

Twickenham Riverside BREEAM Pre-Assessment Planning Summary – Office



Design Team

Applicant	London Borough of Richmond upon Thames
Project Manager	Arcadis
Architect	Hopkins Architects
Landscape Architect	LDA Design
Structural Engineer	Webb Yates Engineers
Mechanical & Electrical Engineer	Skelly & Couch
Transport Consultant	WSP
Quantity Surveyor	Arcadis
Planning Consultant Townscape & Heritage Consultant	Savills Iceni Projects
Sustainability Consultant	Method Consulting
Accessibility Consultant	Lord Consultants
Fire Consultant	FDS Consult UK
Ecology Consultant	BSG Ecology
Arboricultural Consultant	Thomson Environmental Consultants
Daylight & Sunlight Consultant	GIA Chartered Surveyors
Acoustic Consultant	TetraTech
Air Quality Consultant	Entran
Land Contamination Consultant	Geosphere Environmental
Archaeological Consultant	AOC Archaeology Group
Viability Consultant	Lambert Smith Hampton
Principal Designer	Nick Perry Associates
BIM Consultant	BIM Technologies

Method Consulting

Intelligent engineering,
sustainable buildings

Twickenham Riverside Office Units

BREEAM 2018 New Construction Issue 3.0

Offices (Shell Only)

Planning Summary

Revision P1, 3rd June 2021



BREEAM Assessments • BREEAM AP • SKA • WELL • Post Occupancy Evaluation • IMPACT LCA • Energy and Sustainability Statements • Home Quality Mark • SAP & SBEM, EPCs • DREAM • Passivhaus

Twickenham Riverside Office Units BREEAM Pre-Assessment

Introduction

BREEAM, the UK's Building Research Establishment's Environmental Assessment Method, is used to rate the environmental performance of new or existing buildings, as designed and constructed and/or in operation. A BREEAM rating can be awarded where sufficient credits have been gained on the basis of meeting environmental performance criteria in each of the technical categories:

Rating levels
Pass
Good
Very Good
Excellent
Outstanding

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

This pre-assessment has been carried out based on the BREEAM 2018 New Construction Design Stage Criteria for Office buildings (Shell Only). This scheme is applicable to new build projects. In addition to a range of standard issues assessed for all building types, this also includes requirements specific to Retail buildings which have been included in the pre-assessment.

Please note that this pre-assessment includes a summary of the requirements for each credit but the BREEAM Technical Manual should be referred to for full details.

Scoring and mandatory requirements

BREEAM requires the achievement of a minimum percentage score in order to achieve a particular rating. This is determined by a scoring system in which credits are assigned to issues under each of the sections above. These sections are each weighted differently so credits in different sections equate to a different percentage score to those in other sections. The percentage contribution of each credit to the final score is noted at the end of each section in the following pages.

In addition to the achievement of a minimum score, BREEAM also contains mandatory credits/requirements which MUST be achieved in order to obtain a particular rating. If these are not achieved, the required rating cannot be obtained regardless of the percentage score achieved. In BREEAM 2018, there are also 'pre-requisites' which do not carry a score, but must be achieved in order to award a credit and/or rating. Where a pre-requisite or mandatory credit is present, this is clearly highlighted in the main summary spreadsheet below. A list of the mandatory credits can be found on the next page.

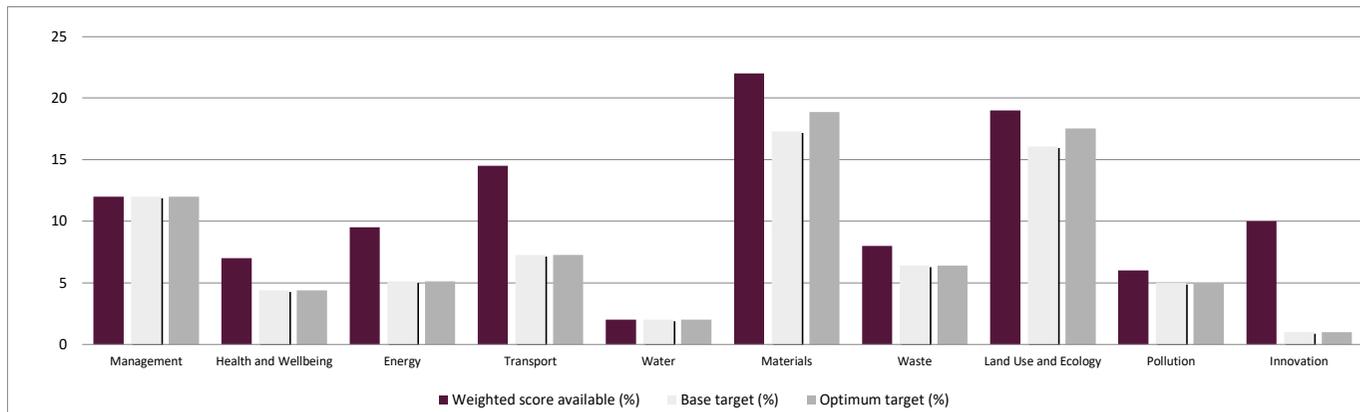
Pre-assessment results

Base Target
Optimum Target

The base target shows the minimum credits anticipated to be achieved for the development. This equals 76.50% which is a rating of Excellent.

The optimum target shows which credits could potentially be gained, although the feasibility of achieving some of these will require further investigation. This equals 79.54% which is a rating of Excellent.

This graph below shows the number of credits available for each environmental issue and the number targeted for this project.



Target summary for planning

Credit Title	Credits Available	Base Target	Optimum Target	Credits Awarded	Actionee	Stage for evidence	Risk Level
MANAGEMENT							
Man 01	Project Delivery Planning	1	1	1	-	-	Low
	Stakeholder Consultation (Interested Parties)	1	1	1	0	PM	Stage 3/4
	Pre-requisite (BREEAM AP) (Concept and Developed Design)	0	Y	Y	Y	-	Low
	BREEAM AP (Concept Design & Developed Design)	2	2	2	1	-	Low
Man 02	Elemental Life Cycle Cost (LCC)	2	2	2	0	Mace/ Arch/ SE	Stage 2
	Component Level LCC Options Appraisal	1	1	1	0	Mace/ Arch/ SE/ M&E	Stage 4
	Capital Cost Reporting	1	1	1	0	PM / QS	Stage 4 / Tender
Man 03	Pre-requisite	0	Y	Y	0	QS	Tender
	Environmental Management	1	1	1	0	QS	Tender
	Pre-requisite (BREEAM AP Site)	0	Y	Y	0	QS	Tender
	BREEAM AP (Site)	1	1	1	0	QS	Tender
	Responsible Construction Management [Mandatory: 1 credit for Excellent; 2 credits for Outstanding]	2	2	2	0	QS	Tender
Man 04	Monitoring of Construction Site Impacts (Utility Consumption & Transport)	2	2	2	0	QS	Tender
	Testing and Inspecting Building Fabric	1	1	1	0	QS	Tender
Sub-total		15	15	15	2		
Weighted sub-total		12.00	12.00	12.00	1.60		

HEALTH AND WELLBEING							
Hea 01	Daylighting	2	0	0	0	M&E	Stage 3/4
	View Out	1	1	1	0	Arch	Stage 4
	External Lighting Levels	1	1	1	0	M&E	Tender
Hea 05	Acoustic Performance	1	1	1	0	Aco / Arch	Stage 4
Hea 06	Security of Site and Building	1	1	1	0	Arch/ M&E/ LA/ WSP	Stage 3/4
Hea 07	Safe Access	1	0	0	0	WSP	Review asap to
	Outside Space	1	1	1	0	LA	Stage 4
Sub-total		8	5	5	0		
Weighted sub-total		7.00	4.38	4.38	0.00		

ENERGY							
Ene 01	Energy Performance [Mandatory: 4 credits for Excellent; 6 credits for Outstanding]	9	4	4	0	M&E	ASAP - minimum
Ene 03	External Lighting	1	1	1	0	M&E	Tender
Ene 04	Passive Design (Passive Design Analysis)	1	1	1	0	M&E	Stage 3
	Passive Design (Free Cooling)	1	0	0	0	-	-
	Low and Zero Carbon Technologies (LZC Feasibility Study)	1	1	1	0	M&E	Stage 3
Sub-total		13	7	7	0		
Weighted sub-total		9.50	5.12	5.12	0.00		

TRANSPORT							
Tra 01	Travel Plan	2	2	2	0	WSP/ Client	Stage 2
Tra 02	Transport Options Implementation	10	4	4	0	Arch/ M&E	Stage 3/4
Sub-total		12	6	6	0		
Weighted sub-total		14.50	7.25	7.25	0.00		

WATER							
Wat 02	Pre-requisite	0	Y	Y	N		
	Water Monitoring	1	1	1	0	M&E	Tender
Wat 03	Leak Detection System	1	1	1	0	M&E	Tender
Wat 04	Water Efficient Equipment	1	1	1	0	LA	Stage 4
Sub-total		3	3	3	0		
Weighted sub-total		2.00	2.00	2.00	0.00		

MATERIALS								
Mat 01	Superstructure (Comparison with the BREEAM benchmark and Option appraisal during Concept / Technical Design)	6	6	6	4	-	Stage 4	Low
	Substructure and hard landscaping options appraisal during Concept Design	1	1	1	1	-	-	Low
Mat 02	Specification of products with a recognised Environmental Product Declaration (EPD)	1	0	1	0	Arch	Ongoing design	Medium
Mat 03	Pre-requisite [Mandatory: All timber used on project is 'Legally harvested and traded timber' for ALL.]	0	Y	Y	N	QS	Tender	Low
	Enabling Sustainable Procurement	1	1	1	1	Arch	Stage 4	Low
	Measuring Responsible Sourcing	3	1	1	0	Arch/ QS / SE / Method	Pre-tender (to	Low
Mat 05	Designing for Durability and Resilience	1	1	1	0	Arch / CE / LA	Stage 3/4	Low
Mat 06	Material Efficiency	1	1	1	0	Arch / M&E / CE	Stage 1	Medium
Sub-total		14	11	12	6			
Weighted sub-total		22.00	17.29	18.86	9.43			

WASTE								
Wst 01	Pre-demolition audit [Mandatory: 1 credit from total Wst 01 for Outstanding]	1	1	1	0	QS	Tender	Low
	Construction resource efficiency [Mandatory: 1 credit from total Wst 01 for Outstanding]	3	2	2	0	QS	Tender	Low
	Diversion of resources from landfill [Mandatory: 1 credit from total Wst 01 for Outstanding]	1	1	1	0	QS	Tender	Low
Wst 02	Pre-requisite	0	Y	Y	N	-	-	Low
	Project Sustainable Aggregate Points	1	0	0	0	SE	Tender	High
Wst 03	Operational Waste [Mandatory: 1 credit for Excellent and Outstanding]	1	1	1	0	Arch/M&E	Stage 3	Low
Wst 05	Adaptation to Climate Change (Resilience of structure, fabric, building services and renewables installation)	1	1	1	0	Arch / SE / M&E	Stage 4	Low
Wst 06	Design for disassembly and functional adaptability - recommendations	1	1	1	1	-	-	Low
	Disassembly and functional adaptability – implementation	1	1	1	0	Arch / SE / M&E	Stage 4	Low
Sub-total		10	8	8	1			
Weighted sub-total		8.00	6.40	6.40	0.80			

LAND USE & ECOLOGY								
LE 01	Previously Occupied Land	1	1	1	0	Arch	Stage 4	Low
	Contaminated Land	1	0	0	0	-	-	-
LE 02	Pre-requisite (Statutory obligations)	0	Y	Y	N	Client/ Contractor	Tender	Low
	Survey and evaluation	1	1	1	0	Eco	Stage 3/4	Low
	Determining ecological outcomes	1	1	1	0	Eco	Stage 3/4	Low
LE 03	Pre-requisite (Ecological risks and opportunities)	0	Y	Y	N	Client/ Contractor	Tender	Low
	Planning and measures on-site	1	1	1	0	Eco	Stage 3/4	Low
	Managing negative impacts	2	2	2	0	Eco	Stage 3/4	Medium
LE 04	Pre-requisite (Managing negative impacts)	0	Y	Y	N	Client/ Contractor	-	Low
	Ecological enhancement	1	1	1	0	Eco/Arch/LA	Stage 3/4	Low
	Change and enhancement of ecology	3	2	3	0	Eco/Arch/LA	Stage 3/4	Medium
LE 05	Pre-requisite (Statutory obligations, planning and site implementation)	0	Y	Y	N	Client/ Contractor	-	Low
	Management and maintenance throughout the project	1	1	1	0	Eco	Stage 4	Low
	Landscape and ecology management plan	1	1	1	0	LA/Eco	Stage 4	Low
Sub-total		13	11	12	0			
Weighted sub-total		19.00	16.08	17.54	0.00			

POLLUTION								
Pol 03	Pre-requisite	0	Y	Y	N	-	-	Low
	Flood Resilience	2	1	1	0	CE	Stage 3	Medium
	Surface Water Run Off: Pre-requisite	0	Y	Y	N	CE	Stage 3/4	Low
	Surface Water Run Off	2	2	2	0	CE	Stage 3/4	Medium
Pol 04	Minimising Watercourse Pollution	1	1	1	0	CE	Stage 3/4	Medium
	Reduction of Night Time Light Pollution	1	1	1	0	M&E	Stage 3	Low
Sub-total		6	5	5	0			
Weighted sub-total		6.00	5.00	5.00	0.00			

INNOVATION							
Man 03: Responsible Construction Practices	1	0	0	0	-	-	-
Hea 01: Visual Comfort	1	0	0	0	-	-	-
Hea 06: Security	1	0	0	0	-	-	-
Mat 01: Environmental Impacts - Building LCA	2	1	1	0	Method	Stage 4	Low
Mat 03: Responsible Sourcing of Construction Products	1	0	0	0	-	-	-
Wst 01: Construction Waste Management	1	0	0	0	-	-	-
Wst 02: Use of Recycled and Sustainably Sourced Aggregates	1	0	0	0	-	-	-
LE 02: Wider site sustainability	1	0	0	0	-	-	-
LE 04: Change and enhancement of ecological value	1	0	0	0	-	-	-
Inn 01: Special Innovative Feature	10	0	0	0	-	-	-
Sub-total	10	1	1	0			
Weighted sub-total	10.00	1.00	1.00	0.00			

Totals

Base Target	76.50
Optimum Target	79.54
Credits Awarded	11.83

Risk Level for Targeted Credits

Please note: This is subjective by the BREEAM assessor to guide the team on where credits may be at risk of being unachievable	Expected to be achieved if evidence provided	Low
	Some technical or cost check required/some uncertainty	Medium
	Considered challenging, evidence suggests non-compliance	High
	Considered likely to be lost from target without action	Urgent
	Could be at risk for post construction stage - care to be taken on site	PCR Risk