Tenth Avenue, Deeside

BREEAM Pre-assessment Summary Report

Pre-assessment

22 Mar 2023

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Introduction

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

Project Name	Tenth Avenue, Deeside
Version	BREEAM UK NC V6
Assessment stage	Pre Assessment
Lead Consultant	Wayne Maw
Target Rating	(%)
Downloaded By	Wayne Maw
Download Date	22/03/23
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Scoring scenarios

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

- Current - The number currently achieved.
- Scenario 1 - Current, plus credits which can be easily gained.
- Scenario 2 - Scenario 1, plus credits which can be won but not so easily.

On this basis, the following scores are considered achievable under each scenario;

Scenario	Score	BREEAM Rating
Current	56.94%	Very Good
Scenario 1	61.81%	Very Good
Scenario 2	82.23%	Excellent

Minimum Standards

In addition performance against the minimum standards (required for the specified target rating) under each scenario is summarised below;

Issue	Current	Scenario 1	Scenario 2
Man 03 - Responsible construction practices	✔	✔	✔
Man 04 - Commissioning and handover	✔	✔	✔
Man 04 - Commissioning and handover	✔	✔	✔
Ene 01 - Reduction of energy use and carbon emissions	✔	✔	✔
Ene 02 - Energy monitoring	✔	✔	✔
Wat 01 - Water consumption	✔	✔	✔
Wat 02 - Water monitoring	✔	✔	✔
Mat 03 - Responsible sourcing of construction products	✔	✔	✔
Wst 01 - Construction waste management	✔	✔	✔
Wst 03 - Operational waste	✔	✔	✔

If the required minimum standards are not met then the target rating will not be achieved regardless of overall score.

The following is a list of all credits available for this project, along with the following:

Current	The number currently achieved.
Scenario 1	Current, plus credits which can be easily gained.
Scenario 2	Scenario 1, plus credits which can be won but not so easily.

Credit Progress Log

Management						
Man 01 - Project brief and design						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Project delivery planning	1	1	1	1	Requirement 1 Prior to completion of the Concept Design, the project delivery stakeholders (see Definitions) meet to identify and define for each key phase of project delivery: 1. Roles 2. Responsibilities 3. Contributions. Requirement 2 Consider each one of the following items when defining roles, responsibilities and contributions for each key phase of the project: 1. End user requirements 2. Aims of the design and design strategy 3. Particular installation and construction requirements or limitations 4. Occupiers' budget and technical expertise in maintaining any proposed systems 5. Maintainability and adaptability of the proposals 6. Operational energy (see Assessment scope) 7. Requirements for the production of project and end user documentation 8. Requirements for commissioning, training and aftercare support. Where the building occupants are not known, the list of considerations above still applies. The appropriate project delivery stakeholder considers each item, based on likely scenarios of building occupancy. Requirement 3 The project team demonstrates how the project delivery stakeholders' contributions and the consultation process outcomes influence the following: 1. Initial Project Brief 2. Project Execution Plan (see Definitions) 3. Communication Strategy (see Definitions) 4. Concept Design.
2	Stakeholder consultation (interested parties)	1	0	0	1	**Potential Credit** Requirement 4 Prior to completion of the Concept Design, the design team consult with all interested parties (see Definitions) on matters that cover the minimum consultation content Requirement 5 Demonstrate how the stakeholder contributions and consultation exercise outcomes influence the Initial Project Brief and Concept Design. Requirement 6 Prior to completion of the detailed design (RIBA Stage 4, Technical Design or equivalent), all interested parties (see Definitions) give and receive consultation feedback.

3	BREEAM AP (concept design)	1	0	1	1	**Potential Credit** Involve a BREEAM AP in the project at an appropriate time and level to: 1. Work with the project team, including the client, to consider the links between BREEAM issues and assist them in maximising the project's overall performance against BREEAM, from their appointment and throughout Concept Design 2. Monitor progress against the performance targets (see Definitions) agreed under criterion 8 throughout all stages after their appointment where decisions critically impact BREEAM performance 3. Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8 4. Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets 5. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.
4	BREEAM AP (developed design)	1	0	1	1	**Potential Credit** Involve the BREEAM AP in the project at an appropriate time and level to: 1. Work with the project team, including the client, to consider the links between BREEAM issues and to assist them in maximising the project's overall performance against BREEAM throughout Developed Design 2. Monitor progress against the performance targets agreed under criterion 8 throughout all stages where decisions critically impact the specification and tendering process and the BREEAM performance 3. Proactively identify risks and opportunities related to the achievement of the targets agreed under criterion 8 4. Provide feedback to the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets. 5. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team.
Man 02 - Life cycle cost and service planning						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Elemental LCC	2	0	0	0	
2	Component level LCC options appraisal	1	0	0	0	
3	Capital cost reporting	1	1	1	1	Report the capital cost for the building in pounds per square metre of gross internal floor area (£k/m²) as part of the submission to BRE. See also Methodology and Additional information.
Man 03 - Responsible construction practices						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req 1	Prerequisite - Legally harvested and traded timber		✔	✔	✔	All timber and timber-based products used during the construction process of the project are 'legally harvested and traded timber'
1	Environmental management	1	1	1	1	ll parties who at any stage manage the construction site (e.g. the principal contractor, the demolition contractor) operate an EMS covering their main operations. The EMS must: 1. Be third party certified, to ISO 14001: 2015, EMAS (EU Eco-Management and Audit Scheme) or equivalent standard; All parties who at any point manage the construction site (e.g. the principal contractor, the demolition contractor) implement best practice pollution prevention policies and procedures on-site in accordance with Working at construction and demolition sites: PPG6, Pollution Prevention Guidelines.

2	BREEAM AP (site)	1	0	0	1	**Potential credit** Involve a BREEAM AP in the project at an appropriate time and level to: 1. Work with the project team, including the client, to consider the links between BREEAM issues and assist them in achieving and if possible going beyond the design intent, to maximise the project's performance against the agreed performance targets throughout the Construction, Handover and Close Out stages 2. Monitor construction progress against the performance targets agreed under criterion 5 throughout all stages where decisions critically impact BREEAM performance 3. Proactively identify risks and opportunities related to the procurement and construction process and the achievement of the targets agreed under criterion 5 4. Provide feedback to the constructors and the project team as appropriate, to support them in taking corrective actions and achieving their agreed performance targets 5. Monitor and, where relevant, coordinate the generation of appropriate evidence by the project team and the provision to the assessor.
3	Responsible construction management	2	2	2	2	Achieve items listed as required for one credit in Table 4.1 Responsible construction management items.

4	Monitoring of construction site impacts	2	2	2	2	Requirement 10 Assign responsibility to an individual for monitoring, recording and reporting energy use, water consumption and transportation data (where measured) resulting from all on-site construction processes (and dedicated off-site manufacturing) throughout the build programme. To ensure the robust collection of information, this individual must have the appropriate authority and responsibility to request and access the data required. Where appointed, the BREEAM AP could perform this role. Requirement 11 **First monitoring credit - Utility consumption** **Energy consumption** Requirement 12 Set targets for the site energy consumption in kWh (and where relevant, litres of fuel used) as a result of the use of construction plant, equipment (mobile and fixed) and site accommodation. Requirement 13 Monitor and record data for the energy consumption described in criterion 12. Requirement 14 Report the total carbon dioxide emissions (total $kgCO_2$/project value) from the construction process via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking). **Water consumption** Requirement 16 Set targets for the potable water consumption (m^3) arising from the use of construction plant, equipment (mobile and fixed) and site accommodation. Requirement 17 Monitor and record data for the potable water consumption described in criterion 16. Requirement 18 Use the collated data to report the total net water consumption (m^3), i.e. consumption minus any recycled water use from the construction process via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking). Requirement 19 **Second monitoring credit - transportation of construction materials and waste** Requirement 20 Set targets for transportation movements and impacts resulting from delivery of the majority of construction materials to site and construction waste from site. As a minimum cover: 1. Transportation of materials from the point of supply to the building site, including any transport, intermediate storage and point of supply (see Definitions). Monitor as a minimum: 1. Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01 Environmental impacts from construction products - Building life cycle assessment (LCA)). 2. Ground works and landscaping materials. 2. Transportation of construction waste from the construction gate to waste disposal processing or recovery centre gate. This monitoring must cover the construction waste groups outlined in the project's resource management plan. Requirement 21 Monitor and record data for the transportation movements as described in criterion 20. Requirement 22 Using the collated data, report separately for materials and waste, the total transport-related carbon dioxide emissions ($kgCO_2eq$), plus total distance travelled (km) via BREEAM Projects (for the purposes of potential future BREEAM performance benchmarking).

e1	Responsible construction management	1	1	1	1	
Man 04 - Commissioning and handover						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Prerequisite (Very Good to Outstanding)		✔	✔	✔	Prior to handover, develop two building user guides (see Methodology) for the following users: 1. A non-technical user guide for distribution to the building occupiers 2. A technical user guide for the premises facilities managers.
1	Commissioning - testing schedule and responsibilities	1	1	1	1	Requirement 1 Prepare a schedule of commissioning and testing. The schedule identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and for testing and inspecting building fabric. Requirement 2 The schedule identifies the appropriate standards for all commissioning activities to be conducted, where applicable, in accordance with: 1. Current Building Regulations 2. BSRIA guidelines 3. CIBSE guidelines 4. Other appropriate standards (see Methodology) Exclude from the assessment any process or manufacture-related equipment specified as part of the project. However, include such equipment in cases where they form an integral part of the building HVAC services, such as some heat recovery systems. Requirement 3 Where a building management system (BMS) is specified: 1. Carry out commissioning of air and water systems when all control devices are installed, wired and functional 2. Include physical measurements of room temperatures, off-coil temperatures and other key parameters, as appropriate, in commissioning results 3. The BMS or controls installation should be running in auto with satisfactory internal conditions prior to handover 4. All BMS schematics and graphics (if BMS is present) are fully installed and functional to user interface prior to handover 5. Fully train the occupier or facilities team in the operation of the system. Requirement 4 Appoint an appropriate project team member to monitor and programme pre-commissioning, commissioning and testing. Where necessary include re-commissioning activities on behalf of the client. Requirement 5 The principal contractor accounts for the commissioning and testing programme, responsibilities and criteria within their budget and the main programme of works. Allow the required time to complete all commissioning and testing activities prior to handover.
2	Commissioning - design and preparation	1	1	1	1	During the design stage, the client or the principal contractor appoints an appropriate project team member (see criterion 4), provided they are not involved in the general installation works for the building services systems, with responsibility for: 1. Undertaking design reviews and giving advice on suitability for ease of commissioning 2. Providing commissioning management input to construction programming and during installation stages 3. Management of commissioning, performance testing and handover or post-handover stages. For buildings with complex building services and systems, this role needs to be carried out by a specialist commissioning manager
3	Testing and inspecting building fabric	1	0	1	1	**Potential Credit** Requirement 9 Complete post-construction testing and inspection to quality-assure the integrity of the building fabric, including continuity of insulation, avoidance of thermal bridging and air leakage paths (this is through air tightness testing and a thermographic survey). A suitably qualified professional (see Definitions) undertakes the survey and testing in accordance with the appropriate standard. Requirement 10 Rectify any defects identified during post-construction testing and inspection prior to building handover and close out. Any remedial work meets the required performance characteristics for the building or element as defined at the design stage (see Methodology).

4	Handover	1	1	1	1	Requirement 11 Prior to handover, develop two building user guides (see Methodology) for the following users: 1. A non-technical user guide for distribution to the building occupiers 2. A technical user guide for the premises facilities managers. A draft copy is developed and discussed with users first (where the building occupants are known) to ensure the guide is most appropriate and useful to potential users. Requirement 12 Prepare two training schedules timed appropriately around handover and proposed occupation plans for the following users: 1. A non-technical training schedule for the building occupiers 2. A technical training schedule for the premises facilities managers.
		18	10	13	15	**Standard Management Credit Total**
		1	1	1	1	**Exemplary Management Credit Total**
		11.98	7.10	8.93	10.15	**% Management Total (Standard + Exemplary)**
Health & Wellbeing						
Hea 01 - Visual comfort						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
2	Daylighting (building type dependent)	1	0	1	1	Achieve 2% average daylight factor throughout occupied spaces with a 0.7 uniformity ratio
3	View out	1	0	0	0	
4	Internal and external lighting levels, zoning and control	1	1	1	1	All external lighting located within the construction zone is specified in accordance with BS 5489-1:2013 Code for the practice for the design of road lighting. Lighting of roads and public amenity areas[34] and BS EN 12464-2:2014[35] Light and lighting - Lighting of work places - Part 2: Outdoor work places. External lighting should provide illuminance levels that enable users to perform outdoor visual tasks efficiently and accurately, especially during the night.
e1	Daylighting (building type dependent)	1	0	0	0	
Hea 02 - Indoor air quality						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Prerequisite - Indoor air quality (IAQ) plan		✔	✔	✔	
Hea 05 - Acoustic performance						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Acoustic performance	1	0	0	0	The building meets the appropriate acoustic performance standards and testing requirements defined in the relevant table below. These tables define criteria for the acoustic principles of: 2. Indoor ambient noise level.
Hea 06 - Security						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Security of site and building	1	0	0	0	
e1	Security of site and building	1	0	0	0	

Hea 07 - Safe and healthy surroundings						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Safe access	1	0	0	0	
2	Outside space	1	0	1	1	7 There is an outside space providing building users with an external amenity area.
		7	1	3	3	**Standard Health & Wellbeing Credit Total**
		2	0	0	0	**Exemplary Health & Wellbeing Credit Total**
		9.98	1.14	3.42	3.42	**% Health & Wellbeing Total (Standard + Exemplary)**
Energy						
Ene 01 - Reduction of energy use and carbon emissions						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Energy performance	9	4	4	4	Calculate an Energy Performance Ratio for New Constructions (EPR NC). Compare the EPR NC achieved with the benchmarks in Table 6.1 and award the corresponding number of BREEAM credits. Minimum of 4 credits required for the planning condition
2	Prediction of operational energy consumption	4	0	0	4	**Potential Credit** Undertake an operational energy report (TM 54)
e1	Beyond zero net regulated carbon - - Exemplary level criteria	2	0	0	0	
e2	Carbon negative - Exemplary level criteria	3	0	0	0	
Ene 02 - Energy monitoring						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Sub-metering of end use categories	1	1	1	1	Requirement 1 Install energy metering systems so that at least 90% of the estimated annual energy consumption of each fuel is assigned to the end-use categories (see Methodology). Requirement 2 Meter the energy consumption in buildings according to the total useful floor area: 1. If the area is greater than 1,000m², by end-use category with an appropriate energy monitoring and management system 2. If the area is less than 1,000m², use either: 1. an energy monitoring and management system or 2. separate accessible energy sub-meters with pulsed or other open protocol communication outputs, for future connection to an energy monitoring and management system (see Definitions). Requirement 3 Building users can identify the energy consuming end uses, for example through labelling or data outputs.

2	Sub-metering of high energy load and tenancy areas	1	1	1	1	Requirement 4 Monitor a significant majority of the energy supply with: 1. An accessible energy monitoring and management system for: 1. tenanted areas or 2. relevant function areas or departments in single occupancy buildings. OR 2. Separate accessible energy sub-meters with pulsed or other open protocol communication outputs for future connection to an energy monitoring and management system for: 1. tenanted areas or 2. relevant function areas or departments in single occupancy buildings. Requirement 5 Sub-meter per floor plate in large single occupancy or single tenancy buildings with one homogeneous function, for example hotel bedrooms, offices.
Ene 03 - External Lighting						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	External lighting	1	1	1	1	External light fittings within the construction zone with: 1. Average initial luminous efficacy of no less than 70 luminaire lumens per circuit Watt 2. Automatic control to prevent operation during daylight hours 3. Presence detection in areas of intermittent pedestrian traffic.
Ene 04 - Low carbon design						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Passive design	2	0	0	0	
2	Low and zero carbon technologies	1	1	1	1	Requirement 9 An energy specialist (see Definitions) completes a feasibility study (see Low and zero carbon feasibility study) by the end of the Concept Design. Requirement 10 Establish the most appropriate recognised local (on site or near site) low or zero carbon (LZC) energy sources for the building or development (see Scope of LZC systems and how they are assessed), based on the feasibility study. Requirement 11 Specify local LZC technologies for the building or development in line with the feasibility study recommendations. Requirement 12 Quantify the reduced regulated carbon dioxide (CO_2) emissions resulting from the feasibility study.
		19	8	8	12	**Standard Energy Credit Total**
		5	0	0	0	**Exemplary Energy Credit Total**
		19.06	5.92	5.92	8.88	**% Energy Total (Standard + Exemplary)**
Transport						
Tra 01 - Transport assessment and travel plan						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**

1	Travel plan	2	2	2	2	Requirement 1 No later than Concept Design stage, undertake a site-specific transport assessment (or develop a travel statement) and draft travel plan, which can demonstrably be used to influence the site layout and built form; see Methodology. Requirement 2 The site-specific travel assessment (or statement) shall cover as a minimum: 1. If relevant, travel patterns and attitudes of existing building or site users towards cycling, walking and public transport, to identify relevant constraints and opportunities. 2. Predicted travel patterns and transport impact of future building or site users. 3. Current local environment for pedestrians and cyclists, accounting for any age-related requirements of occupants and visitors. 4. Reporting of the number and type of existing accessible amenities, see Table 7.1 below, within 500m of the site. 5. Disabled access accounting for varying levels and types of disability, including visual impairment. 6. Calculation of the existing public transport Accessibility Index (AI), see Methodology on the facing page. 7. Current facilities for cyclists. Requirement 3 Following a transport assessment (in accordance with the requirements set out in requirement 2), develop a site-specific travel plan that provides a long term management strategy which encourages more sustainable travel. The travel plan includes measures to increase or improve more sustainable modes of transport and movement of people and goods during the building's operation see Methodology. Requirement 4 If the occupier is known, involve them in the development of the travel plan. Requirement 5 Demonstrate that the travel plan will be implemented and supported by the building's management in operation.
Tra 02 - Sustainable transport measures						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Pre-requisite		✔	✔	✔	
1	Transport options implementation	10	4	4	4	Identify the sustainable transport measures, see Table 7.4, achieve at least 4 of the points within table 7.4
		12	6	6	6	**Standard Transport Credit Total**
		0	0	0	0	**Exemplary Transport Credit Total**
		11.52	5.76	5.76	5.76	**% Transport Total (Standard + Exemplary)**
Water						
Wat 01 - Water consumption						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Water consumption	5	2	2	2	Use the BREEAM Wat 01 calculator to assess the efficiency of the domestic water-consuming components. 2 Credits targeted on teh basis of a 25% improvment over the BRE benchmark, Gemeni used as a template for this credit
e1	Water consumption	1	0	0	0	
Wat 02 - Water monitoring						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**

Pre-req	Prerequisite (Good to Outstanding)		✔	✔	✔	
1	Water monitoring	1	1	1	1	Requirement 1 Specify a water meter on the mains water supply to each building. This includes instances where water is supplied via a borehole or other private source. Requirement 2 For water-consuming plant or building areas consuming 10% or more of the building's total water demand: 1. Fit easily accessible sub-meters, OR 2. Install water monitoring equipment integral to the plant or area. Requirement 3 For each meter (main and sub): 1. Install a pulsed or other open protocol communication output, AND 2. Connect it to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption. If there is no BMS system in operation at Post-Construction stage, award credits provided that the system used enables connection when the BMS becomes operational.
Wat 03 - Water leak detection						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Leak detection system	1	0	0	0	
2	Flow control devices	1	1	1	1	Install flow control devices that regulate the supply of water to each WC area or facility according to demand, in order to minimise undetected wastage and leaks from sanitary fittings and supply pipework.
		8	4	4	4	**Standard Water Credit Total**
		1	0	0	0	**Exemplary Water Credit Total**
		8.04	3.52	3.52	3.52	**% Water Total (Standard + Exemplary)**
Materials						
Mat 01 - Environmental impacts from construction products - Building life cycle assessment (LCA)						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Superstructure	6	1	1	6	Undertake a simplified LCA modelling provess, must be completed prior to the submission of the planning application Additional potential credits are available where an IMPACT compliant software is used for this process
2	Substructure and hard landscaping options appraisal during Concept Design (all building types)	1	0	0	1	
e1	Core building services options appraisal during Concept Design (all building types)	1	0	0	0	
e2	LCA and LCC alignment (all building types)	1	0	0	0	

e3	Third party verification (all building types) - Exemplary level criteria	1	0	0	0	
Mat 02 - Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Specification of products with a recognised environmental product declaration (EPD)	1	0	0	1	**Potential Credit** Specify construction products with EPD that achieve a total EPD points score of at least 20, according to the methodology.
Mat 03 - Responsible sourcing of construction products						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Prerequisite		✔	✔	✔	All timber and timber-based products used on the project are legally harvested and traded timber as per the UK government's Timber Procurement Policy
1	Enabling sustainable procurement	1	1	1	1	A sustainable procurement plan must be used by the design team to guide specification towards sustainable construction products. The plan must: 1. Be in place before Concept Design. 2. Include sustainability aims, objectives and strategic targets to guide procurement activities. Note: targets do not need to be achieved for the credit to be awarded but justification must be provided for targets that are not achieved. 3. Include a requirement for assessing the potential to procure construction products locally. There must be a policy to procure construction products locally where possible. 4. Include details of procedures in place to check and verify the effective implementation of the sustainable procurement plan. In addition, if the plan is applied to several sites or adopted at an organisational level it must: 5. Identify the risks and opportunities of procurement against a broad range of social, environmental and economic issues following the process set out in BS ISO20400:201
2	Measuring responsible sourcing	3	2	2	2	Use the Mat 03 calculator tool and methodology to determine the number of credits achieved for the construction products specified or procured. Credits are awarded in proportion to the scope of the assessment and the number of points achieved, as set out in Table 9.10.
e1	Measuring responsible sourcing	1	0	0	0	
Mat 05 - Designing for durability and resilience						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**

1	Protecting vulnerable parts of the building from damage/material degradation	1	0	0	1	**Potential Credit** Requirement 1 **Protecting vulnerable parts of the building from damage** Protection measures are incorporated into the building's design and construction to reduce damage to the building's fabric or materials in case of accidental or malicious damage occurring. These measures must provide protection against: 1. Negative impacts of high user numbers in relevant areas of the building (e.g. corridors, lifts, stairs, doors etc.). 2. Damage from any vehicle or trolley movements within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. 3. External building fabric damage by a vehicle. Protection where parking or manoeuvring areas are within 1 metre of the building façade and where delivery areas or routes are within 2 metres of the façade, i.e. specifying bollards or protection rails. 4. Potential malicious damage to building materials and finishes, in public and common areas where appropriate. Requirement 2 **Protecting exposed parts of the building from material degradation** Key exposed building elements have been designed and specified to limit long and short term degradation due to environmental factors. This can be demonstrated through one of the following: 1. The element or product achieving an appropriate quality or durability standard or design guide. See Table 9.14. If none are available, use BS 7543:2015[172] as the default appropriate standard OR 2. A detailed assessment of the element's resilience when exposed to the applicable material degradation and environmental factors. Requirement 3 Include convenient access to the roof and façade for cost effective cleaning, replacement and repair in the building's design. Requirement 4 Design the roof and façade to prevent water damage, ingress and detrimental ponding. See Table 9.14 for an example list of relevant industry durability and quality standards.
Mat 06 - Material efficiency						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Material efficiency	1	0	0	1	**Potential Credit** Requirement 1 At the Preparation and Brief and Concept Design stages, set targets and report on opportunities and methods to optimise the use of materials. These must be done for each of the following stages. See Table 9.15. 1. Preparation and Brief 2. Concept Design 3. Developed Design 4. Technical Design 5. Construction Requirement 2 Develop and record the implementation of material efficiency, see Table 9.15, during 1. Developed Design 2. Technical Design 3. Construction Requirement 3 Report the targets and actual material efficiencies achieved
		14	4	4	13	**Standard Materials Credit Total**
		4	0	0	0	**Exemplary Materials Credit Total**
		21.50	5	5	16.25	**% Materials Total (Standard + Exemplary)**
Waste						
Wst 01 - Construction waste management						

	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Pre-demolition audit	1	1	1	1	Requirement 1 Complete a pre-demolition audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. The audit must cover the content of Pre-demolition audit scope on page 262 and: 1. Be carried out at Concept Design stage by a competent person (see Definitions) prior to strip-out or demolition works 2. Guide the design, consider materials for reuse and set targets for waste management 3. Engage all contractors in the process of maximising high grade reuse and recycling opportunities Requirement 2 Make reference to the audit in the resource management plan (RMP) (see Definitions). Requirement 3 Compare actual waste arisings and waste management routes used with those forecast and investigate significant deviations from planned targets.
2	Construction resource efficiency	3	2	2	2	Requirement 4 Prepare a compliant Resource Management Plan (RMP) covering: 1. Non-hazardous waste materials (from on-site construction and dedicated off-site manufacture or fabrication, see Definitions), including demolition and excavation waste 2. Accurate data records on waste arisings and waste management routes. Requirement 5 Meet or improve upon the benchmarks in Table 10.1 for non-hazardous construction waste, excluding demolition and excavation waste.
3	Diversion of resources from landfill	1	1	1	1	Requirement 6 Meet, where applicable, the diversion from landfill benchmarks in Table 10.2 for non-hazardous construction waste and demolition and excavation waste generated. Requirement 7 Sort waste materials into separate key waste groups as per Table 10.35, either on-site or through a licensed contractor for recovery.
e1	Construction resource efficiency/Diversion of resources from landfill	1	0	0	0	
Wst 02 - Use of recycled and sustainably sourced aggregates						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Prerequisite		✔	✔	✔	
1	Project Sustainable Aggregate points	1	1	1	1	Requirement 1 Identify all aggregates uses and type on the project Table 10.5 and Table 10.6. Requirement 2 Determine the quantity in tonnes for each identified use and aggregate type. Requirement 3 Identify the region in which the aggregate source is located. Requirement 4 Identify the distance in kilometres travelled by all aggregates by transport type. Requirement 5 Enter the information into the BREEAM Wst 02 calculator to calculate the Project Sustainable Aggregate points. The corresponding number of BREEAM credits will be awarded as shown in Table 10.4.

e1	Project Sustainable Aggregate points	1	1	1	1	
Wst 03 - Operational waste						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Operational waste	1	1	1	1	Requirement 1 Provide a dedicated space for the segregation and storage of operational recyclable waste generated. The space is: 1. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams 2. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors 3. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from daily or weekly operational activities and occupancy rates. Requirement 2 For consistent and large amounts of operational waste generated, provide: 1. Static waste compactors or balers; situated in a service area or dedicated waste management space 2. Vessels for composting suitable organic waste OR adequate spaces for storing segregated food waste and compostable organic material for collection and delivery to an alternative composting facility 3. A water outlet provided adjacent to or within the facility for cleaning and hygiene purposes where organic waste is to be stored or composted on site.
Wst 05 - Adaptation to climate change						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Resilience of structure, fabric, building services and renewables installation	1	0	0	1	**Potential Credit** Requirement 1 Conduct a climate change adaptation strategy appraisal using: 1. A systematic risk assessment to identify the impact of expected extreme weather conditions arising from climate change on the building over its projected life cycle. The assessment covers the installation of building services and renewable systems, as well as structural and fabric resilience aspects and includes (see Methodology): 1. Hazard identification 2. Hazard assessment 3. Risk estimation 4. Risk evaluation 5. Risk management. Requirement 2 Develop recommendations or solutions based on the climate change adaptation strategy appraisal, during or prior to Concept Design, that aim to mitigate the identified impact. Requirement 3 Provide an update during Technical Design demonstrating how the recommendations or solutions proposed at Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing by the assessor.
e1	Responding to climate change	1	0	0	1	
Wst 06 - Design for disassembly and adaptability						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**

1	Design for disassembly and functional adaptability - recommendations	1	0	0	1	**Potential Credit** Requirement 1 Conduct a study to explore the ease of disassembly and the functional adaptation potential of different design scenarios (see Methodology) by Concept Design. Requirement 2 Develop recommendations or solutions (see Functional adaptation implementation) based on the study (criterion 1 above), during or prior to Concept Design, that aim to enable and facilitate disassembly and functional adaptation.
2	Disassembly and functional adaptability – implementation	1	0	0	1	**Potential Credit** Requirement 4 Provide an update, during Technical Design, on: 1. How the recommendations or solutions proposed by Concept Design have been implemented where practical and cost effective. Omissions have been justified in writing to the assessor. 2. Changes to the recommendations and solutions during the development of the Technical Design. Requirement 5 Produce a building adaptability and disassembly guide to communicate the characteristics allowing functional adaptability and disassembly to prospective tenants.
		10	6	6	9	**Standard Waste Credit Total**
		3	1	1	2	**Exemplary Waste Credit Total**
		10	5.20	5.20	8.30	**% Waste Total (Standard + Exemplary)**

Land Use & Ecology

LE 01 - Site selection

	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Previously occupied land	1	1	1	1	Requirement 1 At least 75% of the proposed development is on previously occupied land
2	Contaminated land	1	0	0	1	**Potential Credit** If teh site investigation shows contamination that needs remediation this credit could be awarded

LE 02 - Ecological risks and opportunities

	Credit	Available	Current	Scenario 1	Scenario 2	Comments
Pre-req	Prerequisite - Statutory obligations		✔	✔	✔	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
1	Survey and evaluation/Determining ecological outcomes	2	2	2	2	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
e1	Wider site sustainability - Exemplary level criteria	1	1	1	1	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment

LE 03 - Managing impacts on ecology

	Credit	Available	Current	Scenario 1	Scenario 2	Comments

Pre-req	Prerequisite – Ecological risks and opportunities		✔	✔	✔	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
1	Planning and measures on-site	1	1	1	1	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
2	Managing negative impacts	2	2	2	2	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
LE 04 - Ecological change and enhancement						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Prerequisite - Managing negative impacts on ecology		✔	✔	✔	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
1	Change and enhancement of ecology / Ecological enhancement	1	1	1	1	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
2	Change and enhancement of ecology	3	3	3	3	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
e1	Change and enhancement of ecology - Exemplary level criteria	1	1	1	1	
LE 05 - Long term ecological management and maintenance						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
Pre-req	Prerequisite - Statutory obligations, planning and site implementation		✔	✔	✔	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
1	Management and maintenance throughout the project / Landscape and ecology management plan	2	2	2	2	Credits to be confirmed by BREEAM ecology report, credits based on the Gemeni ecology report for the pre-assessment
		13	12	12	13	**Standard Land Use & Ecology Credit Total**
		2	2	2	2	**Exemplary Land Use & Ecology Credit Total**
		16.95	15.80	15.80	16.95	**% Land Use & Ecology Total (Standard + Exemplary)**
Pollution						
Pol 01 - Impact of refrigerants						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Impact of refrigerants	3	3	3	3	indicted that there will be no mechcanical cooling wihtin the building, will need to be confirmed
Pol 02 - Local air quality						

	Credit	Available	Current	Scenario 1	Scenario 2	Comments
1	Local air quality	2	2	2	2	Requirement 1 All heating and hot water is supplied by non-combustion systems. For example, only powered by electricity. OR alternatively; Requirement 2 Emissions from all installed combustion plant that provide space heating and domestic hot water do not exceed the levels set in Table 12.4 and Table 12.5.
Pol 03 - Flood and surface water management						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Flood resilience	2	2	2	2	A site-specific flood risk assessment (FRA) confirms the development is in a flood zone that is defined as having a low annual probability of flooding. The FRA takes all current and future sources of flooding into consideration (see Sources of flooding).

2	Surface water run-off	2	2	2	2	Requirement 5 **Prerequisite for surface water run-off credits** Surface water run-off design solutions must be bespoke, i.e. they must take account of the specific site requirements and natural or man-made environment of and surrounding the site. The priority levels detailed in the Methodology must be followed, with justification given by the appropriate consultant where water is allowed to leave the site. Requirement 6 **One credit - Surface Water Run-Off - Rate** For brownfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) shows a 30% improvement for the developed site compared with the predeveloped site. This should comply at the 1-year and 100-year return period events. Requirement 7 For Greenfield sites, drainage measures are specified so that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed site than it was for the pre-development site. This should comply at the 1-year and 100-year return period events. Requirement 8 Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified Sustainable Drainage Systems (SuDS) are in place. Requirement 9 Calculations include an allowance for climate change. This should be made in accordance with current best practice planning guidance (see Definitions). Requirement 10 **One credit - Surface Water Run-Off - Volume** Flooding of property will not occur in the event of local drainage system failure (caused either by extreme rainfall or a lack of maintenance); AND EITHER Requirement 11 Drainage design measures are specified so that the post-development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development. This must be for the 100-year 6-hour event, including an allowance for climate change (see requirement 15). Requirement 12 Any additional predicted volume of run-off for this event is prevented from leaving the site by using infiltration or other SuDS techniques. OR (only where requirements 11 and 12 cannot be achieved): Requirement 13 Justification from the appropriate consultant indicating why the above criteria cannot be achieved, i.e. where infiltration or other SuDS techniques are not technically viable options. Requirement 14 Drainage design measures are specified so that the post-development peak rate of run off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options: 1. The pre-development one-year peak flow rate 2. The mean annual flow rate (Qbar) 3. 2L/s/ha. Requirement 15 For the one-year peak flow rate, the one-year return period event criterion applies. Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS are in place. Requirement 16 For either option, above calculations must include an allowance for climate change; this should be made in accordance with current best practice planning guidance.

3	Minimising watercourse pollution	1	0	1	1	**Potential Credit** Requirement 17 There is no discharge from the developed site for rainfall up to 5 mm (confirmed by the appropriate consultant). Requirement 18 Areas with a low risk source of watercourse pollution, an appropriate level of pollution prevention treatment is provided, using appropriate SuDS techniques. Requirement 19 Areas with a high risk of contamination or spillage of substances, such as petrol and oil, have separators (or an equivalent system) are installed in surface water drainage systems. Requirement 20 Chemical or liquid gas storage areas have a means of containment fitted to the site drainage system (i.e. shut-off valves). This is to prevent the escape of chemicals to natural watercourses in the event of a spillage or bunding failure. Requirement 21 All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as the SuDS manual (219) and other relevant industry best practice. They must be bespoke solutions taking account of the specific site requirements and natural or man-made environment of and surrounding the site. Requirement 22 A comprehensive and up to date drainage plan of the site will be made available for the building or site occupiers. Requirement 23 Relevant maintenance agreements for the ownership, long term operation and maintenance of all specified SuDS must be in place.
Pol 04 - Reduction of night time light pollution						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**
1	Reduction of night time light pollution	1	1	1	1	Requirement 1 External lighting pollution has been eliminated through effective design that removes the need for external lighting. This does not adversely affect the safety and security of the site and its users. OR alternatively, where the building does have external lighting, one credit can be awarded as follows: Requirement 2 The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the Institute of Lighting Professionals (ILP) Guidance notes for the reduction of obtrusive light, 2011[179]. Requirement 3 All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00. Requirement 4 If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP guidance notes. Requirement 5 Illuminated advertisements are designed in compliance with ILP PLG05 The Brightness of Illuminated Advertisements
Pol 05 - Reduction of noise pollution						
	Credit	**Available**	**Current**	**Scenario 1**	**Scenario 2**	**Comments**

1	Reduction of noise pollution	1	0	0	1	Requirement 1 There are no noise-sensitive areas within the assessed building or within 800m radius of the assessed site. OR Requirement 2 Where there are noise-sensitive areas within the assessed building or noise-sensitive areas within 800m radius of the assessed site, a noise impact assessment compliant with BS4142:2014 is commissioned. Noise levels must be measured or determined for: 1. Existing background noise levels 1. at the nearest or most exposed noise-sensitive development to the proposed assessed site 2. including existing plant on a building, where the assessed development is an extension to the building 2. Rating noise level from the assessed building. Requirement 3 The noise impact assessment must be carried out by a suitably qualified acoustic consultant. Requirement 4 The noise level from the assessed building, as measured in the locality of the nearest or most exposed noisesensitive development, is a difference to the background noise of at least -5dB throughout the day and night. Requirement 5 If the noise sources from the assessed building is greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with the requirement.
		12	10	11	12	**Standard Pollution Credit Total**
		0	0	0	0	**Exemplary Pollution Credit Total**
		9	7.50	8.25	9	**% Pollution Total (Standard + Exemplary)**

Innovation

AI - Approved Innovation

	Credit	Available	Current	Scenario 1	Scenario 2	Comments
e1	Approved innovations	1	0	0	0	
		0	0	0	0	**Standard Innovation Credit Total**
		1	0	0	0	**Exemplary Innovation Credit Total**
		1	0	0	0	**% Innovation Total (Standard + Exemplary)**