a solar PV system is installed.

Ene 02 Energy Monitoring

2 credits likely of 2 credits

Credit criteria

One credit is available where evidence provided demonstrates that major energy consuming systems are monitored using either a Building Energy Management System (BEMS) or separate accessible energy sub-meters with a pulsed output to enable future connection to a BEMS. Achievement of this credit is a minimum standard for a Very Good BREEAM rating.

A second credit is available where evidence provided demonstrates that energy sub-meters with a pulsed output are provided to separate tenant areas.

Credit Commentary

The first of these is a minimum standard for a Very Good rating and therefore sub-meters with pulsed outputs (or other means of connection to automatic reading systems) will be provided as necessary to meet the requirements of this credit. The energy assessment indicates that the major energy consuming functions in this building will be heating, cooling, hot water, lighting and small power, with small power contributing about 50% of the total. In this case it would be unreasonably expensive to sub-meter hot water as this would add little value (as hot water is only to 4 wash hand basins and a shower) but a separate sub-meter for the air source heat pump system that is to provide heating and cooling would be required.

The design team has confirmed that separate accessible energy sub-meters with a pulsed output for the energy supplies to the warehouse and the office accommodation will be specified. The second credit will therefore be achieved.

2 credits have been assumed.

Ene 03 External Lighting**1 credit likely of 1 credit****Credit criteria**

One credit where either the building is designed to operate without any external lighting or energy-efficient external lighting is specified (not less than 60 luminaire lumens per circuit watt) and all light fittings are controlled for the presence of daylight.

Credit Commentary

The design team have indicated that they will incorporate external lighting that is designed in accordance with the above BREEAM criteria. This credit is therefore likely to be achieved.

Ene 04 Low Carbon Design**0 credit likely of 3 credits****Credit criteria**

One credit where evidence provided demonstrates that an analysis has been carried out to identify opportunities for the implementation of passive design solutions to reduce energy demand in the building. It is a requirement for this credit that the credit for Thermal Comfort (Hea 04) has been achieved.

A second credit can be obtained if the first credit is achieved and any opportunities for free cooling are implemented.

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. This is not linked to the first two credits under this issue.

Credit Commentary

The first two credits (for passive design) cannot be achieved since it is not intended that the first credit for Hea 04 (thermal comfort) is pursued.

The provision of a solar PV system is something which may be considered and there will be plenty of roof area available, facing south-east with 10° pitch (which is not optimal but still likely to support a viable system). A feasibility study will be undertaken to identify the options for the reduction of the building's operational CO₂ emissions if this is to be pursued. However, at this stage we have assumed that this credit will not be achieved.

Ene 08 Energy efficient equipment**2 credits likely of 2 credits****Credit criteria**

Up to two credits where evidence provided demonstrates energy-efficient equipment has been procured to ensure optimum performance and energy savings in operation.

Credit Commentary

In this building the only major contributors to the 'unregulated' energy use will be small power/plug in equipment. The design team have indicated that they will specify energy efficient equipment for any office equipment, domestic scale white goods or other small powered equipment that is supplied as part of this project. Therefore it is assumed that these credits are likely to be achieved.

TRANSPORT

Tra 01 Public transport accessibility

1 credit likely of 3 credits

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

There is a bus stop on Flexford Gardens which is 400m from the new building and serves the no. 20 and 21 bus services which each have two services per hour to a main travel hub. The details have been input to the BREEAM Tra 01 calculator and this confirms that 1 credit is likely to be achieved.

Tra 02 Proximity to amenities

1 credit likely of 1 credit

Credit criteria

One credit is achieved where evidence provided demonstrates that the building is located within 500m of at least three amenities, at least two of which must be 'core' amenities for the building type i.e.:

- a. Appropriate food outlet
- b. Access to cash
- c. Access to a recreation/leisure facility for fitness/sports

Credit Commentary

There is a co-operative food store with an ATM at 55 St. Albans Rd, Havant PO9 2JR and there is St Alban's Primary School also in St Albans Road. All these amenities are within 500 metres of the property and therefore we 1 credit will be achieved.

Tra 03 Cyclist facilities

2 credits likely of 2 credits

Credit criteria

One credit is available where evidence provided demonstrates that covered, secure and well-lit cycle storage facilities are provided for all building users (one space per 10 users).

A second credit may be achieved where, in addition to the above, at least two of the following types of cyclist facilities are provided:

- a. Showers
- b. Changing facilities
- c. Lockers
- d. Drying spaces.

Credit Commentary

The design team have indicated that there are already about 20 cycle racks on the site that will be retained. The minimum number of covered, secure and well-lit cycle storage spaces required by BREEAM is at least one per 10 occupants. If the building occupancy is unknown there are default assumptions that can be made based on the floor area and activity which gives an estimate of about 19 occupants in this case. Therefore only two covered cycle storage spaces will be required to achieve the first credit.

The design team has also confirmed that it would also be possible to include an adequately heated/ventilated drying space and two lockers adequately sized for cyclists' equipment to achieve the second credit.

Two credits are therefore likely to be achieved.

Tra 04 Maximum car parking capacity**Not applicable**

This issue is not applicable for Simple Buildings.

Tra 05 Travel Plan**Not applicable**

This issue is not applicable for Simple Buildings.

WATER

Wat 01 Water Consumption

3 credits likely of 5 credits

Credit criteria

Up to five credits are available 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. The water consumption (litres/person/day) for the assessed building is compared against a notional baseline performance and BREEAM credits are awarded as follows:

% improvement	No. of BREEAM credits
12.5%	1
25%	2
40%	3
50%	4
55%	5
65%	Innovation credit for Exemplary performance

Credit Commentary

The design team is targeting a 40% improvement to achieve 3 credits. Using the BREEAM Wat 01 calculator it is estimated that this is likely to be achieved with 6/4 litre dual flush WCs and wash hand basin and kitchen taps with flow rate <4.0 litres/minute. There are no urinals. If the above details are included in the specification we would expect three credits to be achieved.

Wat 02 Water monitoring

1 credit likely of 1 credit

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 confirmed that there will be a water meter on the mains water supply to the building and that this will be specified to have a pulsed output. The building has a relatively small water demand (only for sanitary fittings and a kitchen sink in the canteen) and therefore it is considered unlikely that any sub metering would be beneficial. It is assumed that this credit will be achieved.

Wat 03 Water leak detection and prevention

2 credits likely of 2 credits

Credit criteria

One credit where evidence provided demonstrates that a leak detection system is specified or installed on the building's water supply. In the case of a Simple Building, an alternative method of achieving compliance is to install automatic excess flow valves at relevant locations to protect the property from damage caused by leaking pipes or tanks.

Second credit where evidence provided demonstrates that a flow control device is fitted to each WC area/facility to ensure water is supplied only when needed (and therefore prevent minor water leaks).

Credit Commentary

The design team have indicated that there will be no water leak detection system on the mains supply but they will include the installation of automatic excess flow valves at relevant locations to protect the property from damage caused by leaking pipes or tanks. They have also confirmed that a flow control devices will be specified to the WC area. Therefore, both credits are likely to be achieved.

Wat 04 Water efficient Equipment**Not applicable**

This issue is not applicable for Simple Buildings.

MATERIALS**Mat 01 Life Cycle Impacts****2 credits likely of 2 credits****Credit criteria**

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

Where the total points achieved significantly exceed the level required for maximum credits an additional innovation credit may also be achieved.

Credit Commentary

In the case of this building, only the external walls and roof will need to be assessed for this issue. The external walls and roof will comprise a Kingspan KS 1000 RW Trapezoidal / Microrib Bonded Composite Panel system (steel inner lining, pentane blown PUR/PIR insulation, coated steel outer skin) on steel support on a structural steel frame with no internal finish (Green Guide reference 806600001 for the walls and 812550001 for the roof). This is A+ rated. Therefore both credits are likely to be achieved.

Mat 02 Hard landscaping and boundary protection**1 credit likely of 1 credit****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

There is existing boundary fencing that will be retained so there will be no new boundary protection. All external hard landscaping will comprise of either reclaimed clay pavers or new pavers over a recycled sub base which will achieve A or A+ ratings. It is therefore likely that this credit can be achieved.

Mat 03 Responsible Sourcing**0 credits likely of 4 credits****Pre-requisite**

There is a pre-requisite that to achieve any credits 100% of any timber must be legally harvested and traded. N.B. This is a mandatory requirement for a Very Good rating to be achieved.

Credit criteria

One credit is available where evidence is provided that the principal contractor sources materials for the project in accordance with a documented sustainable procurement plan.

Additionally, up to 3 credits are available where evidence provided demonstrates that each of the applicable specified materials comprising the main building elements are assigned a responsible sourcing tier level. The number of points awarded determines the credits achieved.

Innovation: An innovation credit can be achieved where, in addition to the standard BREEAM requirements, 70% of the available responsible sourcing points have been achieved.

Credit Commentary

The design team have confirmed that the pre-requisite will be met by ensuring that all timber used on the project will be sourced in accordance with the UK government's Timber Procurement Policy. However, it is not anticipated that the credits for this issue will be pursued.

We have assumed no credits will be achieved.

Mat 04 Insulation**1 credit likely of 1 credit****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 insulation index that is based on the volume of each type of insulation and its Green Guide to Specification ratings. The credit is achieved when the insulation index is 2.5 or greater. Any new insulation specified for use within the following building elements must be assessed:

- a. External walls
- b. Ground floor
- c. Roof
- d. Building services

Credit Commentary

We have assumed this credit would be achieved as the majority of the insulation in the building will be in the Kingspan Composite Panels used for the external walls and roof. The product data sheet for Kingspan AWP range indicates that PIR insulation achieves a Green Guide rating of A+ and the system has an approved environmental profile with a BRE ecopoints score of 0.497 cradle to grave 60 year study period. The energy assessor has assumed that there will be 100mm Kingspan TF70 insulation to the ground floor and this is also A+ rated in the Green Guide. Thus the insulation index for the walls, floor and roof will be at least 3, and while this may be reduced when insulation to the building services is taken into account, the calculation is volume weighted so it is very unlikely to come out below 2.5. Therefore one credit is assumed.

Mat 05 Designing for durability and resilience**1 credit likely of 1 credit****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 and appropriate design is included to limit material degradation of exposed parts of the building due to environmental factors.

Credit Commentary

The design team have indicated that they will specify that suitable durability/protection measures are installed to vulnerable areas of the building and that the design minimises the risk of environmental degradation to the building fabric. For this type of building suitable durability measures are likely to include bollards/barriers to delivery areas, robust external wall construction, kick plates on doors and hard-wearing floor finishes in heavily used areas.

It is assumed that this credit will be achieved.

Mat 06 Material efficiency**0 credits likely of 1 credit****Credit criteria**

One credit is available where opportunities have been identified and implemented to optimise the use of materials in building design, procurement, construction, maintenance and end of life. For this credit to be awarded, evidence of this is needed at each of the following RIBA stages:

- a. Preparation and brief
- b. Concept Design
- c. Developed Design
- d. Technical Design
- e. Construction

Credit Commentary

Although the building design aims to optimise the use of materials, the design team has no plans to assess the material efficiency in relation to the maintenance and end of life impacts so it has been assumed that this credit cannot be achieved.

WASTE**Wst 01 Construction Waste Management****4 credits likely of 4 credits****Credit criteria**

One credit is available where evidence provided demonstrates that there is a Resource Management Plan in place with the aim of minimising and monitoring waste.

A further two credits are available where the first credit is achieved and evidence provided demonstrates that the following are measured and reported on:

- a. The construction waste generated by the development in m³/100m² or tonnes/100m² gross internal floor area (excluding demolition and excavation waste)
- b. The proportion of construction waste diverted from landfill (i.e. reused/recycled/recovered)

A further credit is achieved where at least 80% by weight (70% by volume) of non-hazardous construction waste and 90% of demolition waste by weight (80% by volume) (if applicable)

generated by the build has been diverted from landfill and either reused, salvaged, returned to the supplier or recycled **and** waste materials will be sorted into key waste groups.

Innovation: An innovation credit is achieved 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 reused, salvaged, returned to the supplier or recycled (as detailed above).

Credit Commentary

The design team has confirmed that they will prepare and implement a Resource Management Plan and measure and report on the construction waste generated and diverted from landfill. This will achieve three of the four credits for this issue. If at least 70% by volume (or 80% by tonnage) of non-hazardous construction waste is diverted from landfill the fourth credit could also be achieved.

It is assumed that all four credits will be achieved.

Wst 02 Recycled aggregates

1 credit likely of 1 credit

Credit criteria

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

An innovation credit is available where a higher percentage is achieved

Credit Commentary

This credit would require a minimum of 25% recycled and secondary aggregates to be specified for the project. The design team has confirmed that all usable concrete material will be re-used on site and that any imported aggregate material will also be recycled. Therefore it is assumed that it is possible to achieve this credit although care will be needed to ensure that appropriate evidence is available.

We have assumed one credit will be achieved.

Wst 03 Operational Waste

1 credit likely of 1 credit

Credit criteria

One credit where a central, dedicated space is provided for the storage of the building's recyclable waste streams. Where appropriate there should be static waste compactors and composting facilities.

Credit Commentary

The design team have confirmed that dedicated storage facilities for operational related recyclable waste already exists on site and that this will be available for use by the occupants of the new building. Evidence will be needed that the space is clearly labelled and accessible to the building occupants and for collection of waste. A space of area of at least 4m² will need to be allocated for this building. Therefore it has been assumed that this credit will be achieved.

Wst 05 Adaptation to climate change**0 credit likely of 1 credit****Credit criteria**

One credit is available where a climate change adaptation strategy appraisal for structural and fabric resilience has been conducted by the end of Concept Design (RIBA stage 2). This needs to be based on a systematic risk assessment of the impact of climate change covering hazard identification, hazard assessment, risk estimation, risk evaluation and risk management.

An innovation credit is also available where this credit is achieved and minimum criteria relevant to this issue have been met in Hea 04, Ene 01, Ene 04, Wat 0, Mat 05 and Pol 03.

Credit Commentary

The design team has no plans to carry out a climate change risk assessment so it has been assumed that this credit cannot be achieved.

Wst 06 Functional adaptability**0 credit likely of 1 credit****Credit criteria**

One credit is available where a building-specific functional adaptation strategy study has been undertaken by the end of Concept Design (RIBA stage 2), which includes recommendations for measures to be incorporated to facilitate future adaptation. These recommendations must either be adopted in the design by Technical Design stage (RIBA stage 4) or their omission justified in writing.

Credit Commentary

This would require a functional adaptability strategy study to be undertaken prior to RIBA stage 2 and would need to include recommendations and implementation for measures to be incorporated to facilitate future adaptation. While the design team may consider pursuing this credit and it is possible that it could be achieved. However, at this stage it has not been assumed that it will be achieved.

LAND USE AND ECOLOGY

LE01 Site Selection

1 credit likely of 2 credits

Credit criteria

One credit where evidence provided demonstrates that at least 75% of the footprint of the proposed development falls within the boundary of land which was previously occupied by industrial, commercial or domestic buildings or fixed surface infrastructure.

A second credit where evidence provided demonstrates that the site is deemed to be significantly contaminated as confirmed by a contaminated land specialist's site investigation, risk assessment and appraisal.

Credit Commentary

The design team have confirmed that all of the new building is located on the (hard standing) car park of the existing adjacent building and therefore the first credit will be achieved. The site has no contamination so the second credit for this issue cannot be achieved.

LE 02 Ecological Value of site and Protection of ecological features

2 credits likely of 2 credits

Credit criteria

One credit is awarded where evidence provided demonstrates that the construction zone is defined as land of low ecological value.

One credit is awarded if all existing features of ecological value will be fully protected from damage during site preparation and construction works.

Credit Commentary

The design team have confirmed that the land within the construction zone can be defined as 'land of low ecological value' and that there are no features of ecological value within the site boundary that will need to be protected. Both credits are therefore likely to be achieved.

LE03 Minimising impact on existing site ecology

2 credits likely of 2 credits

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 (defined as a change in ecological value of minus nine or better).

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

The current ecological value of the site is assumed to be zero and therefore that both credits will be achieved. Note that it is a minimum requirement for the BREEAM 'Very Good' rating that at least one credit for this issue is achieved.

LE04 Enhancing Site Ecology**0 credit likely of 2 credits****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 the general enhancement and protection of the site ecology.

Two credits where, in addition to the above, there is a positive increase in the ecological value of the site of 6 species or greater.

Credit Commentary

There is no intention to appoint an ecologist and therefore this credit cannot be achieved.

LE05 Long term impact on biodiversity**Not applicable**

This issue is not applicable to Simple Buildings.

POLLUTION

Pol 01 Impact of Refrigerants

Not applicable

This issue is not applicable to Simple Buildings.

Pol 02 NO_x emissions

0 credits likely of 1 credit

Credit criteria

One credit is available where evidence provided demonstrates that the maximum dry NO_x emissions from delivered space heating and hot water energy to the office and associated areas are ≤70 mg/kWh (at 0% excess O₂).

As the operational areas have no space heating the second credit for these areas is not applicable in this case.

Credit Commentary

It is anticipated that the space heating to the office and associated areas will be provided by air conditioning units running on mains electricity and there will be no heating available to operational areas. Since it is anticipated that the space heating to this building will be running on mains electricity these credits will not be achieved since the assessment includes the NO_x emissions at power stations which significantly exceed the above BREEAM criteria.

Pol 03 Surface water run off

3 credits likely of 5 credits

Credit criteria – flood resilience

Two credits where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding and a site specific Flood Risk Assessment (FRA) confirms that there is a low risk of flooding from all sources.

OR

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.

Credit criteria – surface water run-off

Two further credits where evidence provided demonstrates there is a decrease in the impermeable area by 50% or more OR where all run-off from the roof for rainfall depths up to 5mm from all new and existing parts of the building have been managed on site using source control methods.

OR

One credit where there is no increase in impermeable surfaces as a result of the new construction OR the additional run-off is managed on site using permeable hard standing surfaces and other appropriate SUDs techniques for rainfall depths up to 5mm.

Credit criteria – minimising watercourse pollution

One credit where 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

A check of the flood risk zone for the postcode area PO9 2JL has been carried out on the Environment Agency website and from this it is understood that the proposed building is in an area of very low flood risk from rivers or the sea. Provided that a site specific Flood Risk Assessment confirms that the flood risk from all sources is low, the first two credits will be achieved. A further credit will be available for surface water run off as there will be no increase in impermeable surfaces (as the building will be located on an existing car park). It is assumed that the other two credits cannot be achieved as this would require additional measures to reduce the rainwater run-off from the site.

Three credits have been assumed.

Pol 04 Reduction of Night Time Light Pollution**1 credit likely of 1 credit****Credit criteria**

One credit where evidence provided demonstrates that:

- a. The external lighting design is in compliance with the guidance in the Institution of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011.
- b. All external lighting (except for safety and security lighting) can be automatically switched off between 23.00 and 07.00.
- c. If safety and security lighting is provided and will be used between 23.00 and 07.00, this complies with the lower levels of lighting recommend in the ILP guidance.
- d. Illuminated advertisements, where specified, are in compliance with ILE Technical Report 5.

Credit Commentary

The design team have confirmed that they will specify that all external lighting is in-line with the Institution of Lighting Professionals guidance on the reduction of obtrusive light and the other criteria above. This credit is therefore likely to be achieved.

Pol 05 Noise Attenuation**Not applicable**

This issue is not applicable to simple buildings.