

The Heights Primary School

BREEAM Pre Assessment Report

March 2017
Rev 0



ZEROENERGYDESIGN

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Amendment Record Sheet

Revision	Description	Date	Approved
0	BREEAM Pre-Assessment Report	March 2017	

1.0 Introduction

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

Project Name	The Heights Primary School
BREEAM Version	BREEAM 2014 NC Issue 4.0
Assessment Stage	Pre-Assessment Stage
Lead Assessor	Sian Trulio
Target Rating	Excellent (70%)

If you have any queries on the content of this report or the award of any of the credits please contact your licensed assessor.

1.1 Rating Thresholds

The rating benchmarks for the 2014 version of BREEAM are outlined in the table below:

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

1.2 Mandatory Credits

BREEAM Issue	BREEAM rating/minimum number of credits				
	Pass	Good	Very Good	Excellent	Outstanding
Man 03: Responsible Construction Practices	-	-	-	1 Credit (considerate construction)	2 Credit (considerate construction)
Man 04: Commissioning and Handover	-	-	-	Criterion 10 (building user guide)	Criterion 10 (building user guide)
Man 05: Aftercare	-	-	-	1 Credit (seasonal commissioning)	1 Credit (seasonal commissioning)
Ene 01: Reduction of Energy Use and Carbon Emissions	-	-	-	5 Credits	8 Credits
Ene 02: Energy Monitoring	-	-	1 Credit (first sub-metering credit)	1 Credit (first sub-metering credit)	1 Credit (first sub-metering credit)

BREEAM Issue	BREEAM rating/minimum number of credits				
	Pass	Good	Very Good	Excellent	Outstanding
Wat 01: Water Consumption	-	1 Credit	1 Credit	2 Credit	2 Credit
Wat 02: Water Monitoring	-	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Mat 03: Responsible Sourcing of Materials	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Wst 01: Construction Waste Management	-	-	-	-	1 Credit
Wst 03: Operational Waste	-	-	-	1 Credit	1 Credit
Le 03: Minimising Impact on Existing Site Ecology	-	-	1 Credit	1 Credit	1 Credit

2.0 Scoring scenario

It should be noted that the pre-assessment scores have been based on the following scoring scenario;

- Scenario 1 – Easier gained credits to just pass the threshold for an 'Excellent' rating
- Scenario 2 – Scenario 1, plus credits which are a little more difficult or costly to achieve but will provide a safety buffer against credits that may drop later on due to a number of possible reasons.

On this basis, the following scores are considered achievable under each scenario for the building:

Education (Primary School) Building:

Scenario	Score	BREEAM Rating
Scenario 1	71.18%	Excellent
Scenario 2	75.99%	Excellent

3.0 - Credits and Comments Table

BREEAM Issues		Available	Scenario 1	Scenario 2	Comments
Management 0.57% per credit					
Man 01 Project brief and design	Stakeholder consultation (project delivery)	1	1	1	
	Stakeholder consultation (third party)	1	1	1	
	Sustainability Champion (design)	1	1	1	
	Sustainability Champion (monitoring progress)	1	1	1	
Man 02 Life cycle cost and service life planning	Elemental life cycle cost (LCC)	2	0	0	
	Component level LCC Plan	1	0	0	
	Capital cost reporting	1	1	1	
Man 03 Responsible construction practices	Environmental management	1	1	1	
	Sustainability Champion	1	1	1	
	Considerate Construction	2	2	2	
	Monitoring of construction-site impacts	2	2	2	
Man 04 Commissioning and handover	Commissioning and testing schedule and responsibilities	1	1	1	
	Commissioning building services	1	1	1	
	Testing and inspecting building fabric	1	0	0	
	Handover	1	1	1	
Man 05 Aftercare	Aftercare support	1	1	1	
	Seasonal commissioning	1	1	1	
	Post occupancy evaluation	1	1	1	
Management Totals:		21	17	17	
Management score totals:		12%	9.71%	9.71%	
Health & Wellbeing 0.83% per credit					
Hea 01 Visual Comfort	Glare control	1	1	1	
	Daylighting	1	0	0	
	View out	1	1	1	
	Internal and external lighting levels, zoning and control	1	1	1	
Hea 02 Indoor Air Quality	Indoor air quality (IAQ) plan	1	1	1	
	Ventilation	1	0	0	
	VOC emission levels (products)	1	1	1	
	VOC emission levels (post construction)	1	0	0	
	Potential for natural ventilation	1	0	0	
Hea 04 Thermal comfort	Thermal modelling	1	1	1	
	Adaptability	1	0	0	
	Thermal zoning and controls	1	1	1	
Hea 05 Acoustic Performance		3	3	3	
Hea 06 Safety and Security	Safe access	1	0	0	
	Security of site and building	1	1	1	
Health & Wellbeing Totals:		18	11	11	
Health & Wellbeing score totals:		15%	9.16%	9.16%	

Energy 0.68% per credit					
Ene 01 Reduction of energy use and carbon emissions		12	5	5	
Ene 02 Energy Monitoring	Sub-metering of major energy consuming systems	1	1	1	
	Sub-metering of high energy load and tenancy areas	N/A	N/A	N/A	
Ene 03 External Lighting		1	1	1	
Ene 04 Low carbon design	Passive design analysis	1	0	0	
	Free cooling	1	0	0	
	LZC feasibility study	1	1	1	
Ene 06 Energy Efficient Transportation Systems	Energy consumption	1	1	1	
	Energy efficient features	2	2	2	
Ene 08 Energy Efficient Equipment		2	0	0	
Energy Totals:		22	11	11	
Energy score totals:		15%	7.5%	7.5%	
Transport 1% per credit					
Tra 01 Public Transport Accessibility		3	3	3	
Tra 02 Proximity to amenities		1	1	1	
Tra 03 Cyclist facilities	Cycle storage	1	1	1	
	Cyclist facilities	1	0	1	
Tra 04 Maximum Car Parking Capacity		N/A	N/A	N/A	
Tra 05 Travel Plan		1	1	1	
Transport Totals:		9	6	7	
Transport score totals:		9%	6%	7%	
Water 0.78% per credit					
Wat 01 Water Consumption		5	3	4	
Wat 02 Water Monitoring		1	1	1	
Wat 03 Leak Detection	Leak detection system	1	1	1	
	Flow control devices	1	1	1	
Wat 04 Water Efficient Equipment		1	1	1	
Water Totals:		9	7	7	
Water score totals:		7%	5.44%	6.22%	
Materials 0.96% per credit					
Mat 01 Life Cycle Impacts		6	5	6	
Mat 02 Hard Landscaping and Boundary Protection		1	1	1	
Mat 03 Responsible Sourcing of Materials	Legally harvested and traded timber	Pre req.	Y	Y	
	Sustainable procurement plan	1	1	1	
	Responsible sourcing of materials (RSM)	3	2	2	

Mat 04 Insulation		1	1	1	
Mat 05 Designing for durability and resilience		1	1	1	
Mat 06 Material efficiency		1	0	0	
Materials Totals:		14	11	12	
Materials score totals:		13.5%	10.6%	11.57%	
Waste 1.06% per credit					
Wst 01 Construction Waste Management	Construction resource efficiency	3	3	3	
	Diversion of resources from landfill	1	1	1	
Wst 02 Recycled Aggregates		1	0	0	
Wst 03 Operational Waste		1	1	1	
Wst 04 Speculative Floor and Ceiling Finishes		N/A	N/A	N/A	
Wst 05 Adaptation to climate change		1	0	1	
Wst 06 Functional adaptability		1	0	0	
Waste Totals:		8	5	6	
Waste score totals:		8.5%	5.31%	6.37%	
Land Use & Ecology 1% per credit					
LE 01 Site Selection	Previously occupied land	1	0	0	
	Contaminated land	1	0	0	
LE 02 Ecological Value of Site and Protection of Ecological Features	Ecological value of site	1	1	1	
	Protection of ecological features	1	1	1	
LE 03 Minimising impact on existing site ecology		2	2	2	
LE 04 Enhancing site ecology	Ecologist's report and recommendations	1	1	1	
	Increase in ecological value	1	1	1	
LE 05 Long Term Impact on Biodiversity		2	2	2	
Land Use & Ecology Totals:		10	8	8	
Land Use & Ecology score totals:		10%	8%	8%	
Pollution 0.77% per credit					
Pol 01 Impact of Refrigerants		3	1	1	
Pol 02 NOx emissions		3	3	3	
Pol 03 Surface Water Run Off	Flood resilience	2	2	2	
	Surface water run-off	2	2	2	
	Minimising watercourse pollution	1	1	1	
Pol 04 Reduction of Night Time Light Pollution		1	1	1	
Pol 05 Noise Attenuation		1	1	1	

Pollution Totals:	13	11	11	
Pollution score totals:	10%	8.46%	8.46%	
Innovation 1% per credit (up to a maximum of 10 credits)				
Man 03 Responsible construction practices	1	0	1	
Man 05 Aftercare	1	1	1	
Hea 01 Visual Comfort	1	0	0	
Hea 02 Indoor Air Quality	2	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	
Innovation Totals:	10 (Max)	1	2	
Innovation score totals:	10%	1%	2%	
OVERALL SCORE TOTALS:	110%	71.18%	75.99%	

5.0 – Time Critical Credits

The following credit requirements are actions to be carried out during the feasibility stage (RIBA Stage 1):

Man 01 – Stakeholder Consultation (targeted for scenario 1 and 2)

A Sustainability Champion must be appointed to facilitate the setting and achievement of BREEAM performance target(s) for the project during the Feasibility Stage (RIBA Stage 1)

Le 04 – Enhancing Site Ecology (targeted for scenario 1 and 2)

A Suitably Qualified Ecologist (SQE) must be appointed by the end of RIBA Stage 1 to advise on enhancing the ecology of the site at an early stage

Mat 06 – Material Efficiency (currently not targeted)

Opportunities to optimise the use of materials in building design, procurement, construction, maintenance and end of life must have been identified, investigated and implemented during Preparation and Brief (RIBA Stage 1)

The following credit requirements are actions to be carried out during Concept Design (RIBA Stage 2):

Man 01 – Stakeholder Consultation (targeted for scenario 1 and 2)

Prior to completion of the Concept Design (RIBA Stage 2), the project delivery stakeholders must have met to identify and define their roles and responsibilities and contributions for each of the key phases of project delivery.

The appointed Sustainability Champion, along with the design team, must agree the BREEAM target and what credits will be targeted in order to achieve it.

Man 02 – Life Cycle Cost (LCC) and Service Life Planning (currently not targeted)

An elemental LCC analysis must be carried out based on proposals developed during the RIBA Stage 2

Hea 06 – Safety and Security (targeted for scenario 1 and 2)

The design team must consult with a Suitably Qualified Security Specialist (SQSS) during or prior to RIBA Stage 2. The SQSS must conduct an evidence based Security Needs Assessment (SNA)

Ene 04 – Low Carbon Design (only Low Zero Carbon - feasibility study credit targeted for scenario 1 and 2)

The passive design analysis must be carried out at RIBA Stage 2 to identify opportunities for the implementation of passive design solutions that reduce demands for energy consuming building services. There are specific requirements within the BREEAM manual as to what the study should include. **(Currently not targeted)**

The Low and Zero Carbon (LZC) technologies feasibility study must be carried out by the completion of the Concept Design Stage (RIBA Stage 2) to establish the most appropriate recognised local (on-site or near-site) low or zero carbon (LZC) energy source for the building/development. There are specific requirements within the BREEAM manual as to what the study should include.

Mat 06 – Material Efficiency (currently not targeted)

Opportunities to optimise the use of materials in building design, procurement, construction, maintenance and end of life must have been identified, investigated and implemented during Concept Design (RIBA Stage 2)

Wst 05 – Adaptation to Climate Change (targeted for scenario 2)

The design team must conduct a climate change adaptation strategy appraisal for structural and fabric resilience by the end of Concept Design (RIBA Stage 2), in accordance with specific requirements within the BREEAM manual

Wst 06 – Functional Adaptability (currently not targeted)

A building-specific functional adaptation strategy study must be undertaken by the client and design team by Concept Design (RIBA Stage 2), which includes recommendations for measures to be incorporated to facilitate future adaptation.

Le 04 – Enhancing Site Ecology (targeted for scenario 1 and 2)

The SQE must provide an Ecology Report with appropriate recommendations for the enhancement of the site's ecology at Concept Design stage (RIBA Stage 2). The report is based on a site visit/survey by the SQE.

6.0 – Time Dependent Credits

BREEAM Issues		RIBA Stage 1	RIBA Stage 2	RIBA Stage 3	RIBA Stage 4
Man 01 Project Brief & Design	Stakeholder consultation (Project delivery)		Consultation		Feedback from consultation
	Stakeholder consultation (third party)				
	Sustainability Champion (design)	Appointment	Agree BREEAM Target		
	Sustainability Champion (monitoring progress)				
Man 02 Life Cycle Cost & Service Life Planning	Elemental life cycle cost (LCC)		Plan Completed		
	Component level LCC Plan				Plan Completed
Man 04 Commissioning and Handover	Commissioning and testing schedule and responsibilities				Appointment
	Commissioning building services				
	Testing and inspecting building fabric				
Hea 06 Safety & Security	Security of site and building		Security Needs Assessment (SNA)		
Ene 04 Low Carbon Design	Passive design analysis		Passive Design Analysis		
	LZC feasibility study		Feasibility Study		
Mat 06 Material Efficiency		Optimise Material Use	Optimise Material Use	Optimise Material Use	Optimise Material Use
Wst 05 Adaptation to Climate Change			Climate Adaption Strategy Appraisal		
Wst 06 Functional Adaptability			Functional Adaption Strategy Study		
Le 04 Enhancing Site Ecology	Ecologist report	Ecologist Appointment	Ecology Report		