

BAM CONSTRUCT

Plot 3a, Dunsbury Park

BREEAM Pre-assessment Summary

**BAM Sustainability department
May 2018**

1.0 Introduction

This report is intended as a summary of the pre-assessment for the following BREEAM assessment:

Project Name	Plot 3a, Dunsbury Park (DHF)
BREEAM Version	BREEAM 2014 NC
Assessment Stage	Design Stage
Lead Assessor	Hardip Mann
Targeted Score	59.30%

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3.0 BREEAM Planning requirement

DHF has the following BREEAM requirements:

'There is a wish - expressed by Havant planning representatives - that the proposed development should be of good quality, and an express requirement that a BREEAM Excellent status is achieved. Based on a BREEAM review, due to site constraints and the current RIBA stage of project, we believe that a "high" BREEAM "Very Good" rating is considered to be a fairer reflection of the rating that could be achieved. However, we would still aim to meet the mandatory "minimum" BREEAM requirements needed to attain an Excellent rating.'

A BREEAM feasibility review has been conducted by at BAM using our own analysis with the in-house BREEAM Assessors and BREEAM Accredited Professionals.

3.1 2011 vs 2014

The BREEAM 2014 version is more onerous than its predecessor that was in place at the time of the outline consent. In our research, it seems BREEAM 2014 is between 5-10% more difficult (in terms of score) than BREEAM 2011 i.e. a score of 60-65% for the 2014 scheme (rating 'Very Good') would probably have gained over 70% (rating 'Excellent') for the 2011 scheme.(calculated using a conversion tool). This is due to the more onerous requirements of the 2014 version, and due to various credit issue amalgamations.

3.2 Very Good vs Excellent-

Assessing BREEAM under the 2014 scheme instead of the earlier 2011 scheme involves a higher risk profile and minimum standard than under earlier schemes (as was envisaged at the time of the application for outline consent) – effectively BREEAM 2014 'raises the bar' to achieve the same rating. Therefore assessing a development under the 2014 scheme means a greater number of credits would need to be targeted to achieve the Excellent rating – credits that, due to the nature and location of the Dunsbury Park development, are impossible or unreasonably onerous to achieve.

3.3 Recommendations

Due to the restrictions listed above, we would recommend a compromise target rating of achieving a high 'Very Good' score (59.3%). To ensure the BRE's main principles of an Excellent building are implemented, we have where possible targeted the mandatory credits outlined for an Excellent rating; the nature of the building and end-user's specific specification for workshop heating have contributed to one 'Mandatory for Excellent' credit being unachievable. Notwithstanding this the scheme proposal will provide a very sustainable development whilst acting within the site constraints, operational requirements and economic viability of the development.

4.0 Minimum Standards for Excellent

In addition performance against the minimum standards required for Excellent is summarised below:

Issue	Excellent	Minimum standard achieved
Man 03 - Responsible construction practices	Yes	One credit of the two CCS credits available required, DHF achieves two credits
Man 04 - Commissioning and handover	Yes	Compliant Building User Guide will be provided
Ene 01 - Reduction of energy use and carbon emissions	No	Requires 5 credits to be achieved (equivalent to an EPR of at least 0.375) – The scheme proposal modelling currently estimates that 2 credits will be achieved due to the nature of the building and end-user heating technology requirements.
Ene 02 - Energy Monitoring	Yes	Sub-metering major energy consuming systems will be provided
Wat 01 - Water Consumption	Yes	12.5% improvement in water efficiency is required, DHF is targeting 40%
Wat 02 - Water Monitoring	Yes	Water meter provided to the mains water supply
Mat 03 - Responsible Sourcing of Materials	Yes	All timber used on the project will be sourced in accordance with the Government's Timber Procurement Policy.
Wst 03 - Operational Waste	Yes	Dedicated space for the recycling of operational waste will be provided
LE 03 - Minimising impact on existing site ecology	Yes	One credit of the two available will be achieved

2.0 - Credit Summary

		Available	Targeted	Potential	Comments
Management					
Man 01	Project brief and design	4	3	3	100% Credits not targeted would require a compliant specific third party consultation process
Man 02	Life cycle cost and service life planning	4	4	4	
Man 03	Responsible construction practices	6	6	6	Exemplary level Credit also targeting, giving 7 credits in total.
Man 04	Commissioning and handover	4	4	4	
		18	16	17	
Health & Wellbeing					
Hea 01	Visual Comfort	4	1	1	The design of the building to meet its' specialist end use and end user corporate requirements precludes the achievement of further visual comfort credits.
Hea 02	Indoor Air Quality	5	2	2	Credits for air intake / extract separation and natural ventilation are not achievable throughout the building due to project nature. It was deemed for the type of building would not lend itself to provide ventilation or the potential for natural ventilation to workshop areas..
Hea 03	Safe Containment in laboratories	0	0	0	Credit not applicable to this building type.
Hea 04	Thermal comfort	3	2	2	Building Services systems are not applicable for adaption to suit a projected climate change scenario
Hea 05	Acoustic Performance	3	3	3	
Hea 06	Safety and Security	2	0	0	Credit not targeted because site safety credit is not feasible due to site footprint and location of access roads and security standards are defined by the occupant's national security policies, making the input of a security consultant superfluous.
	Total	17	8	8	
Energy					
Ene 01	Reduction of energy use and carbon emissions	12	2	2	Mandatory requirement for excellent rating 5 credits– further credits not achievable due to mechanical vent strategy, the end-users workshop heating specification and funding allocation. These credits are based on several factors such as the air-tightness of the building, all energy consuming items such as lighting, heating, operation of plant, etc. and how much electricity the site can generate from renewable sources. It is a small site in comparison and there are limitations as to how much land and other areas can be set aside for renewal energy. Once these are fed into the energy consumption equation then the percentage saving can be evaluated over the Part L requirements. In other words, the less operational plant that is installed will reduce the energy consumption for this development. We have assessed project as a 'shell& core', which assumes central plant and systems are being installed. An early energy modelling study, which would include details on fabric, fittings and plant specified, would give a realistic estimation on no. credits that should be targeted. 5 credits is a challenging target for this functional type of building.
Ene 02	Energy Monitoring	2	2	2	
Ene 03	External Lighting	1	1	1	

Ene 04	Low carbon design	3	1	1	Neither free cooling measures nor L2C technologies are reasonably practicable given the building size and usage.
Ene 05	Energy Efficient cold storage	0	0	0	Not applicable to this building type
Ene 06	Energy Efficient Transportation Systems	0	0	0	Not applicable to this building.
Ene 07	Energy Efficient Laboratory Systems	0	0	0	Not applicable to this building.
Ene 08	Energy Efficient Equipment	2	0	0	Workshop/Garage equipment will not meet the required Criteria
Ene 09	Drying space	0	0	0	Not applicable to this building.
Total		20	9	9	
Transport					
Tra 01	Public Transport Accessibility	3	1	1	These are site specific credits. There is a limited bus service in proximity to the site only The nearest railway stations at Havant and Rowlands Castle are too far away from the site to be considered in the calculation.
Tra 02	Proximity to amenities	1	0	0	This is a site specific credit. As no stipulated amenities are present within the defined distance from the site this credit cannot be achieved.
Tra 03	Cyclist facilities	2	2	2	
Tra 04	Maximum Car Parking Capacity	2	0	0	The building's use for vehicle servicing demands parking capacities in excess of the BREEAM defined standards.
Tra 05	Travel Plan	1	1	1	
Total		9	4	4	
Water					
Wat 01	Water Consumption	5	3	3	Maximum economically viable credits achieved for this development. Based on the most efficient low flow taps on the market, it is unreasonably onerous and uneconomic to achieve more than 3 credits out of 5.
Wat 02	Water Monitoring	1	1	1	
Wat 03	Leak Detection	2	2	2	
Wat 04	Water Efficient Equipment	1	0	0	Equipment in use in this workshop environment makes the credit impossible to achieve.
		9	6	6	

Materials					
Mat 01	Life Cycle Impacts	2	2	2	
Mat 02	Hard Landscaping and Boundary Protection	1	0	0	It is not possible to exceed 80% of hard landscaping and boundary protection achieving suitable Green Guide ratings while concurrently meeting the project brief and end-user requirements.
Mat 03	Responsible Sourcing of Materials	4	2	2	Further credits will require more materials and will have to be specified with environmental specification. The responsible sourcing element in 2014 is considerably harder to achieve with that new tier ratings that have been set. Also there is a limited number of suppliers who have BES 6001 certification (carrying a tier rating of 5 out of 10) and many of those who have ISO 14001 are 'Key Process' which carries a tier rating of 1 out of 10. Those which have ISO 14001 with 'Supply Chain' as well only provide 2 out of 10 so the scope to score well is very limited until the BRE create new responsible sourcing protocols which looks very unlikely in the short term over the duration of this scheme.
Mat 04	Insulation	1	1	1	
Mat 05	Designing for durability and resilience	1	1	1	
Mat 06	Material efficiency	1	1	1	
		10	7	8	
Waste					
Wst 01	Construction Waste Management	4	2	2	No further credits achievable without significant increase in offsite fabrication, which is not viable.
Wst 02	Recycled Aggregates	1	0	0	Not achievable due to nature of construction and material content
Wst 03	Operational Waste	1	1	1	
Wst 04	Speculative Floor and Ceiling Finishes	0	0	0	Not applicable to this building.
Wst 05	Adaptation to climate change	1	1	1	
Wst 06	Functional adaptability	1	1	1	
		8	5	5	
Land Use & Ecology					
LE 01	Site Selection	2	0	0	Neither credits achievable due to location of the project. First credit requires 75% of building footprint to be on previously occupied land (i.e. brownfield site); second credit is for contamination remediation which is not required at this site.
LE 02	Ecological Value of Site and Protection of Ecological Features	2	1	1	The site has a high ecological value before any development takes place so achieving a positive improvement post development is difficult, if at all achievable. Credit available for protection of ecological features during construction.
LE 03	Minimising impact on existing site ecology	2	1	1	Due to removal of species and re-planting scheme, further credit not achievable as eventual reduction in number of species across site post development outside parameters to score both credits.
LE 04	Enhancing site ecology	2	1	1	As with LE02, existing site has High ecological value, therefore only credit for following and implementing Ecologist report is targeted and available.
LE 05	Long Term Impact on Biodiversity	2	2	2	
		10	5	5	

Pollution					
Pol 01	Impact of Refrigerants	3	0	0	Specialist coolants are required to achieve the credits – these are not industry standard products and are not viable within available funding
Pol 02	NOx emissions	2	2	2	
Pol 03	Surface Water Run Off	5	5	5	
Pol 04	Reduction of Night Time Light Pollution	1	1	1	
Pol 05	Noise Attenuation	1	1	1	
		12	8	8	
Innovation					
Man 03	Responsible construction practices	1	1	1	No further innovation credits achievable as the baseline standards either not achieved or not open to improvement
Hea 01	Visual Comfort	1	0	0	
Ene 01	Reduction of energy use and carbon emissions	5	0	0	
Wat 01	Water Consumption	1	0	0	
Mat 01	Life Cycle Impacts	3	0	0	
Mat 03	Responsible Sourcing of Materials	1	0	0	
Wst 01	Construction Waste Management	1	0	0	
Wst 02	Recycled Aggregates	1	0	0	
Wst 05	Adaptation to climate change	1	0	0	
AI	Approved Innovation	1	0	0	
		16	0	0	

