Department for Infrastructure

Jersey Future Hospital

BREEAM International 2016 Pre-Assessment Planning Report

P01 | 28 March 2018

Job number 237035

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1 Introduction

Arup have been appointed by Department for Infrastructure (DfI) to undertake a BREEAM (Building Research Establishment Environmental Assessment Method) pre-assessment for the proposed **Jersey Future Hospital** project in Jersey.

The Revised 2011 Island Plan, 2014 has a strategic policy (SP2 – efficient use of resources) which identifies the below requirements:

"Development should make the most efficient and effective use of land, energy, water resources and buildings to help deliver a more sustainable form and pattern of sustainable development and to respond to climate change. In particular;

1. The proposed provision of new development, its spatial distribution, location and design should be designed to limit carbon emissions;

2. New development should be planned to make good use of opportunities for decentralised and renewable or low carbon energy;

3. New development should be planned to minimise future vulnerability in a changing climate;

4. New development should secure the highest viable resource efficiency, in terms of the re-use of existing land and buildings; the density of development; the conservation of water resources and energy efficiency."

The DfI have confirmed that BREEAM is to be utilised as a design and assessment tool to demonstrate achievement of the above requirements and inclusion of sustainability throughout the design process.

There are two buildings as part of the project that will be assessed using BREEAM. These are the Main Building and Westaway Court building.

The DfI have confirmed that the two buildings are required to achieve BREEAM Excellent ratings and the purpose of this report is to highlight the design team's responsibilities in relation to achieving this.

An initial review has been undertaken to identify how BREEAM could be integrated into the design at the earliest stage and the pre-assessments have been completed in collaboration with Hassell, Gleeds and Arup.

Following a full design team pre-assessment workshop, the team have finalised the BREEAM 2016 targets for Jersey Future Hospital.

The pre-assessment was undertaken by an Arup licensed BREEAM Assessor and Accredited Professional.

The pre-assessments are based on the Jersey Future Hospital Main Building and Westaway Court being assessed using the BREEAM International New Construction 2016: Bespoke (Healthcare) scheme.

A pre-assessment is an early stage review of all assessment criteria and their potential for inclusion in a scheme. In order to achieve an Excellent rating, the buildings needs to achieve a score of 70% against the assessment criteria. The pre-assessments provided with this report are an early indication of how this will

be achieved although over the course of the project, the specific credits targeted and achieved may vary.

1.1 About BREEAM

BREEAM is a performance based assessment method and certification scheme for new buildings. The certification body is the Building Research Establishment (BRE). The primary aim of BREEAM New Construction is to mitigate the life cycle impacts of new buildings on the environment in a robust and cost-effective manner. This is achieved through integration and use of the scheme by clients and their project teams at key stages in the design and procurement process.

It is important to recognise that BREEAM reflects the overall performance of the building rather than the opportunities or limitations placed on specific stakeholders involved in the procurement process. This means that the client, design team, principal contractor and BREEAM Assessor, as well as other specialist disciplines, have important roles to play if the desired performance level is to be achieved and reflected through the certified BREEAM rating. However, the onus of orientating the brief towards sustainability needs to come first and foremost from the client.

Arup's early involvement will ensure that realistic and achievable targets are set and can be met, appropriate responsibilities can be defined and understood and low or no cost solutions to environmental impacts can be sought and applied wherever possible.

The environmental certification process measures the performance of the building against the Building Research Establishment's established criteria; the results are quantified by a number of individual measures and associated criteria stretching across a range of sustainability issues:

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

Each category comprises a number of credits, scoring is achieved through provision of compliant evidence or documentation satisfying the requirements of these credits.

Once all the credits have been assessed, a percentage score for each category is calculated, and an environmental weighting applied to give an overall percentage score and rating (Pass ≥30, Good ≥45, Very Good ≥55, Excellent ≥70 or Outstanding ≥85).

Following the Pre-Assessment, the BREEAM assessment is to be undertaken at two main stages of the development process:

- Design and Procurement Assessment
- Post Construction Review

The design and construction of the Jersey Future Hospital Main Building will be assessed using **BREEAM International New Construction: Bespoke (Healthcare); SD233: 1.0 – 2016**.

As this is a bespoke international assessment BRE are providing weightings for the final assessment at this stage. BRE have advised the most appropriate weightings to be used in advance of their final provision and these have been used as the basis of this pre-assessment.

Both buildings will be developed with the design team and assessed as *fully fitted* buildings.

2 Overall BREEAM International 2016 Target

The pre-assessments identified that the client target rating of Excellent, which is achievable and the current baseline scoring for both buildings is over the threshold of >70% required to achieve BREEAM Excellent.

To achieve this target, the BREEAM process will continue to be incorporated into the design development so that the cost-neutral and time constrained credits are targeted and actioned during the correct design stage.

These baseline scores are common at the early stage of a building design as more information is required from the design team before committing to achieving additional credits.

2.1 Main Hospital

Score	
Baseline	**Potential**
70.76%	80.10%
Excellent	**Excellent**

2.2 Westaway Court

Score	
Baseline	**Potential**
70.52%	75.80%
Excellent	**Excellent**

Appendix A

BREEAM Pre-Assessments

Phase 1A Main Building BREEAM 2016 Intl

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BREEAM International 2016 Pre-Assessment
Bespoke : Healthcare (General Hospital)

Project Name: Jersey Future Hospital
Project Number: 237035
BREEAM Ref: BREEAM-0064-1019

Date: 28/03/2018
Issue: Stage 1
Revision: 1

*** Reference must be made to the current Technical Manual (SD233: 1.0) for full credits requirements ***

Target
Excellent = 70%

Score	
Baseline	**Potential**
70.76%	80.10%
Excellent	**Excellent**

Credit at risk of time out OR loss
Credit requires early stage actions
Potential credit to target
Credit not currently targeted
Mandatory credit to achieve Excellent rating

	Credit	Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Management										
Management Section Weighting							**11.0%**			
Man 01	Stakeholder Consultation (Project Delivery)	Criteria 1-3	1	1	1		0.52%	PM	Stage 1 - 2	The design team have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery. [Linked to Soft Landings]
	Stakeholder Consultation (Third Party)	Criteria 4-6	1	1	1		0.52%	PM/DfI	Stage 1 - 3	Consultation plan to be provided including feedback in design. Evidence of consultation meetings. Demonstration of feedback from consultation
	Sustainability Champion (Design)	Criteria 8-10	1	1	1		0.52%	BREEAM AP	Stage 2	BREEAM to be regular agenda item at DT meetings and produce AP progress reports
	Sustainability Champion (Monitoring Progress)	Criteria 11-12	1	1	1		0.52%	BREEAM AP	Stage 4	BREEAM to be regular agenda item at DT meetings AP progress reports
Man 02	Elemental Life Cycle Cost (LCC)	Criteria 1-2	2	2	2		1.05%	PM	Stage 2	An elemental life cycle cost (LCC) analysis has been carried out
	Component Level LCC Plan	Criteria 3-4	1	1	1		0.52%		Stage 4	A component level LCC plan has been developed
	Capital Cost Reporting	Criterion 5	1	1	1		0.52%	PM	Stage 5	Report the capital cost for the building in pounds per square metre (£k/ m2)
Man 03	Environmental Management	Criteria 1-3	1	1	1		0.52%	PM Contractor	Stage 3	*Relevant commitments in Contractor Specification* The principal contractor operates an environmental management system (EMS) covering their main operations. A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data resulting from all on-site construction processes
	Sustainability Champion (Construction)	Criteria 4-6	1	1	1		0.52%		Stage 3	
	Considerate Construction	Criterion 7	2	2	2		1.05%		Stage 3	
	Monitoring of Construction Site Impacts	Criterion 8	Pre-requisite						Stage 3	
	Utility Consumption	Criteria 9-12	1	1	1		0.52%		Stage 3	
	Transport of Construction Materials & Waste	Criteria 13-14	1	1	1		0.52%		Stage 3	
Man 04	Commissioning Schedule and Responsibilities	Criteria 1-4	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 2	A schedule of commissioning and testing
	Commissioning Building Services	Criterion 5	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 2	A specialist commissioning manager is appointed by the contractor
	Commissioning Building Fabric	Criteria 6-8	1	1	1		0.52%	Architect Contractor	Stage 2	This can be demonstrated through the completion of a thermographic survey and an airtightness test and inspection
	Handover	Criteria 10-13	1	1	1		0.52%	PM Contractor	Stage 3	Building User Guide, Training Schedule will be developed by the contractor
Man 05	Aftercare Support	Criteria 1-2	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 3	Operational infrastructure and resources in place to provide aftercare support to the building occupier
	Seasonal Commissioning	Criterion 3	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 3	Seasonal commissioning activities will be completed over a minimum 12-month period,
	Post Occupancy Evaluation	Criteria 4-5	1	1	1		0.52%	PM Client	Stage 3	The Client makes a commitment to carry out a third party post-occupancy evaluation (POE) exercise one year after initial building occupation.
Total			**21**	**21**	**21**	**0**	0.53%		**11.00%**	
Health and Wellbeing										
Health and Wellbeing Section Weighting							**14%**			
Hea 01	High Frequency Ballasts	Criterion 1	Pre-requisite					Electrical Engineer	Stage 2	All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts
	Glare Control	Criteria 2-3	1	1	1		0.67%	Architect	Stage 2	The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas.
	Daylighting	Criterion 4	2	0	1		0.00%	Architect	Stage 3	The relevant building areas meet good practice daylight factor(s) 1 credit = 80% of area has average daylight factor of 2% plus additional uniformity reqs Certain areas can be excluded from the requirements
	View Out	Criteria 5-6	2	0	1		0.00%	Architect	Stage 2	95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out. *The window/opening size required as a percentage of surrounding wall area depending on the distance of the desk or work space to the window or opening can vary.* The second credit can be awarded where the distance between the wall with the window/opening and nearest external solid object (e.g. buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces, e.g. wards and dayrooms. Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes or the mortuary
	Internal & External Lighting Levels, Zoning & Control	Criteria 7-11	1	1	1		0.67%	Electrical Engineer	Stage 2	Lighting design in compliance with BREEAM requirements
Hea 02	No Asbestos	Criterion 1	Pre-requisite					Architect		Materials containing asbestos are prohibited from being specified and used within the building.
	Indoor Air Quality (IAQ) Plan	Criterion 2	1	1	1		0.67%	Mechanical Engineer Contractor	Stage 2	An indoor air quality plan has been produced and implemented that minimise indoor air pollution during the design, construction and occupation of the building.
	Ventilation	Criteria 3-8	1	1	1		0.67%	Mechanical Engineer	Stage 2	Design drawings showing building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution; Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO_2) or air quality sensors which are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space.
	VOCs (Products)	Criteria 9-10	1	1	1		0.67%	Architect Contractor	Stage 3	*Relevant clauses in architect specification or workmanship clauses* Products meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions
	VOCs (Post Construction)	Criteria 11-17	1	1	1		0.67%	PM Contractor	Stage 3	Commitment to carry out post construction (but pre-occupancy) testing for formaldehyde and total volatile organic compound (TVOC) concentration level.
	Potential for Natural Ventilation	Criteria 18-19	1	0	0		0.00%	Mechanical Engineer Architect	Stage 3	The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios.
Hea 03	Laboratory Containment Devices and Containment Areas	Criteria 1-3	1	1	1		0.67%	Mechanical Engineer	Stage 3	Where containment devices such as fume cupboards are specified their manufacture and installation meet best practice safety and performance requirements and objectives
	Buildings with Containment Level 2 and 3 Laboratory Facilities	Criteria 4-5	1	1	1		0.67%	Mechanical Engineer	Stage 3	Where containment level 2 and 3 laboratory facilities are specified they must meet best practice safety and performance criteria and objectives.
Hea 04	Thermal Modelling	Criteria 1-5	1	1	1		0.67%	Mechanical Engineer	Stage 3	Thermal Model Results and thermal modelling analysis has informed the temperature control strategy for the building and its users.
	Adaptability - Projected Climate Change Scenario	Criteria 6-9	1	1	1		0.67%		Stage 3	The thermal modelling demonstrates that building requirements are achieved for a projected climate change environment
	Thermal Zoning and Controls	Criteria 9-11	1	1	1		0.67%	Mechanical Engineer	Stage 3	The strategy for proposed heating/cooling system(s) demonstrates that it has addressed zoning, occupant control, interaction with other systems and manual override.
Hea 05	Mandatory Appointment of Acoustician	Criterion 1	Pre-requisite					Acoustician	Stage 2	Acoustician appointed
	Acoustic Performance - Noise Levels	Criterion 2	2	2	2		1.33%	Acoustician	Stage 2	Airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant Building Regulations or Standards.

Credit		Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Hea 06	Safe Access	Criteria 1-11	1	0	1		0.00%	Architect	Stage 3	Cycle lanes provide direct access from site entrances to cycle storage and (where relevant) connect to off-site cycle paths. Footpaths on site provide direct access from site entrances to building entrances. Where provided, drop-off areas are designed off, or adjoining, the access road and provide direct access to pedestrian footpaths. Pedestrian crossings, signposting and compiant lighting of access roads, paths and cycle lanes.
	Inclusive and Accessible Design	Criteria 12-14	1	1	1		0.67%	Architect	Stage 2	An access strategy is developed in line with Checklist A3. The access strategy addresses, as a minimum, access to and throughout the development for all users, with particular emphasis on the following: * Disabled users; addressing and proposing design solutions that remove obstacles that define disability * People of different age groups, genders, ethnicity and fitness levels * Parents with children
Hea 07	Hazards	Criteria 1-2	0	0	0		0.00%	Mechanical Engineer	Stage 2	**Not Applicable** A risk assessment is carried out at the outline proposal or Concept Design stage by an appropriate person, or persons, to identify any potential natural hazards in the region of the development .
Hea 09	Water Quality	Criteria 1-3	1	1	1		0.67%	Mechanical Engineer Architect DfI	Stage 2	All water systems in the building are designed in compliance with the measures outlined in the relevant national health and safety best practice guides or regulations to minimise the risk of microbial contamination, e.g. legionellosis. A wholesome supply of accessible potable drinking water is supplied as follows in the permanently **staffed areas** and in **patient and visitor waiting areas**.
Total			**21**	**15**	**18**	**0**	#DIV/0!		**10.00%**	Minimum standard (criterion 1 only)
Hazards Total			**0**	**0**	**0**	**0**	#DIV/0!		**0.00%**	
Energy										
Energy Section Weighting							**15%**			
Ene 01	Reduction of Energy Use & CO_2 Emissions	Criteria 1-4	15	8	10		4.00%	Mechanical Engineer	Stage 2	**Minimum Excellent standard: 6 credits** IES Model Design team co-ordination required to significantly reduce the buildings energy consumption in the most cost effective way possible
Ene 02	Monitoring of Major Energy Systems	Criteria 1-2	1	1	1		0.50%	Mechanical Engineer	Stage 2	Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption includes lifts.
	Monitoring of Energy Use by Area	Criterion 3	1	1	1		0.50%	Mechanical Engineer	Stage 2	1) Operating department 2) Mortuary and post-mortem department 3) Pharmacy department 4) Laboratories 5) MRI 6) Oncology 7) Renal dialysis
Ene 03	External Lighting	Criteria 1-4	1	1	1		0.50%	Mechanical Engineer	Stage 2	Lighting design in compliance with BREEAM requirements
Ene 04	Passive Design Analysis	Criteria 1-3	1	1	1		0.50%	Mechanical Engineer	Stage 2	The project team carries out an analysis of the proposed building design/development to influence decisions made during Concept Design stage
	Free Cooling	Criteria 4-5	1	0	0		0.00%	Mechanical Engineer	Stage 2	The building uses ANY of the free cooling strategies and no mechanical cooling.
	Feasibility Study	Criteria 6-7	1	1	1		0.50%	Mechanical Engineer	Stage 2	LZC study and specification of technology e.g. PV & Solar Thermal Hot Water
Ene 05	Energy Efficient Design, Installation and Commissioning	Criteria 1-2	1	1	1		0.50%	Mechanical Engineer Medical Planner	Stage 3	Need to identify with Refrigeration Engineer whether this credit can be targeted. It Client correspondence confirmed that not all items are on Enhanced Capital Allowance (ECA) Energy Technology Product List.
	Energy Efficiency Criteria	Criterion 3	1	1	1		0.50%		Stage 3	
	Indirect Greenhouse Gas Emissions	Criteria 4-5	1	0	1		0.00%	Mechanical Engineer Medical Planner	Stage 2	
Ene 06	Lift/Transportation Analysis Systems	Criterion 1	1	1	1		0.50%	Mechanical Engineer	Stage 2	Lift analysis to be carried out. Energy analysis completed
	Energy Efficient Transportation Systems	Criteria 2-4	2	2	2		1.00%	Mechanical Engineer	Stage 3	Relevant clause in the specification Manufacturer's product data The use of regenerative drives is demonstrated to save energy, if so, they are specified.
	Regenerative Drives	Criteria 5-6								
Ene 07	Laboratory Design Specification and Best Practice Efficient Measures	Criteria 1-6	1	1	1		0.50%	Mechanical Engineer	Stage 2	Client engagement is sought through consultation during the preparation of the initial project brief to determine occupant requirements and define laboratory performance criteria
Ene 08	Energy Efficient Equipment	Criterion 1	2	2	2		1.00%	PM DfI Mechanical Engineer Medical Planner	Stage 3	Identify the building's unregulated energy consuming loads and estimate their contribution to the total annual unregulated energy consumption of the building. Identify unregulated energy load from significantly contributing systems (small power or kitchen & catering facilities).
Total			**30**	**21**	**24**	**0**	#DIV/0!		**10.50%**	
Transport										
Transport Section Weighting							**10.0%**			
Tra 01	Public Transport Accessibility Index	Criterion 1	5	2	2		2.00%	Transport Consultant	Stage 2	**Other building - Visitors.** Scale Map highlighting the transport nodes Timetables for each service
Tra 02	Proximity to Amenities	Criterion 1	1	1	1		1.00%	Transport Consultant	Stage 2	**Other building - Visitors.** Scale Map highlighting the accessible amenities
Tra 03	Alternative Modes of Transport	Criterion 1	2	2	2		2.00%	Transport Consultant	Stage 2	**Other building - Visitors.** A single credit can be awarded where spaces for staff only are provided as well as the appropriate compliant cyclist facilities. Compliant cycle facilities i.e. racks [1 cycle space per 10 staff] Compliant cycle facilities i.e. racks [1 cycle space per 10 building beds]
Tra 04	Maximum Car Parking	Criterion 1	1	1	1		1.00%	Transport Consultant	Stage 2	The maximum number of parking spaces provided must not be greater than the total of the following: - One parking space for every four staff, plus; - One parking space for every four beds, plus - Two parking spaces for each consulting, examination, treatment, therapy room and A&E cubicle.
Tra 05	Travel Plan	Criteria 1-5	1	1	1		1.00%	Transport Consultant DfI	Stage 2	A site specific travel assessment/statement has been undertaken An updated travel plan has been developed as part of the feasibility and design stages.
Total			**10**	**7**	**7**	**0**	#DIV/0!		**7.00%**	
Water										
Water Section Weighting							**9.0%**			
Wat 01	Water Performance 12.5%	Criteria 1-7	1	1	1		1.00%	Architect Mechanical Engineer	Stage 3	**Precipitation zone 1** The water consumption (L/person/day) for the assessed building is compared against a baseline performance.
	Water Performance 25%		1	1	1		1.00%		Stage 3	
	Water Performance 40%		1	1	1		1.00%		Stage 3	
	Water Performance 50%		1	0	1		0.00%		Stage 3	Level 4 Specification required
	Water Performance 55%		1	0	1		0.00%		Stage 3	Level 5 Specification required
Wat 02	Water Monitoring	Mandatory Criteria 1	Pre-requisite					Mechanical Engineer	Stage 3	The specification of a water meter on the mains water supply to each building
		Criteria 2-4	1	1	1		1.00%		Stage 3	Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters Areas that will consume 10% will need a separate water meter to be fitted specifically for that area. Laboratory: a separate water meter is fitted on the water supply to any process or cooling loop for plumbed-in laboratory process equipment
Wat 03	Leak Detection System	Criterion 1	1	1	1		1.00%	Mechanical Engineer	Stage 3	A leak detection system is specified
	Flow Control Devices	Criterion 2	1	0	0		0.00%		Stage 2	Unlikely that flow control devices that regulate the supply of water to each WC area or facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fittings).
Wat 04	Water Efficient Equipment	Criteria 1-3	1	1	1		1.00%	Architect	Stage 3	Where there is no water demand from uses other than domestic-scale drinking and sanitary use components in the building this issue is not applicable and does not require assessment.
Total			**9**	**6**	**8**	**0**	#DIV/0!		**6.00%**	

	Credit	Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Materials										
Materials Section Weighting							**15.0%**			
Mat 01	Material Specification - Major Building Elements	Criteria 1-3	6	2	2		2.50%	Architect	Stage 2	Breakdown of Material Specification inc GG Ratings (ideally A or A+) Design Drawings Output of BRE Mat 01 Calculator Tool
Mat 02	Hard Landscaping and Boundary Protection	Criterion 1	0	0	0		0.00%	Architect	Stage 2	Not assessed in BREEAM International
Mat 03	Responsible Sourcing of Timber	Criterion 1	Pre-requisite					Contractor	Stage 3	Legally harvested and traded timber
	Sustainable Procurement Plan	Criterion 2	1	1	1		1.25%	PM Contractor	Stage 3	By the end of concept design stage, the client or developer has a documented policy and procedure that sets out procurement requirements for all suppliers and trades to adhere to relating to the responsible sourcing of construction products.
	Responsible Sourcing of Materials	Criterion 3	3	1	1		1.25%	Architect Structural Engineer PM Contractor	Stage 3	Where the applicable building materials are responsibly sourced in accordance with the BREEAM methodology
Mat 05	Designing for Durability and Resilience	Criteria 1-1	1	1	1		1.25%	Architect	Stage 2	**Protecting vulnerable parts of the building from damage** The building incorporates suitable durability and protection measures **Protecting exposed parts of the building from material degradation** The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors.
Mat 06	Material Efficiency	Criterion 1	1	0	1		0.00%	PM Structural Engineer	Stage 1-5	Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life. At Stage 1, the project needs to set requirements that will inform decisions throughout the design and construction.
Total			**12**	**5**	**6**	**0**	7.50%		**6.25%**	
Waste										
Waste Section Weighting							**8.00%**			
Wst 01	Construction Site Waste Management	Criteria 1-3	2	2	2		2.29%	PM Contractor	Stage 3	*Where appropriate targets for the amount of non-hazardous and hazardous waste produced on site are set in m³ of waste per 100m² or tonnes of waste per 100m² *Procedures are in place to minimise non-hazardous and hazardous waste in line with the targets. *The amount of site construction waste created is being monitored and targets regularly reviewed. *The design or site management team has nominated an individual responsible for implementing the above. **Second Credit** Procedures are in place for sorting, reusing and recycling construction waste into at least five defined waste groups either on site or off-site through a licensed external contractor.
	Diversion from Landfill	Criteria 4 -6	1	0	0		0.00%		Stage 3	A significant quantity of non-hazardous construction and demolition waste (where applicable) generated by the project has been diverted from landfill.
Wst 02	Recycled Aggregates	Criteria 1-3	1	0	0		0.00%	Civil Engineer Contractor	Stage 3	The percentage of high grade aggregate that is recycled or secondary aggregate
Wst 03	Operational Waste	Criteria 1-4	1	1	1		1.14%	Architect Medical Planner	Stage 3	Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building, its occupant(s) and activities. Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operation, the following facilities are provided: a. Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space. b. adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility. A compliant waste management strategy (i.e. one which covers hazardous waste, clinical waste, sharps and domestic waste, has input from a range of stakeholders including supply chain, clinical staff and FM, plus other requirements).
Wst 05	Adaption to Climate Change	Criteria 1	1	1	1		1.14%	Structural Engineer	Stage 2	Conduct a climate change adaptation strategy appraisal for structural and fabric resilience
Wst 06	Functional Adaptability	Criteria 1-2	1	1	1		1.14%	Architect Mechanical Engineer	Stage 2	A building-specific functional adaptation strategy study has been undertaken by the developer and design team to accommodate future changes of use of the building over its lifespan.
Total			**7**	**5**	**5**	**0**	7.14%		**5.71%**	
Land Use and Ecology										
Land Use and Ecology Section Weighting							**11.0%**			
LE 01	Re-Use of Land	Criterion 1	2	2	2		2.20%	Architect	Stage 2	Design drawings indicating area (m2) of previously developed land and location and footprint (m2) of proposed development
	Contaminated Land	Criteria 2-3	1	0	0		0.00%	Ecologist	Stage 2	We don't believe the site to be contaminated to the level requiring remediation
LE 02	Ecological Value of Site	Criterion 1	1	1	1		1.10%	Ecologist	Stage 2	Land within the construction zone is defined as 'land of low ecological value'
	Protection of Ecological Features	Criteria 2-3	1	1	1		1.10%	Ecologist	Stage 2	All existing features of ecological value within and surrounding the construction zone and site boundary area are adequately protected from damage
LE 03	Mitigating Ecological Impact	Criterion 1	0	0	0		0.00%	Landscape Architect Ecologist	Stage 1	Not assessed in BREEAM International
		Criterion 2	0	0	0		0.00%	Landscape Architect Ecologist	Stage 2	
LE 04	Enhancing Site Ecology	Criteria 1-4	1	1	1		1.10%	Landscape Architect Ecologist	Stage 2	The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build,
		Criteria 3-5	2	1	2		1.10%	Landscape Architect Ecologist	Stage 2	
LE 05	Long Term Impact on Biodiversity	Criteria 1-4	Pre-requisite					Ecologist	Stage 2	5 Year Landscape and habitat management plan (where required) All relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with during the design and construction process.
		Criteria 5-9	2	2	2		2.20%	PM Contractor	Stage 3	Where additional measures to improve the assessed site's long term biodiversity are adopted
Total			**10**	**8**	**9**	**0**	8.80%		**8.80%**	
Pollution										
Pollution Section Weighting								**7.0%**		
Pol 01	Impact of Refrigerants	Criteria 2-4	2	1	1		0.58%	Mechanical Engineer	Stage 3	Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of≤1000 kgCO2e/kW cooling/heating capacity.
	Refrigerant Leak Detection	Criteria 5-9	1	0	0		0.0%		Stage 3	Where systems using refrigerants have a permanent automated refrigerant leak detection system installed
Pol 02	NOx Emissions ≤ 56 mg/kWh	Criterion 1	1	0	0		0.00%	Mechanical Engineer	Stage 2	Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a NOx emission level (measured on a dry basis at 0% excess O_2) of ≤56 mg/kWh **Currently, French grid electricity has a default NOx value of 250mg/kWh.**
	NOx Emissions ≤ 40 mg/kWh	Criterion 1	1	0	0		0.00%		Stage 2	
Pol 03	Flood Risk	Criteria 1-5	2	2	2		1.17%	Civil Engineer	Stage 2	Commission a Flood Risk Assessment to provide confirm of low probability of flooding
	Surface Water Run Off	Criterion 6	Pre-requisite						Stage 2	Consultant's report
		Criteria 7-8	1	1	1		0.58%		Stage 3	Where drainage measures are specified to ensure 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.
		Criteria 9-14	1	0	1		0.00%		Stage 3	Drainage design measures are specified to ensure 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 for the 100-year 6-hour event, including an allowance for climate change.
	Minimising Water Course Pollution	Criteria 15-21	1	0	0		0.00%		Stage 3	Where there is a high risk of contamination or spillage of substances such as petrol and oil separators are installed in surface water drainage systems. **Site is unlikely to attenuate the first 5mm of rainwater**
Pol 04	Reduction of Night Time Light Pollution	Criteria 1-4	1	1	1		0.58%	Electrical Engineer	Stage 3	Lighting design in compliance with BREEAM requirements

Credit		Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Pol 05	Noise Attenuation	Criteria 1-5	1	1	1		0.58%	Acoustician	Stage 2	Carry out a initial background noise survey. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level.
Total			**12**	**6**	**7**	**0**	0.58%		**1.750%**	
Innovation										
							10%			
Man 03	CCS Exemplary level Achieved	Criteria 2-4	1	0	1	0	1.00%	PM Contractor		Contractor to achieve a final CCS score of 40+
Man 05	3 Year Post Occupancy Evaluation	Criteria 2-4	1	1	1	0	1.00%	DfI		Letter of commitment from the occupier that operational infrastructure and resources will be in place to coordinate the evaluation activities at quarterly intervals for the first three years of building occupation
Hea 02	Indoor Air Quality	Criteria 20-23	2	0	0	0	1.00%	Architect		**One Credit:** At least four of the five relevant product types meet emission limits, testing requirements and any additional requirements **Two Credits:** All product types meet the emission limits, testing requirements and any additional requirements
Ene 01	Reduction of Energy Use	Criteria 2-4	5	0	0	0	1.00%	Mechanical Engineer		Building has been modelled using Option 1 and this demonstrates that the building is energy positive
Tra 03	Alternative Modes of Transport	Criterion 6	1	1	1	0	1.00%	DfI Transport Consultant		Two of the options have been implemented.
Wat 01	Water Performance 65%	Criteria 1-3	1	0	0	0	1.00%	Architect Mechanical Engineer		Wat 01 performance of at least 65%
Mat 01	Material Specification - Major Building Elements	Criteria 6-7	5	0	0	0	1.00%	Architect		Scheme acheives at least 85% of Mat 01 calculator points A range of at least 10 products specified at DS and installed by PCS are covered by verified manufacturer specified EPD
Mat 03	Responsible Sourcing of Materials Exemplary Level of Compliance	Criterion 6	1	0	0	0	1.00%	Architect Contractor		At least 52% of the available responsible sourcing points are achieved
Wst 01	Construction Site Waste Management	Criteria 12-13	1	0	0	0	1.00%	Contractor		Criteria 1 to 11 , where applicable, are achieved ≥75% (by weight) or≥65% (by volume) of construction waste diverted from landfill ≥ 75% (by weight) or ≥ 65% (by volume) of demolition waste diverted from landfill
Wst 02	Recycled Aggregates	Criteria 3-4	1	0	0	0	1.00%	Civil Engineer Contractor		Total amount of recycled or secondary aggregate specified is greater than 50% plus within 30km by road
Wst 05	Adaption to Climate Change	Criterion 2	1	0	1	0	1.00%	Structural Engineer		Wst 05 (Criterion 1), Hea 4 Thermal Comfort, Hea 7 Hazards, Ene 1 (8 credits), Ene 4 Passive Design, Wat 1 (3 credits), Mat 5 Material Degradation, Pol 3 Flood Risk and 2 x Surface Water Run-off
Total				**2**	**4**	**0**	1.00%		**2.00%**	

Phase 1B Westaway Court BREEAM 2016 Intl

ARUP

BREEAM International 2016 Pre-Assessment

Bespoke : Healthcare (General Hospital)

Project Name: Westaway Court

Project Number: 237035

BREEAM Ref: Scheme to be registered by Assessing company

Date: 28/03/2018

Issue: Stage 1

Revision: 1

*** Reference must be made to the current Technical Manual (SD233: 1.0) for full credits requirements ***

Target
Excellent = 70%

Score	
Baseline	**Potential**
70.52%	75.80%
Excellent	**Excellent**

Credit at risk of time out OR loss
Credit requires early stage actions
Potential credit to target
Credit not currently targeted
Mandatory credit to achieve Excellent rating

Credit		Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Management										
Management Section Weighting							**11.0%**			
Man 01	Stakeholder Consultation (Project Delivery)	Criteria 1-3	1	1	1		0.52%	PM	Stage 1 - 2	The design team have met to identify and define their roles, responsibilities and contributions for each of the key phases of project delivery. [Linked to Soft Landings]
	Stakeholder Consultation (Third Party)	Criteria 4-6	1	1	1		0.52%	PM DfI	Stage 1 - 3	Consultation plan to be provided including feedback in design. Evidence of consultation meetings. Demonstration of feedback from consultation.
	Sustainability Champion (Design)	Criteria 8-10	1	1	1		0.52%	BREEAM AP	Stage 2	BREEAM to be regular agenda item at DT meetings and produce AP progress reports
	Sustainability Champion (Monitoring Progress)	Criteria 11-12	1	0	1		0.00%	BREEAM AP	Stage 4	BREEAM to be regular agenda item at DT meetings AP progress reports **To be undertaken on Island**
Man 02	Elemental Life Cycle Cost (LCC)	Criteria 1-2	2	2	2		1.05%	PM	Stage 2	An elemental life cycle cost (LCC) analysis has been carried out
	Component Level LCC Plan	Criteria 3-4	1	0	1		0.00%		Stage 4	A component level LCC plan has been developed
	Capital Cost Reporting	Criterion 5	1	1	1		0.52%	PM	Stage 5	Report the capital cost for the building in pounds per square metre (£k/ m2)
Man 03	Environmental Management	Criteria 1-3	1	1	1		0.52%	PM Contractor	Stage 3	*Relevant commitments in Contractor Specification* The principal contractor operates an environmental management system (EMS) covering their main operations. A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy use, water consumption and transport data resulting from all on-site construction processes
	Sustainability Champion (Construction)	Criteria 4-6	1	1	1		0.52%		Stage 3	
	Considerate Construction	Criterion 7	2	2	2		1.05%		Stage 3	
	Monitoring of Construction Site Impacts	Criterion 8	Pre-requisite						Stage 3	
	Utility Consumption	Criteria 9-12	1	1	1		0.52%		Stage 3	
	Transport of Construction Materials & Waste	Criteria 13-14	1	1	1		0.52%		Stage 3	
Man 04	Commissioning Schedule and Responsibilities	Criteria 1-4	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 2	A schedule of commissioning and testing
	Commissioning Building Services	Criterion 5	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 2	A specialist commissioning manager is appointed by the contractor
	Commissioning Building Fabric	Criteria 6-8	1	1	1		0.52%	Architect Contractor	Stage 2	This can be demonstrated through the completion of a thermographic survey and an airtightness test and inspection
	Handover	Criteria 10-13	1	1	1		0.52%	PM Contractor	Stage 3	Building User Guide, Training Schedule will be developed by the contractor
Man 05	Aftercare Support	Criteria 1-2	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 3	Operational infrastructure and resources in place to provide aftercare support to the building occupier
	Seasonal Commissioning	Criterion 3	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 3	Seasonal commissioning activities will be completed over a minimum 12-month period,
	Post Occupancy Evaluation	Criteria 4-5	1	1	1		0.52%	PM DfI	Stage 3	The client makes a commitment to carry out a third party post-occupancy evaluation (POE) exercise one year after initial building occupation.
Total			**21**	**19**	**21**	**0**	9.95%		**9.95%**	
Health and Wellbeing										
Health and Wellbeing Section Weighting							**14%**			
Hea 01	High Frequency Ballasts	Criterion 1	Pre-requisite					Electrical Engineer	Stage 2	All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts
	Glare Control	Criteria 2-3	1	1	0		0.67%	Architect	Stage 2	The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas.
	Daylighting	Criterion 4	2	0	1		0.00%	Architect	Stage 3	The relevant building areas meet good practice daylight factor(s) 1 credit = 80% of area has average daylight factor of 2% plus additional uniformity reqs Certain areas can be excluded from the requirements
	View Out	Criteria 5-6	2	1	1		0.67%	Architect	Stage 2	95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening that provides an adequate view out. *The window/opening size required as a percentage of surrounding wall area depending on the distance of the desk or work space to the window or opening can vary.* The second credit can be awarded where the distance between the wall with the window/opening and nearest external solid object (e.g. buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces, e.g. wards and dayrooms. Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes or the mortuary
	Internal & External Lighting Levels, Zoning & Control	Criteria 7-11	1	1	1		0.67%	Electrical Engineer	Stage 2	Lighting design in compliance with BREEAM requirements
Hea 02	No Asbestos	Criterion 1	Pre-requisite					Architect		Materials containing asbestos are prohibited from being specified and used within the building.
	Indoor Air Quality (IAQ) Plan	Criterion 2	1	1	1		0.67%	Mechanical Engineer Contractor	Stage 2	An indoor air quality plan has been produced and implemented that minimise indoor air pollution during the design, construction and occupation of the building.
	Ventilation	Criteria 3-8	1	1	1		0.67%	Mechanical Engineer	Stage 2	Design drawings showing building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution; Areas of the building subject to large and unpredictable or variable occupancy patterns have carbon dioxide (CO2) or air quality sensors which are linked to the mechanical ventilation system and provide demand-controlled ventilation to the space.
	VOCs (Products)	Criteria 9-10	1	1	1		0.67%	Architect Contractor	Stage 3	*Relevant clauses in architect specification or workmanship clauses* Products meet the testing requirements and emission levels criteria for volatile organic compound (VOC) emissions
	VOCs (Post Construction)	Criteria 11-17	1	1	1		0.67%	PM Contractor	Stage 3	Commitment to carry out post construction (but pre-occupancy) testing for formaldehyde and total volatile organic compound (TVOC) concentration level.
	Potential for Natural Ventilation	Criteria 18-19	1	0	0		0.00%	Mechanical Engineer Architect	Stage 3	The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios.
Hea 03	Laboratory Containment Devices and Containment Areas	Criteria 1-3	1	1	1		0.67%	Mechanical Engineer	Stage 3	Where containment devices such as fume cupboards are specified their manufacture and installation meet best practice safety and performance requirements and objectives
	Buildings with Containment Level 2 and 3 Laboratory Facilities	Criteria 4-5	1	1	1		0.67%	Mechanical Engineer	Stage 3	Where containment level 2 and 3 laboratory facilities are specified they must meet best practice safety and performance criteria and objectives.
Hea 04	Thermal Modelling	Criteria 1-5	1	1	1		0.67%	Mechanical Engineer	Stage 3	Thermal Model Results and thermal modelling analysis has informed the temperature control strategy for the building and its users.
	Adaptability - Projected Climate Change Scenario	Criteria 6-9	1	1	1		0.67%		Stage 3	The thermal modelling demonstrates that building requirements are achieved for a projected climate change environment
	Thermal Zoning and Controls	Criteria 9-11	1	1	1		0.67%	Mechanical Engineer	Stage 3	The strategy for proposed heating/cooling system(s) demonstrates that it has addressed zoning, occupant control, interaction with other systems and manual override.
Hea 05	Mandatory Appointment of Acoustician	Criterion 1	Pre-requisite					Acoustician	Stage 2	Acoustician appointed
	Acoustic Performance - Noise Levels	Criterion 2	2	2	2		1.33%	Acoustician	Stage 2	Airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant Building Regulations or Standards.

Credit		Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Hea 06	Safe Access	Criteria 1-11	1	0	1		0.00%	Architect	Stage 3	Cycle lanes provide direct access from site entrances to cycle storage and (where relevant) connect to off-site cycle paths. Footpaths on site provide direct access from site entrances to building entrances. Where provided, drop-off areas are designed off, or adjoining, the access road and provide direct access to pedestrian footpaths. Pedestrian crossings, signposting and compiant lighting of access roads, paths and cycle lanes.
	Inclusive and Accessible Design	Criteria 12-14	1	1	1		0.67%	Architect	Stage 2	An access strategy is developed in line with Checklist A3. The access strategy addresses, as a minimum, access to and throughout the development for all users, with particular emphasis on the following: * Disabled users; addressing and proposing design solutions that remove obstacles that define disability * People of different age groups, genders, ethnicity and fitness levels * Parents with children
Hea 09	Water Quality	Criteria 1-3	1	1	1		0.67%	Mechanical Engineer Architect DfI	Stage 2	All water systems in the building are designed in compliance with the measures outlined in the relevant national health and safety best practice guides or regulations to minimise the risk of microbial contamination, e.g. legionellosis. A wholesome supply of accessible potable drinking water is supplied as follows in the permanently **staffed areas** and in **patient and visitor waiting areas**.
Total			**21**	**16**	**17**	**0**	0.67%		**10.67%**	Minimum standard (criterion 1 only)
Hazards Total			**0**	**0**	**0**	**0**	#DIV/0!		**0.00%**	
Energy										
Energy Section Weighting							**15%**			
Ene 01	Reduction of Energy Use & CO_2 Emissions	Criteria 1-4	15	6	6		3.00%	Mechanical Engineer	Stage 2	**Minimum Excellent standard: 6 credits** IES Model Design team co-ordination required to significantly reduce the buildings energy consumption in the most cost effective way possible
Ene 02	Monitoring of Major Energy Systems	Criteria 1-2	1	1	1		0.50%	Mechanical Engineer	Stage 2	Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption includes lifts.
	Monitoring of Energy Use by Area	Criterion 3	1	1	1		0.50%	Mechanical Engineer	Stage 2	1) Operating department 2) Mortuary and post-mortem department 3) Pharmacy department 4) Laboratories 5) MRI 6) Oncology 7) Renal dialysis
Ene 03	External Lighting	Criteria 1-4	1	1	1		0.50%	Mechanical Engineer	Stage 2	Lighting design in compliance with BREEAM requirements
Ene 04	Passive Design Analysis	Criteria 1-3	1	1	1		0.50%	Mechanical Engineer	Stage 2	The project team carries out an analysis of the proposed building design/development to influence decisions made during Concept Design stage
	Free Cooling	Criteria 4-5	1	0	0		0.00%	Mechanical Engineer	Stage 2	The building uses ANY of the free cooling strategies and no mechanical cooling.
	Feasibility Study	Criteria 6-7	1	1	1		0.50%	Mechanical Engineer	Stage 2	LZC study and specification of technology e.g. PV & Solar Thermal Hot Water
Ene 05	Energy Efficient Design, Installation and Commissioning	Criteria 1-2	1	1	1		0.50%	Mechanical Engineer Medical Planners	Stage 3	Need to identify with Refrigeration Engineer whether this credit can be targeted. It client correspondence confirms that not all items are on Enhanced Capital Allowance (ECA) Energy Technology Product List.
	Energy Efficiency Criteria	Criterion 3	1	1	1		0.50%		Stage 3	
	Indirect Greenhouse Gas Emissions	Criteria 4-5	1	0	1		0.00%	Mechanical Engineer Medical Planners	Stage 2	
Ene 06	Lift/Transportation Analysis Systems	Criterion 1	1	1	1		0.50%	Mechanical Engineer	Stage 2	Lift analysis to be carried out. Energy analysis completed
	Energy Efficient Transportation Systems	Criteria 2-4	2	2	2		1.00%	Mechanical Engineer	Stage 3	Relevant clause in the specification Manufacturer's product data The use of regenerative drives is demonstrated to save energy, if so, they are specified.
	Regenerative Drives	Criteria 5-6							Stage 3	
Ene 07	Laboratory Design Specification and Best Practice Efficient Measures	Criteria 1-6	1	1	1		0.50%	Mechanical Engineer	Stage 2	Client engagement is sought through consultation during the preparation of the initial project brief to determine occupant requirements and define laboratory performance criteria
Ene 08	Energy Efficient Equipment	Criterion 1	2	2	2		1.00%	PM DfI Mechanical Engineer Medical Planners	Stage 3	Identify the building's unregulated energy consuming loads and estimate their contribution to the total annual unregulated energy consumption of the building. Identify unregulated energy load from significantly contributing systems (small power or kitchen & catering facilities).
Total			**30**	**19**	**20**	**0**	0.50%		**9.50%**	
Transport										
Transport Section Weighting							**10.0%**			
Tra 01	Public Transport Accessibility Index	Criterion 1	5	2	2		2.00%	Transport Consultant	Stage 2	**Other building - Visitors.** Scale Map highlighting the transport nodes Timetables for each service
Tra 02	Proximity to Amenities	Criterion 1	1	1	1		1.00%	Transport Consultant	Stage 2	**Other building - Visitors.** Scale Map highlighting the accessible amenities
Tra 03	Alternative Modes of Transport	Criterion 1	2	2	2		2.00%	Transport Consultant	Stage 2	**Other building - Visitors.** A single credit can be awarded where spaces for staff only are provided as well as the appropriate compliant cyclist facilities. Compliant cycle facilities i.e. racks [1 cycle space per 10 staff] Compliant cycle facilities i.e. racks [1 cycle space per 10 building beds]
Tra 04	Maximum Car Parking	Criterion 1	1	1	1		1.00%	Transport Consultant	Stage 2	The maximum number of parking spaces provided must not be greater than the total of the following: - One parking space for every four staff, plus; - One parking space for every four beds, plus - Two parking spaces for each consulting, examination, treatment, therapy room and A&E cubicle.
Tra 05	Travel Plan	Criteria 1-5	1	1	1		1.00%	Transport Consultant DfI	Stage 2	A site specific travel assessment/statement has been undertaken An updated travel plan has been developed as part of the feasibility and design stages.
Total			**10**	**7**	**7**	**0**	1.00%		**7.00%**	
Water										
Water Section Weighting							**9.0%**			
Wat 01	Water Performance 12.5%	Criteria 1-7	1	1	1		0.90%	Architect Mechanical Engineer	Stage 3	**Precipitation zone 1** The water consumption (L/person/day) for the assessed building is compared against a baseline performance.
	Water Performance 25%		1	1	1		0.90%		Stage 3	
	Water Performance 40%		1	1	1		0.90%		Stage 3	
	Water Performance 50%		1	0	1		0.00%		Stage 3	Level 4 Specification required
	Water Performance 55%		1	0	0		0.00%		Stage 3	Level 5 Specification required
Wat 02	Water Monitoring	Mandatory Criteria 1	Pre-requisite					Mechanical Engineer	Stage 3	The specification of a water meter on the mains water supply to each building
		Criteria 2-4	1	1	1		0.90%		Stage 3	Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters Areas that will consume 10% will need a separate water meter to be fitted specifically for that area. Laboratory: a separate water meter is fitted on the water supply to any process or cooling loop for plumbed-in laboratory process equipment
Wat 03	Leak Detection System	Criterion 1	1	1	1		0.90%	Mechanical Engineer	Stage 3	A leak detection system is specified
	Flow Control Devices	Criterion 2	1	0	0		0.00%		Stage 2	Unlikely that flow control devices that regulate the supply of water to each WC area or facility according to demand are installed (and therefore minimise water leaks and wastage from sanitary fittings).
	Leak Isolation	Criterion 3	1	1	1		0.90%		Stage 3	Isolation valves are located in an accessible place that allows hot and cold water to be isolated by hand separately (switched on or off)
Wat 04	Water Efficient Equipment	Criteria 1-3	1	1	1		0.90%	Architect	Stage 3	Where there is no water demand from uses other than domestic-scale drinking and sanitary use components in the building this issue is not applicable and does not require assessment.
Total			**10**	**7**	**8**	**0**	0.80%		**6.30%**	

Credit		Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Materials										
Materials Section Weighting							**15.0%**			
Mat 01	Material Specification - Major Building Elements	Criteria 1-3	6	2	2		2.50%	Architect	Stage 2	Breakdown of Material Specification inc GG Ratings (ideally A or A+) Design Drawings Output of BRE Mat 01 Calculator Tool
Mat 02	Hard Landscaping and Boundary Protection	Criterion 1	0	0	0		0.00%	Architect	Stage 2	Not assessed in BREEAM International
Mat 03	Responsible Sourcing of Timber	Criterion 1	Pre-requisite					Contractor	Stage 3	Legally harvested and traded timber
	Sustainable Procurement Plan	Criterion 2	1	1	1		1.25%	PM Contractor	Stage 2	By the end of concept design stage, the client or developer has a documented policy and procedure that sets out procurement requirements for all suppliers and trades to adhere to relating to the responsible sourcing of construction products.
	Responsible Sourcing of Materials	Criterion 3	3	1	1		1.25%	Architect Structural Engineer PM Contractor	Stage 3	Where the applicable building materials are responsibly sourced in accordance with the BREEAM methodology
Mat 05	Designing for Durability and Resilience	Criteria 1-1	1	1	1		1.25%	Architect	Stage 2	**Protecting vulnerable parts of the building from damage** The building incorporates suitable durability and protection measures **Protecting exposed parts of the building from material degradation** The relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors.
Mat 06	Material Efficiency	Criterion 1	1	1	1		1.25%	PM Structural Engineer	Stage 1-5	Opportunities have been identified, and appropriate measures investigated and implemented, to optimise the use of materials in building design, procurement, construction, maintenance and end of life. At Stage 1, the project needs to set requirements that will inform decisions throughout the design and construction.
Total			**12**	**6**	**6**	**0**	7.5%		**7.50%**	
Waste										
Waste Section Weighting							**8.00%**			
Wst 01	Construction Site Waste Management	Criteria 1-3	2	2	2		2.29%	PM Contractor	Stage 3	*Where appropriate targets for the amount of non-hazardous and hazardous waste produced on site are set in m³ of waste per 100m² or tonnes of waste per 100m² *Procedures are in place to minimise non-hazardous and hazardous waste in line with the targets. *The amount of site construction waste created is being monitored and targets regularly reviewed. *The design or site management team has nominated an individual responsible for implementing the above. **Second Credit** Procedures are in place for sorting, reusing and recycling construction waste into at least five defined waste groups either on site or off-site through a licensed external contractor.
	Diversion from Landfill	Criteria 4 -6	1	0	0		0.00%		Stage 3	A significant quantity of non-hazardous construction and demolition waste (where applicable) generated by the project has been diverted from landfill.
Wst 02	Recycled Aggregates	Criteria 1-3	1	0	0		0.00%	Civil Engineer Contractor	Stage 3	The percentage of high grade aggregate that is recycled or secondary aggregate
Wst 03	Operational Waste	Criteria 1-4	1	1	1		1.14%	Architect Medical Planners	Stage 3	Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building, its occupant(s) and activities. Where the consistent generation in volume of the appropriate operational waste streams is likely to exist, e.g. large amounts of packaging or compostable waste generated by the building's use and operation, the following facilities are provided: a. Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space. b. adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility. A compliant waste management strategy (i.e. one which covers hazardous waste, clinical waste, sharps and domestic waste, has input from a range of stakeholders including supply chain, clinical staff and FM, plus other requirements).
Wst 05	Adaption to Climate Change	Criteria 1	1	1	1		1.14%	Structural Engineer	Stage 2	Conduct a climate change adaptation strategy appraisal for structural and fabric resilience
Wst 06	Functional Adaptability	Criteria 1-2	1	1	1		1.14%	Architect Mechanical Engineer	Stage 2	A building-specific functional adaptation strategy study has been undertaken by the developer and design team to accommodate future changes of use of the building over its lifespan.
Total			**7**	**5**	**5**	**0**	1.14%		**5.71%**	
Land Use and Ecology										
Land Use and Ecology Section Weighting							**11.0%**			
LE 01	Re-Use of Land	Criterion 1	2	2	2		2.20%	Architect	Stage 2	Design drawings indicating area (m2) of previously developed land and location and footprint (m2) of proposed development
	Contaminated Land	Criteria 2-3	1	0	0		0.00%	Ecologist	Stage 2	We don't believe the site to be contaminated to the level requiring remediation
LE 02	Ecological Value of Site	Criterion 1	1	1	1		1.10%	Ecologist	Stage 2	Land within the construction zone is defined as 'land of low ecological value'
	Protection of Ecological Features	Criteria 2-3	1	1	1		1.10%	Ecologist	Stage 2	All existing features of ecological value within and surrounding the construction zone and site boundary area are adequately protected from damage
LE 03	Mitigating Ecological Impact	Criterion 1	0	0	0		0.00%	Landscape Architect Ecologist	Stage 1	Not assessed in BREEAM International
		Criterion 2	0	0	0		0.00%	Landscape Architect Ecologist	Stage 2	
LE 04	Enhancing Site Ecology	Criteria 1-4	1	1	1		1.10%	Landscape Architect Ecologist	Stage 2	The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build.
		Criteria 3-5	2	1	2		1.10%	Landscape Architect Ecologist	Stage 2	
LE 05	Long Term Impact on Biodiversity	Criteria 1-4	Pre-requisite					Ecologist	Stage 2	5 Year Landscape and habitat management plan (where required) All relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with during the design and construction process.
		Criteria 5-9	2	2	2		2.20%	PM Contractor	Stage 3	Where additional measures to improve the assessed site's long term biodiversity are adopted
Total			**10**	**8**	**9**	**0**	1.80%		**8.80%**	
Pollution										
Pollution Section Weighting								**7.0%**		
Pol 01	Impact of Refrigerants	Criteria 2-4	2	1	1		0.583%	Mechanical Engineer	Stage 3	Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC CO2e) of≤1000 kgCO2e/kW cooling/heating capacity.
	Refrigerant Leak Detection	Criteria 5-9	1	0	1		0.000%		Stage 3	Where systems using refrigerants have a permanent automated refrigerant leak detection system installed
Pol 02	NOx Emissions ≤ 56 mg/kWh	Criterion 1	1	0	0		0.000%	Mechanical Engineer	Stage 2	Where the plant installed to meet the building's delivered heating and hot water demand has, under normal operating conditions, a NOx emission level (measured on a dry basis at 0% excess O_2) of ≤56 mg/kWh. **Currently, French grid electricity has a default NOx value of 250mg/kWh.**
	NOx Emissions ≤ 40 mg/kWh	Criterion 1	1	0	0		0.000%		Stage 2	
Pol 03	Flood Risk	Criteria 1-5	2	2	2		1.167%	Civil Engineer	Stage 2	Commission a Flood Risk Assessment to provide confirm of low probability of flooding
	Surface Water Run Off	Criterion 6	Pre-requisite						Stage 2	Consultant's report
		Criteria 7-8	1	1	1		0.583%		Stage 3	Where drainage measures are specified to ensure 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.
		Criteria 9-14	1	0	1		0.000%		Stage 3	Drainage design measures are specified to ensure 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 for the 100-year 6-hour event, including an allowance for climate change.
	Minimising Water Course Pollution	Criteria 15-21	1	1	1		0.583%		Stage 3	Where there is a high risk of contamination or spillage of substances such as petrol and oil separators are installed in surface water drainage systems. **Site is likely to attenuate the first 5mm of rainwater through use of SUDS**

Credit		Ref	Credits					Design Team Member Responsible	Target Action Date	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting			
Pol 04	Reduction of Night Time Light Pollution	Criteria 1-4	1	1	1		0.583%	Electrical Engineer	Stage 3	Lighting design in compliance with BREEAM requirements
Pol 05	Noise Attenuation	Criteria 1-5	1	1	1		0.583%	Acoustician	Stage 2	Carry out a initial background noise survey. The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to 23:00) and +3dB at night (23:00 to 07:00) compared to the background noise level.
Total			**12**	**7**	**9**	**0**	0.58%		**1.750%**	
Innovation										
							10%			
Man 03	CCS Exemplary level Achieved	Criteria 2-4	1	0	1		1.00%	PM Contractor		Contractor to achieve a final CCS score of 40+
Man 05	3 Year Post Occupancy Evaluation	Criteria 2-4	1	1	1		1.00%	Dfl		Letter of commitment from the occupier that operational infrastructure and resources will be in place to coordinate the evaluation activities at quarterly intervals for the first three years of building occupation
Hea 02	Indoor Air Quality	Criteria 20-23	2				1.00%	Architect		**One Credit:** At least four of the five relevant product types meet emission limits, testing requirements and any additional requirements **Two Credits:** All product types meet the emission limits, testing requirements and any additional requirements
Ene 01	Reduction of Energy Use	Criteria 2-4	5				1.00%	Mechanical Engineer		Building has been modelled using Option 1 and this demonstrates that the building is energy positive
Tra 03	Alternative Modes of Transport	Criterion 6	1	0	0		1.00%	Dfl Transport Consultant		Two of the options have been implemented.
Wat 01	Water Performance 65%	Criteria 1-3	1				1.00%	Architect Mechanical Engineer		Wat 01 performance of at least 65%
Mat 01	Material Specification - Major Building Elements	Criteria 6-7	5				1.00%	Architect		Scheme acheives at least 85% of Mat 01 calculator points A range of at least 10 products specified at DS and installed by PCS are covered by verified manufacturer specified EPD
Mat 03	Responsible Sourcing of Materials Exemplary Level of Compliance	Criterion 6	1				1.00%	Architect Contractor		At least 52% of the available responsible sourcing points are achieved
Wst 01	Construction Site Waste Management	Criteria 12-13	1				1.00%	Contractor		Criteria 1 to 11 , where applicable, are achieved ≥75% (by weight) or≥65% (by volume) of construction waste diverted from landfill ≥ 75% (by weight) or ≥ 65% (by volume) of demolition waste diverted from landfill
Wst 02	Recycled Aggregates	Criteria 3-4	1				1.00%	Civil Engineer Contractor		Total amount of recycled or secondary aggregate specified is greater than 50% plus within 30km by road
Wst 05	Adaption to Climate Change	Criterion 2	1				1.00%	Structural Engineer		Wst 05 (Criterion 1), Hea 4 Thermal Comfort, Hea 7 Hazards, Ene 1 (8 credits), Ene 4 Passive Design, Wat 1 (3 credits), Mat 5 Material Degradation, Pol 3 Flood Risk and 2 x Surface Water Run-off
Total				**1**	**2**	**0**	1.00%		**1.00%**	