

PICK EVERARD

Thames Young Mariners

BREEAM Pre-assessment Report
Surrey County Council

S2- For Information
27/09/2022



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1.0 Introduction:

Pick Everard has been instructed to undertake a desktop pre-assessment for the proposed new Thames Young Mariners Outdoor Learning Centre. This project is aiming to achieve a BREEAM rating of 'Excellent' under the BREEAM UK New Construction 2018 V6.0.

This report provides an overview of the BREEAM scheme applicable to the project and the current project progress on BREEAM. In addition to this, a summarised progress sheet can be found in the appendix for the project, showing all credits applicable and targeted.

2.0 BREEAM Schemes

The Building Research Establishment's Environmental Assessment Method (BREEAM) is an internationally recognised procedure for reviewing and improving the environmental design and performance of a building. It is a widely used and recognised environmental assessment method for buildings across the globe.

BREEAM projects are awarded 'credits' for compliance with assessment criteria. The assessment criteria are split over various weighted categories. The total of all the categories will make-up the final assessment score. The score translates to a rating ranging over the following scale: Pass ($\geq 30\%$), Good ($\geq 45\%$), Very Good ($\geq 55\%$), Excellent ($\geq 70\%$) and Outstanding ($\geq 85\%$).

It should be noted that, in addition to the overall score, a project will also have to achieve a number of 'minimum requirements' to allow a rating to be achieved.

The Building Research Establishment (BRE) current operate the following assessments:

- BREEAM UK New Construction
- BREEAM UK Communities
- BREEAM In Use
- BREEAM Refurbishment and Fit-Out

2.1 BREEAM UK New Construction

The BREEAM UK Construction is used to assess newly non-domestic buildings at the design and construction stages, based in the UK.

It can be used to assess the following assessments:

- Fully Fitted
- Simple Building
- Shell and Core
- Shell only

The BREEAM UK New Construction can be used to assess the following main and sub- categories:

- Commercial
 - Offices
 - Industrial
 - Retail
- Public (non-housing)
 - Education
 - Healthcare
 - Prisons
 - Law Courts

- Multi-residential accommodation/ Supported living facilities
 - Residential institutions (long term stay)
- Other
 - Residential Institutions (short stay)
 - Non –Residential institutions
 - Assembly and Leisure
 - Other
 - Bespoke

The criteria for this assessment are split over ten categories:

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

To facilitate the individual requirement of England, Wales, Scotland, and Northern Ireland, minor changes are applied to the Energy category for each country.

To have a project formally certified, the services of an independent BRE Global licenced BREEAM Assessor must be employed. A traditional assessment is conducted at three stages: Pre-assessment stage, Design stage (assessing the design intent of the project and interim certification) and Construction stage (assessing the ‘as-built’ project and formal certification). Alternatively, a project can be taken directly to a Post Construction Review, allowing the above stages to be combined into one assessment. A typical project follows the process outlined above. Following the Design and Construction stage assessment’s, the BREEAM Assessor will submit a report, which will be reviewed and checked by BRE Global before the certification for the project is issued. It is important to highlight that the formal BREEAM certification is not issued till the completion and submission of the Construction stage assessment.

3.0 Introduction

The proposed development is located in the London Borough of Richmond. The development will consist of a new build facility to provide guest residential accommodation, changing & personal care, dining hall & full catering service kitchen, administrative space, storage, outdoor pursuits activities and associated glamping provision.

The proposed development site has an estimated Gross External Area of 1825m² (GEA). Most visitors will come from schools and therefore the accommodation, teaching areas, and support spaces are designed with this in mind.

The project will implement new hard and soft landscaping including trees, social spaces, a games area, and security fencing.

The project contains one lift. No cold storage is present within the building.

The project should be registered with BRE under the scheme of BREEAM New Construction 2018 under the category of bespoke. The bespoke process for the BREEAM buildings allows those that are not considered 'Standard' to be assessed under BREEAM. Due the varied building types on the site, the bespoke process allowed buildings of different types, i.e. classrooms, accommodation and office spaces.

4.0 Pre-assessment

A desktop-based BREEAM pre-assessment took place using the information provided by, Pick Everard, Atkins Engineering, and Turner & Townsend. The desktop preassessment was undertaken by Joseph Spinks, Sustainability Consultant Pick Everard.

In addition to using the contractor proposal information, teams meetings were held with Chris Gilbert, from Pick Everard to clarify architectural roles and responsibilities.

Furthermore, the previously appointed ecologist, Surrey Wildlife Trust, provided a Preliminary Ecological report which informed the Land Use and Ecology credits for this site. Surrey County Council has appointed Middlemarch as the project ecologist going forward.

This report is a summary of the pre- assessment for the Thames Young Mariners project. It is our understanding that the project achieves a BREEAM rating of 'Excellent', as currently targeted.

The current pre-assessment shows a score of 70.03.% demonstrating that the BREEAM rating of 'Excellent' can be achieved as well as all the mandatory credits to achieve the 'Excellent' rating. This score is based upon the current evidence provided and should be considered an estimate at this stage. We always advise clients at the early stage of a project, that a 5-10% 'buffer' is included to account for any design or construction alterations which may result in a reduction in the final assessment score.

Appendix A: Pre-assessment Progress Tracker

2018 Design Stage Progress Sheet

Name	Pre-assessment: Thames Young Mariners
Date	20/09/2022

Score	
Target score	70.03%
Target rating	EXCELLENT

	Identifier	Criteria	Title	Max	Current Target	Not Targeted
Management	Man 01	1-3	Project Design & Brief - Project delivery planning			
	Man 01	4-6/7	Project Design & Brief - Stakeholder consultation (interested parties)			
	Man 01	8	Project Design & Brief - BREEAM Target	x	x	
	Man 01	9	Project Design & Brief - BREEAM AP (Concept Design)			x
	Man 01	10/11	Project Design & Brief - BREEAM AP (Developed Design)			x
	Man 02	1-3	Life Cycle Cost & Service Life Planning - Elemental life cycle cost	2		
	Man 02	4-5	Life Cycle Cost & Service Life Planning - Component level LCC options appraisal			
	Man 02	6	Life Cycle Cost & Service Life Planning - Capital Cost Reporting			
	Man 03	1	Legally harvested and traded timber	x	x	
	Man 03	3, 4	Responsible Construction Practices - Environmental Management			
	Man 03	5	BREEAM AP - Target	x	x	
	Man 03	6	Responsible Construction Practice - BREEAM AP (site)			
	Man 03	7-9	Responsible Construction Practices - Responsible construction management	2	2	
	Man 03	10-11-18	Responsible Construction Practices - Utility Consumption			
	Man 03	19-22	Responsible Construction Practices - Transportation of construction materials and waste			x
	Man 04	1-5	Commissioning & Handover - Commissioning testing schedule & responsibilities			
	Man 04	6-7	Commissioning & Handover - Commissioning design & preparation			
	Man 04	8-10	Commissioning & Handover - Testing and inspection of building fabric			x
	Man 04	11, 12	Commissioning & Handover - Handover			x
	Man 05	1-2	Aftercare - Support			
Man 05	3	Aftercare - Commissioning implementation				
Man 05	4-7	Aftercare - Post Occupancy Evaluation			x	
TOTAL				21	14	
Health & Wellbeing	Hea 01	1-3	Visual Comfort - Control of glare from sunlight			
	Hea 01	4	Visual Comfort - Daylighting		2	
	Hea 01	5-7	Visual Comfort - View Out			
	Hea 01	8-14	Visual Comfort - Lighting Levels, Zones and Controls			
	Hea 02	1	Indoor Air Quality - Indoor air quality plan	x	x	
	Hea 02	2	Indoor Air Quality - Ventilation			
	Hea 02	3-4	Indoor Air Quality - Emissions from construction products	2		
	Hea 02	5-10	Indoor Air Quality - Post-construction indoor air quality measurement			x
	Hea 04	1-4	Thermal Comfort - Thermal Modelling			
	Hea 04	5-8	Thermal Comfort - Design for future thermal comfort			
	Hea 04	9-11	Thermal Comfort - Thermal Zoning & Controls			
	Hea 05	All	Acoustic Performance	3	3	
	Hea 06	1-3	Security - Security of Site & Building			x
	Hea 07	1-6	Safe and healthy surroundings - safe access			x
Hea 07	7	Safe and healthy surroundings - outside space				
TOTAL				17	14	

	Identifier	Criteria	Title	Max	Current Target	Not Targeted
Energy	Ene 01	1	Reduction of Energy Use & Carbon - Energy performance	9	6	
	Ene 01	2-5	Reduction of Energy Use & Carbon - Prediction of operation energy consumption	4	4	
	Ene 02	1-3	Energy Monitoring - Sub-metering of Major Energy Consuming Systems	1	1	
	Ene 02	4-5	Energy Monitoring - Sub-metering of High Energy Load and Tenancy Areas	1	1	
	Ene 03	1-2	External Lighting	1	1	
	Ene 04	1-4	Low Carbon Design - Passive Design	1	1	
	Ene 04	5-8	Low Carbon Design - Free Cooling	1	1	
	Ene 04	9-12	Low Carbon Design - Low and zero carbon technologies	1	1	
	Ene 06	1	Energy Efficient Transport Systems - Energy Consumption	1	1	
	Ene 06	2-5	Energy Efficient Transport Systems - Energy Efficient Features	1	1	
Ene 08	All	Energy Efficient Equipment	2	2		
TOTAL				23	20	
Transport	Tra 01	1-5	Transport assessment and travel plan	2	2	
	Tra 02	1	Sustainable transport measures	x	x	
	Tra 02	2-3	Sustainable transport measures - Transport options implementation	10	4	
TOTAL				12	6	
Water	Wat 01	1-6	Water Consumption	5	2	
	Wat 02	1-6	Water Monitoring	1	1	
	Wat 03	1&2	Water Leak Detection - System	1	1	
	Wat 03	3	Water Leak Detection - Flow Control Devices	1	1	
	Wat 04	1-2	Water Efficient Equipment	1	1	
TOTAL				9	6	
Materials	Mat 01	1	Building life cycle assessment (LCA) - Superstructure	6	6	
	Mat 01	6-7	Building life cycle assessment (LCA) - Substructure and hard landscaping options appraisal during Concept Design	1	1	
	Mat 02	1	Environmental Product Declarations	1	1	
	Mat 03	1	Responsible Sourcing - Timber	x	x	
	Mat 03	2	Responsible Sourcing - Enabling sustainable procurement	1	1	
	Mat 03	3	Responsible Sourcing - Measuring responsible sourcing	3	2	
	Mat 05	1-4	Designing for Durability & Resilience	1	1	
Mat 06	1	Material Efficiency	1		x	
TOTAL				14	12	
Waste	Wst 01	1-3	Construction Waste Mgmt - Pre-demolition audit	1		x
	Wst 01	4-5	Construction Waste Mgmt - Construction resource efficiency	3	2	
	Wst 01	6-7	Construction Waste Mgmt - Diversion of resources from landfill	1	1	
	Wst 02	1	Use of recycled and sustainably sourced aggregates	x	x	
	Wst 02	2-6	Project Sustainable Aggregate Points	1		
	Wst 03	1-3	Operational Waste	1		x
	Wst 05	1-3	Adaptation to Climate Change - Resilience	1		x
	Wst 06	1-2	Design for disassembly and adaptability - recommendations	1	1	
	Wst 06	3-5	Design for disassembly and adaptability - implementation	1		x
TOTAL				10	4	

	Identifier	Criteria	Title	Max	Current Target	Not Targeted
Land Use & Ecology	LE 01	1	Previously Occupied Land	1	1	
	LE 01	2-3	Contaminated Land	1		x
	LE02	1-2	Assessment route selection	x	x	
	LE 02	4-6	Survey & Evaluation - Construction -Survey route 2	1	1	
	LE 02	7 - 9	Survey & Evaluation -Ecology Outcome - route 2	1	1	
	LE 03	1	Identification and understanding the risks and opportunities for the site	x	x	
	LE 03	2-4	Planning and measures on-site	1	1	
	LE 03	5-8	Managing negative impacts of the project	2		x
	LE 04	1-2	Change and enhancement of ecological value	x	x	
	LE 04	4-5	Liaison, implementation and data collation - Route 2	1	1	
	LE 04	6	Enhancement of ecology- route 2	3		x
	LE 05	1-2	Statutory obligations, planning and site implementation	x	x	
	LE 05	3-4	Management and maintenance throughout the project	1	1	
	LE 05	5-6	Landscape and ecology management plan	1		x
			TOTAL	13	6	
Pollution	Pol 01	2	System compliancy	x	x	
	Pol 01	1, 3-5	Impact of Refrigerants	2	1	
	Pol 01	6-7	Impact of Refrigerants - Leak Detection	1	1	
	Pol 02	All	Local air quality	2	2	
	Pol 03	1	Flood and surface water management consultant	x	x	
	Pol 03	2-4	Flood resilience	2	1	
	Pol 03	5	Surface Water Run-Off - Bespoke	x	x	
	Pol 03	6-8	Surface Water Run-Off - Rate	1	1	
	Pol 03	9-15	Surface Water Run-Off - Volume	1		x
	Pol 03	16-23	Minimizing Water Course Pollution	1		x
	Pol 04	1-5	Reduction of Night Time Light Pollution	1	1	
Pol 05	1-5	Reduction of Noise Pollution	1	1		
			TOTAL	12	8	
	Man 03i	23	Responsible Construction Practices - Responsible construction management	1		x
	Hea 01i	15-16	Visual Comfort - Daylighting	1		x
	Hea 02i	11	Indoor Air Quality - Post-construction indoor air quality measurement	1		x
	Hea 06	4	Security - Security of site and building	1		x
	Ene 01i	6-8	Reduction of Energy Use & carbon Emissions - Beyond zero net regulated carbon	2		x
	Ene 01i	9	Reduction of Energy Use & carbon Emissions - Carbon negative	3		x
	Wat 01i	7-8	Water Consumption	1		x
	Mat 01i	8-9	LCA - Core building services options appraisal during Concept Design	1		x
	Mat 01i	10-14	LCA & LCC alignment	1		x
	Mat 01i	15-18	LCA - Third party verification	1	1	
	Mat 03i	5	Responsible Sourcing of Materials			x
	Wst 01i	8 -11	Construction Site Waste Management	1		x
	Wst 02i	7	Recycled Aggregates	1		x
	Wst 05i	4-5	Adaptation to Climate Change - Responding to climate change	1		x
	LE 02i	11-13	Identifying and understanding the risks and opportunities for the project	1		x
	LE 04i	7	Change and Enhancement of Ecology	1		x