

BREEAM Pre-assessment



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Consulting



Record of revisions.		
Date.	Revision.	Description of change.
14/06/2019	1	For issue
26/06/2019	2	Update based on comments received

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1.0 Executive Summary

The predicted BREEAM score and rating for the proposed Refurbishment of Building B1000 at Langstone Technology Park in Havant, is shown in Table 1.1 below.

Building Type	BREEAM 2018 Rating
Office (Part 1 to 4)	59.88 % (Very Good)

Table 1.1 BREEAM score

The results of this assessment have been based on credits assigned with the objective of ascertaining the feasibility of achieving a BREEAM 'Very Good' rating for the proposed offices refurbishment in Havant. The relevant design team members should assess each of the credits that have been awarded to confirm and provide comments upon their validity.

The BREEAM pre-assessment for the proposed scheme has an anticipated score of 59.88 % therefore achieving a 'Very Good' rating which requires a percentage score greater than or equal to 55 %. The score also allows for a 4.88 % margin of contingency above the minimum score of 55 % required.

All credits which can be investigated to deliver a higher BREEAM score have been highlighted within Section 5.0 of this report. If all these credits were achieved, the development could potentially achieve a BREEAM score of 62.39 % which delivers a 'Very Good' rating with a higher margin of contingency of 7.39 %.

The credits that have not been achieved are highlighted in blue within the BREEAM pre-assessment and the issues which have been achieved are highlighted in green in the tables provided in Section 6.0 of this report.

This is a live document and the BREEAM score is subject to change throughout the development should the relevant criteria not be met, or, should further credits become achievable.

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2.0 Introduction

This report has been prepared by Cudd Bentley Consulting Ltd with regard to the Refurbishment of Building B1000 and office refurbishment at Langstone Technology Park in Havant. The intent is to determine the BREEAM Non-domestic Refurbishment and Fit Out 2014 rating achievable for the offices building.

The applicant seeks full planning permission for the part-demolition of Building 1000, installation of a new flank elevation to the East, a new elevation to the North of Building 4000 as a result of the aforementioned part-demolition of Building 1000, the erection of new buildings in flexible B1c, B2 and B8 use in the South-West corner of the site with associated parking; and the creation of new car parking areas and the rationalisation of existing parking areas. A separate BREEAM Pre-assessment for the Industrial Development is provided in a separate report to support planning application.

In regards of BREEAM, the Havant Borough Council Local Plan/Core Strategy (2011), Sustainable Construction and High-Quality Design, Policy CS14, Efficient Use of Resources, Point 3, states that on completion, unless proven to be financially or technically unviable, meets the following standards:

- Residential development – Level 3 of the Code for Sustainable Homes
- Multi occupation homes and non-residential development over 500sqm - BREEAM standard 'Very Good'. Improvements to these standards throughout the plan period will be encouraged
- Particular attention should be paid to water efficiency measures.

Sushil Pathak of Cudd Bentley Consulting Limited has been appointed to assist with the BREEAM 2014 UK (Non-domestic Refurbishment and Fit Out) Pre-assessment on the proposed Office. Cudd Bentley Consulting and in particular the licensed assessor Sushil Pathak has been trained by the BRE to be able to undertake BREEAM assessments as an Accredited Professional (AP).

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3.0 BREEAM Overview

BREEAM schemes are an environmental assessment method for buildings. Each standard sets the best practice in environmental design and has become the de facto measure to describe a buildings environmental performance.

BREEAM has the following aims:

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

BREEAM has the following objectives:

- To provide market recognition to low environmental impact buildings;
- To ensure best environmental practice is incorporated in the planning, design, construction and operation of buildings and the wider built environment;
- To define a robust, cost effective performance standard surpassing that required by regulations;
- To challenge the market to provide innovative, cost effective solutions that minimise the environmental impact of buildings;
- To raise awareness of owners, occupants, designers and operators of the benefits of buildings with a reduced impact on the environment;
- To allow organisations to demonstrate progress towards corporate environmental objectives.

Credits are awarded over 10 categories of sustainability consisting of a number of issues, summarised in Table 3.1 below.

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Management • Project Design and Brief; • Life Cycle Cost and Service Life Planning; • Responsible Construction Practices; • Commissioning and Handover; • Aftercare.	Materials • Environmental Impact of Materials; • Hard Landscaping and Boundary Protection; • Responsible Sourcing of Materials; • Insulation; • Designing for Durability and Resilience; • Material Efficiency.
Health & Wellbeing • Visual Comfort; • Indoor Air Quality; • Safe Contaminant in Laboratories; • Thermal Comfort; • Acoustic Performance; • Safety and Security.	Waste • Project Waste Management; • Recycled Aggregates; • Operational Waste; • Speculative Finishes; • Adaptation to Climate Change; • Functional Adaptability.
Energy • Reduction of Energy Use and CO2 Emissions; • Energy Monitoring; • External Lighting; • Low Carbon Design; • Energy Efficient Cold Storage; • Energy Efficient Transportation Systems; • Energy Efficient Equipment; • Drying Space.	Land Use and Ecology • Site Selection; • Protection of Ecological Features; • Minimising Impact on Existing Site Ecology; • Enhancing Site Ecology; • Long Term Impact on Biodiversity.
Transport • Sustainable Transport Accessibility; • Proximity to Amenities; • Cyclist Facilities; • Maximum Car Parking Capacity; • Travel Plan.	Pollution • Impact of Refrigerants; • NOx Emissions; • Flood Risk Management and Reducing Surface Water Runoff; • Reduction of Night Time Lighting Pollution; • Noise Attenuation.
Water • Water Consumption; • Water Monitoring; • Leak Detection; • Water Efficient Equipment.	Innovation • Exemplary Performance Levels; • New Technologies.

Table 3.1 Summary of Categories Covered by BREEAM

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Scores and Rating

There are four main elements that determine the building rating:

1.) BREEAM Rating Benchmarks

Table 3.2 below summarises the overall percentage score that is required to classify within each rating.

BREEAM Rating	% Score
Unclassified	< 30
Pass	≥ 30
Good	≥ 45
Very Good	≥ 55
Excellent	≥ 70
Outstanding	≥ 85

Table 3.2 BREEAM Ratings

2.) BREEAM Environmental Weightings

Table 3.3 below outlines the environmental weightings that are adopted in each section to convert the credits awarded into an overall percentage score.

BREEAM Section	Environmental Core Weighting
Management	13.63 %
Health & Wellbeing	14.72 %
Energy	16.35 %
Transport	5.30 %
Water	6.82 %
Materials	14.20 %
Waste	8.52 %
Land Use & Ecology	9.09 %
Pollution	11.36 %
Innovation (additional)	10.00 %

Table 3.3 Environmental Section Weightings

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3.) Minimum BREEAM Standards

To achieve a BREEAM rating, the minimum percentage score must be achieved (Table 3.2) and the minimum standards (number of credits) applicable to that rating level, Table 3.4 below.

BREEAM Issue	Minimum standards by BREEAM rating level				
	Pass	Good	Very Good	Excellent	Outstanding
Man 03 – Responsible Construction Practices	-	-	-	1	2
Man 04 – Commissioning and Handover	-	-	-	Criterion 9	Criterion 9
Man 05 – Aftercare	-	-	-	Criterion 3	Criterion 3
Ene 01 – Reduction of CO ₂ Emissions	-	-	-	6	10
Ene 02 – Sub-metering of Substantial Energy Uses	-	-	1	1	1
Wat 01 – Water Consumption	-	1	1	1	2
Wat 02 – Water Meter	-	Criterion 1	Criterion 1	Criterion 1	Criterion 1
Mat 03 – Responsible Sourcing of Materials	Criterion 1	Criterion 1	Criterion 1	Criterion 1	Criterion 1
Wst 01 – Project Waste Management	-	-	-	-	1

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Wst 03 – Operational Waste	-	-	-	1	1
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Table 3.4 Minimum Standards

4.) BREEAM Credits for Innovation

Innovation credits provide additional recognition for a building that innovates in the field of sustainable performance, above and beyond the level that is currently recognised and rewarded within standard BREEAM issues.

Current Assessment – Design Parameters

For this 2014 pre-assessment, the following design parameters were used within the BREEAM Calculator Tool to commence the assessments:

- Scheme - BREEAM UK Non-domestic (Refurbishment and Fit Out) 2014;
- Building Type – Offices;
- Project type – Part 1: Fabric and Structure
Part 2: Core Services
Part 3: Local Services
Part 4: Interior Design
- Upgrades in the façade
- 4 pipe fan coil, existing boilers, chillers and plate exchangers
- New lighting
- New floor, wall and ceiling finishes
- Landscaping
- New Sanitary ware

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4.0 Site Analysis

The proposed Refurbishment of building B1000 in Langstone Technology Park in Havant comprises a one storey office building with associated landscape and parking spaces. the part-demolition of Building 1000, installation of a new flank elevation to the East, a new elevation to the North of Building 4000.

The proposed site plan is shown in Figure 4.1 below.

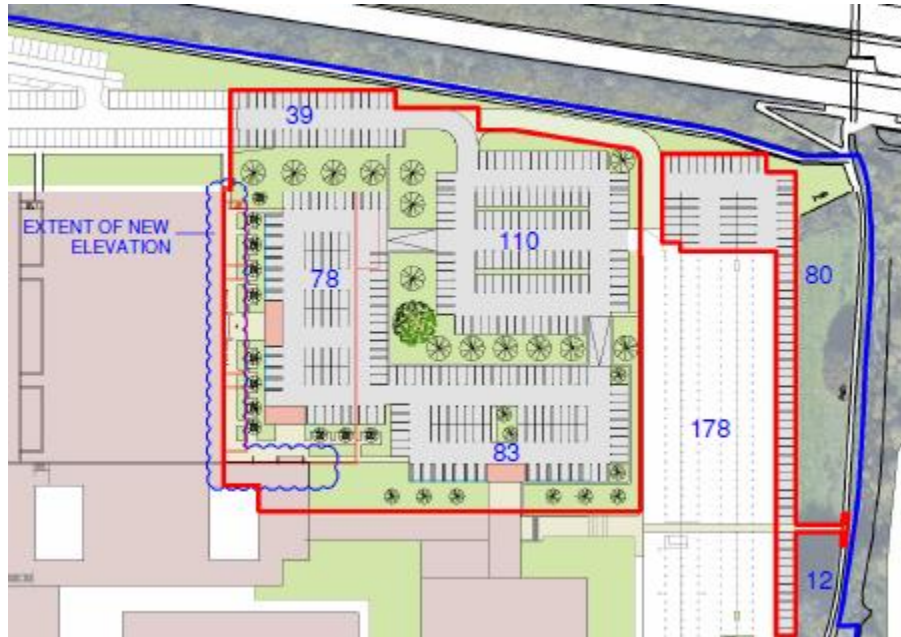


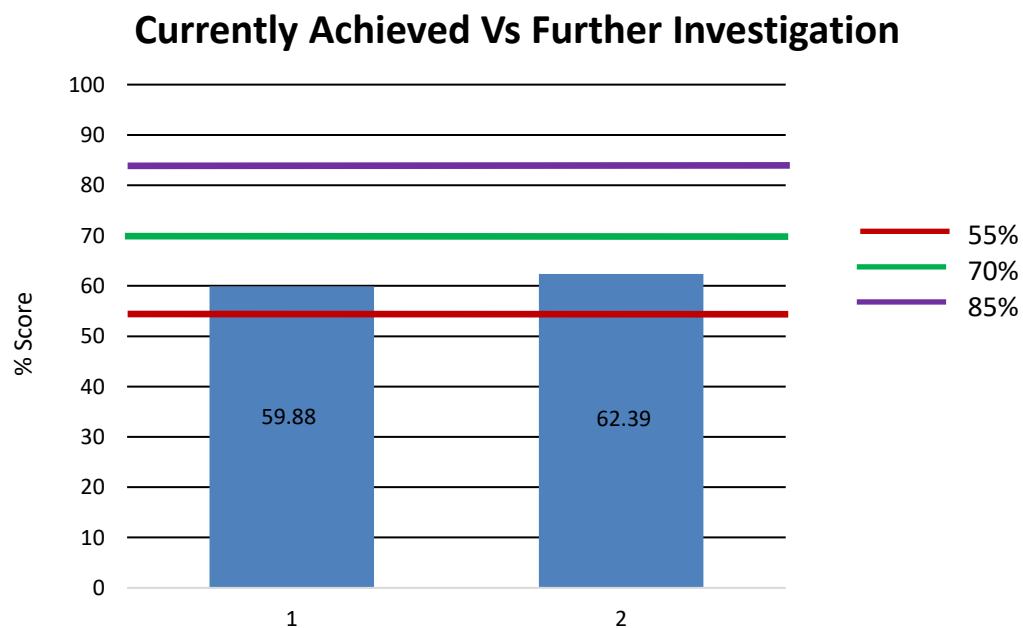
Figure 4.1 Proposed Site Plan

5.0 Summary

In summary, the BREEAM pre-assessment for the proposed building has an anticipated score of 59.88 % therefore achieving a 'Very Good' rating, which requires a percentage score greater than 55%.

All credits which can be investigated to deliver a higher BREEAM score have been highlighted within the Table below. If all these credits can be achieved the development could potentially achieve a BREEAM score of 62.39 % which delivers a 'Very Good' rating with a 7.39 % margin of contingency over the 55 % target. Both scores have been visually represented within Graph 5.1 below.

Credit for Further Investigation	Requirement	% Contribution Score
Tra 02, Proximity to Amenities	Will the building users have access to applicable amenities?	0.76 %
Pol 03 Flood and Surface Water Management	Will the site meet the criteria for surface water volume run-off attenuation and/or limiting discharge and minimise watercourse pollution?	1.75 %



Graph 5.1 Currently Achieved Vs Further Investigation

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6.0 BREEAM Assessments

The following section highlights the BREEAM credits that have been awarded for the refurbishment of Building B1000 at Langstone Technology Park in Havant and the corresponding percentage score.

The design stage assessment and subsequent interim BREEAM Certification represents the performance of the building at the design stage of the assessment, typically prior to the beginning of operations on site. Certification at this stage does not, therefore, represent the buildings final 'as built' BREEAM performance.

The post construction stage assessment and subsequent BREEAM Certification represents the final 'as built' performance and BREEAM rating. A final post construction stage assessment is completed and certified after practical completion of the building works.

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)			 Cudd Bentley Consulting		
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Management							
Man 1 Project Brief and Design	To recognise and encourage an integrated design process that optimises building performance.	Will roles and responsibilities defined in accordance with BREEAM and set a project delivery for stakeholder contributions?	Y		1	1	0.65%
		Will all relevant third parties been consulted with comments influencing the outcomes of the concept design?	N		1	0	0.00%
		Will a Sustainability Champion be appointed during the preparation and brief stage to facilitate BREEAM performance targets?	Y		1	1	0.65%
		Will the Sustainability Champion monitor progress throughout the design process?	Y		1	1	0.65%
Man 2 Life Cycle Cost and Service Life Planning	To deliver whole life value from investment and promote economic sustainability by recognising and encouraging the use of life cycle costing and service life planning to improve design, specification and through-life maintenance and operation.	Will and elemental life cycle cost analysis be carried out at RIBA stage 2 (concept design)?	N		2	0	0.00%
		Will a component level plan be developed by the end of RIBA stage 4 (technical design)?	N		1	0	0.00%
		Will the predicted capital cost for the building be reported?	Y		1	1	0.65%
Man 3 Responsible Construction Practices	To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible.	Will the principal contractor operate under an Environmental Management System, use responsibly sourced timber and best practice pollution prevention policies?	Y		1	1	0.65%
		Will a Sustainability Champion be appointed to monitor the project during construction, handover and close out stages?	Y		1	1	0.65%
		Will the principal contractor adhere to a considerate construction scheme?	Y		2	2	1.30%
		Will responsibility be assigned for monitoring energy, water and transport data?	Y		2	2	1.30%
Man 4 Commissioning and Handover	To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	Will commissioning schedule and responsibilities be developed and accounted for?	Y		1	1	0.65%
		Commissioning building services by appropriate commissioning manager or appropriate project team member?	Y		1	1	0.65%
		Will the building fabric be commissioned?	N		1	0	0.00%
		Will a Building User Guide be developed prior to handover? Will a training schedule for building occupiers/managers at handover?	Y		1	1	0.65%
Man 5 Aftercare	To provide post-handover aftercare to the building owner/occupants following the refurbishment works to ensure the building operates and adapts, where relevant, in accordance with the design intent and operational demands.	Will aftercare support be provided for 12 months from occupation?	N		1	0	0.00%
		Will Seasonal Commissioning be carried out?	N		1	0	0.00%
		Will a Post Occupancy Evaluation be undertaken one year after completion?	N		1	0	0.00%
				Total	21	13	8.44%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)					
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Health and Wellbeing							
Hea 1 Visual Comfort	To encourage and recognise projects that maximise opportunities for good daylighting, artificial lighting and occupant controls at the design stage to ensure best practice in visual performance and comfort for building occupants.	Will measures for Glare control be implemented?	Y		1	1	0.77%
		Will all relevant building areas be designed to achieve the appropriate daylight factor(s)?	N		3	0	0.00%
		Will the design provide adequate view out for building users?	N		2	0	0.00%
		Will internal/external lighting be specified in accordance with the relevant CIBSE Guide/ British Standards?	Y		1	1	0.77%
Hea 2 Indoor Air Quality	To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.	An Air Quality Plan to be produced that will allow the building to be designed to minimise the concentration and recirculation of pollutants in the building?	Y		1	1	0.77%
		Ventilation supply and extract to be 10m apart and 20m away from external pollution?	Y		1	1	0.77%
		Will all decorative paints meet VOC criteria in Table 20?	Y		1	1	0.77%
		Will formaldehyde and TVOC be measured at post-construction?	N		1	0	0.00%
		Ventilation strategy will be flexible and adaptable to provide natural ventilation?	N		1	0	0.00%
Hea 4 Thermal Comfort	To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.	Will thermal modelling of the design be carried out which informs the building services zoning and control strategy?	Y		3	3	2.32%
Hea 5 Acoustic performance	To ensure the buildings' acoustic performance including sound insulation meet the appropriate standards for its purpose.	Will the building meet the relevant acoustic performance standards and testing requirements?	Y	Acoustician report to confirm	3	2	1.55%
Hea 6 Safety and Security	To recognise and encourage effective design measures that promote low risk, safe and secure access to and use of the building.	Will a suitably qualified security consultant (Architectural Liaison Officer) be appointed and security considerations accounted for?	Y		1	1	0.77%
				Total	19	11	8.52%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)					
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Energy							
Ene 1 Reduction of Energy use and Carbon Emissions	To recognise and encourage refurbishment and fit-out projects that reduce operational energy demand, primary energy consumption and carbon emissions.	A target number of BREEAM credits to be achieved have been defined	Y	To be reviewed on completion of energy modelling.	15	4	2.62%
Ene 2 Energy Monitoring	To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.	Will a BMS or sub-meters be specified to monitor energy use from major building services systems?	Y		1	1	0.65%
		Will a BMS or sub-meters be specified to monitor energy use by tenant/ building function areas?	Y	Minimum Standard	1	1	0.65%
Ene 03 External Lighting	To recognise and encourage the specification of energy-efficient light fittings for external areas of the development	Will external light fittings and controls be specified in accordance with the BREEAM criteria?	Y		1	1	0.65%
Ene 4 Low Carbon Design	To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.	Will Hea 4 (Thermal Comfort) be achieved?	Y		3	2	1.31%
		Will an analysis of the buildings passive design features be carried out?	Y				
		Will the building use a BREEAM compliant free cooling strategy?	N				
		Will a feasibility study be undertaken and recommended LZC technology installed?	Y				
Ene 6 Energy Efficient Transportation Systems	To recognise and encourage the specification of energy efficient transportation systems.	Will lifts be installed? Specify stand-by for off-peak periods, lift lighting (>55 lm) and variable drive controller control of the motor.	N		2	0	0.00%
Ene 8 Energy Efficient Equipment	To recognise and encourage procurement of energy efficient equipment to ensure optimum performance and energy savings in operation.	Will the significant majority contributor (small power and plug in equipment) to unregulated energy use meet BREEAM criteria?	Y		2	1	0.65%
				Total	25	10	6.54%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)					
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Transport							
Tra 1 Public Transport Accessibility	To recognise projects where the proximity of good public transport networks has been reviewed, and encourage the implementation of alternative transport solutions where proximity to public transport networks is poor; thus helping to reduce transport related pollution and congestion.	For the purpose of this assessment the building type category is: Office Building			3	1	0.76%
		What is the degree of public transport provision for the building's location	TBC	Transport assessment to confirm			
		Buildings indicative Accessibility Index	TBC	Transport Consultant to confirm			
		Does the building have a dedicated bus service?	N/A				
Tra 2 Proximity to Amenities	To encourage and reward a building that is located in close proximity to local amenities, thereby reducing the need for extended travel or multiple trips.	Will the building be in close proximity of and accessible to applicable amenities?	FI	Credit highlighted for further investigation	1	0	0.00%
Tra 3 Cyclist Facilities	To encourage building users to cycle by ensuring adequate provision of cyclist facilities.	Will cycle storage spaces be provided?	Y	Sliding scale calculation 1-200 staff - 1 space per 10 staff 201 - 300 staff - 1 space per 15 staff 301 - 400 staff - 1 space per 20 staff 401+ staff - 1 space per 20 staff	2	2	1.51%
		Will cyclist facilities be provided?	Y				
Tra 5 Travel Plan	To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms.	Will a transport plan based on site specific travel survey/assessment be developed?	Y		1	1	0.76%
				Total	7	4	3.03%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title		Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)			 Cudd Bentley Consulting		
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %	
Water								
Wat 1 Water Consumption	To reduce the consumption of potable water for sanitary use in existing buildings from all sources through the use of water efficient components and water recycling systems.	Will there be a % reduction in the potable water consumption of the unit?	Y	WC - 4 flush volume Wash hand basins - 4.5 l/min Shower - 6 l/min Urinal - 1.5 l/bowl/hour Kitchen tap - 5 l/min Dish washer - 12 l/cycle	5	3	2.27%	
Wat 2 Water Monitoring	To ensure water consumption can be monitored and managed and therefore encourage reductions in water consumption.	Will there be a water meter on the mains water supply to the building(s)?	Y		1	1	0.76%	
		Will metering/monitoring equipment be specified on the water supply to any relevant plant/ building areas?	Y					
		Will all specified water meters have a pulsed output?	Y					
		If the site/building has an existing BMS connection, will all pulsed meters be connected to the BMS?	TBC					
Wat 3 Water Leak Detection and Prevention	To reduce the impact of water leaks that may otherwise go undetected.	Will a mains water leak detection system be installed on the buildings mains water supply?	N		1	0	0.00%	
		Will flow control devices be installed in sanitary areas?	Y		1	1	0.76%	
Wat 4 Water Efficient Equipment	To reduce water consumption for uses not assessed under Wat 01 by encouraging specification of water efficient equipment.	Will water demands outside the scope of Wat 01 be mitigated or reduced?	Y		1	1	0.76%	
				Total	9	6	4.55%	

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)					
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Materials							
Mat 1 Environmental Impact of Materials	To reward projects where materials have been selected to reduce their life cycle environmental impacts through the use of robust life cycle environmental assessment tools and robust environmental data	A target number of BREEAM credits to be achieved will be defined Elemental assessment of environmental performance information required	Y		6	5	5.46%
Mat 3 Responsible Sourcing of Materials	To recognise and encourage the specification of responsibly sourced materials for key materials used in refurbishment and fit-out.	Will all timber used on the project be 'Legally harvested and traded timber'?	Y		4	3	3.28%
		Will a sustainable procurement plan be developed?	Y				
		Will materials specified for relevant elements will be responsibly sourced?	Y				
Mat 4 Insulation	To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties and has been responsibly sourced.	Is the building targeting an insulating index of 2.5 or more?	Y		1	1	1.09%
Mat 5 Designing for Robustness	To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimisation.	Will suitable durability/ protection measures be specified and installed to vulnerable areas of the building?	Y		1	1	1.09%
		Will exposed building elements incorporate measures to limit degradations due to environmental factors?	Y				
Mat 6 Material Efficiency	To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste.	Will all appropriate parties be consulted in optimising the use of materials throughout the course of the project?	N		1	0	0.00%
				Total	13	10	10.92%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title		Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)			 Cudd Bentley Consulting			
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %		
Waste									
Wst 1 Project Waste Management	To promote resource efficiency via the effective management and reduction of refurbishment and fit-out waste and the reuse and direct recycling of materials.	A target number of BREEAM credits to be achieved was defined as 5	Y	Minimum Standard Pre-refurbishment audit required and materials either re-used on site or sent back to manufacturer for closed loop recycling	7	3	2.13%		
Wst 02 Recycled aggregates	To recognise and encourage the use of recycled and secondary aggregates, thereby reducing the demand for virgin material and optimising material efficiency in construction	High grade aggregates are specified?	N		1	0	0.00%		
Wst 3 Operational Waste	To recognise and encourage the provision of dedicated storage facilities for a buildings operational-related waste stream, so that this waste is diverted from landfill or incineration.	Will appropriate facilities for the storage of operational recyclable waste volumes be provided?	Y	2m ² of dedicated waste space per 1000m ² of net floor area	1	1	0.71%		
		If relevant, will a static waste compactor(s) or baler(s) be specified/installed?	N/A						
		If relevant, will a vessel for composting suitable organic waste be specified/installed?	N/A						
Wst 4 Speculative Finishes	To encourage the specification and fitting of finishes selected by the building occupant and therefore avoid unnecessary waste of materials.	Will finishes only be provided within Landlord areas?	Y		1	1	0.71%		
Wst 5 Adaptation to Climate Change	To minimise the future need of carrying out workshop adapt the building to take account of more extreme weather changes resulting from climate change and changing weather patterns.	Will a Climate Change Adaptation Strategy appraisal be carried out by the end of RIBA Stage 2 (Concept design)?	N		1	0	0.00%		
Wst 6 Functional Adaptability	To recognise and encourage measures taken to accommodate future change of use of the building over its lifespan.	Will a Functional Adaptation Strategy appraisal be carried out by the end of RIBA Stage 2 (Concept design)?	N		1	0	0.00%		
				Total	12	5	3.55%		

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)					
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Land Use and Ecology							
LE 02 Protection of Ecological Features	To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works	Will all features of ecological value surrounding the construction zone/site boundary be protected?	Y	SQE report to confirm	1	1	2.27%
LE 4 Ecological Enhancement	To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.	A Suitable Qualified Ecologist will report and recommendations will be implemented?	Y	SQE report to confirm	1	1	2.27%
LE 5 Long Term Impact on Biodiversity	To minimise the long term impact of the development on the site and the surrounding area's biodiversity.	Will the building meet BREEAMs mandatory criteria for this BREEAM issue?	Y	SQE report to confirm	2	2	4.55%
				Total	4	4	9.09%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated

Title	Refurbishment of Building B1000	BREEAM Refurbishment and Fit Out 2014 Pre-Assessment (Office)			 Cudd Bentley Consulting		
Credit	Description	Requirements	Achieved	Comments	Credits Available	Credits Achieved	Percentage %
Pollution							
Pol 1 Impact of Refrigerants	To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.	Will all refrigerants used within the building systems have a Global Warming Potential less than 10?	Y		3	1	0.87%
Pol 2 NOx Emissions	To contribute to a reduction in national NOx emission levels through the use of low emission heat sources in the building.	Will the NOx emissions produced from the building heating source meet BREEAM criteria?	N		3	0	0.00%
Pol 3 Flood Risk & Surface Water Run Off	To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, therefore minimising the risk of localised flooding on and off site, watercourse pollution and other environmental damage.	What is the actual/likely annual probability of flooding for the assessed site?	Low	FRA to confirm	2	2	1.75%
		Will a Flood Risk Assessment be undertaken and ground level of the building/access meet BREEAM criteria?	Y	FRA too confirm			
		Will the site meet the BREEAM criteria for peak rate surface water run-off?	Y	FRA to onfirm	1	1	0.87%
		Will the site meet the criteria for surface water run off volume, attenuation and/or limiting discharge?	FI	Credit highlighted for further investigation	1	0	0.00%
		Will the site be designed to minimise watercourse pollution in accordance with the BREEAM criteria?	FI	Credit highlighted for further investigation	1	0	0.00%
Pol 4 Reduction of Night Time Light Pollution	To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties	Will the external lighting be designed to reduce light pollution?	Y		1	1	0.87%
Pol 5 Reduction of Noise Pollution	To reduce the likely impact of noise arising from existing or newly specified fixed installations affecting nearby noise sensitive buildings.	Will a noise impact assessment be undertaken?	Y		1	1	0.87%
				Total	13	6	5.24%
			Total BREEAM Percentage Score				59.88%

Green - Achieved
Blue - Not Achieved
Orange - To be Investigated