Department for Infrastructure Jersey Future Hospital BREEAM International 2016 Pre-Assessment Planning Report

P01 | 28 March 2018

This report takes into account the particular instructions and requirements of our client. It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 237035

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# ARUP

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Appendix A BREEAM Pre-Assessments

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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

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

#### **About BREEAM** 1.1

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 Materials •
- Health & Wellbeing •
- Energy •
- Transport
- Water .

- 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  $\geq$  30, Good  $\geq$  45, Very Good  $\geq$  55, Excellent  $\geq$  70 or Outstanding  $\geq 85$ ).

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
- | P01 | 28 March 2018 NGLOBALEUROPE/CARDIFFJ/0BS/237000/237035-00/4 INTERNAL PROJECT DATA/4-100 BREEAM/4D PLANNING APPLICATION/BREEAM PLANNING REPORT - UPDATED VERSION FOR 2018 SUBMISSION ISSUE DOCX

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

Sco	re
Baseline	Potential
70.76%	80.10%
Excellent	Excellent

#### 2.2 Westaway Court

Score	2
Baseline	Potential
70.52%	75.80%
Excellent	Excellent

Appendix A

**BREEAM Pre-Assessments** 

# Phase 1AMain Building BREEAM 2016 Intl



Excellent = 70%

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

Baseline

70.76%

Excellent

Potential

80.10%

Excellent

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 \*

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	Def			Cred	lits		Design Team Mombor	Target	Outling Design Store Actions
	Credit	Ref	Available	Baseline	Potential	Achieved	Weighting	Member Responsible	Action Date	Outline Design Stage Actions
Manage	ment									
	ment Section Weighting						11.0%			
	Stakeholder Consultation (Project Delivery)	Criteria 1-3	1	1	1		0.52%	РМ	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]
Man 01	Stakeholder Consultation (Third Party)	Criteria 4-6	1	1	1		0.52%	PM/Díī	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
	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
Man 02	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 )
	Environmental Management	Criteria 1-3	1	1	1		0.52%		Stage 3	
	Sustainability Champion (Construction)	Criteria 4-6	1	1	1		0.52%		Stage 3	Relevant commitments in Contractor Specification The principal contractor operates an environmental management system (EMS) covering their main
Man 03	Considerate Construction	Criterion 7	2	2	2		1.05%	PM	Stage 3	operations. A Sustainability Champion is appointed to monitor the project to ensure ongoing compliance with the
	Monitoring of Construction Site Impacts	Criterion 8		r	Pre-requ	risite		Contractor	Stage 3	relevant sustainability performance/process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages
1	Utility Consumption	Criteria 9-12	1	1	1		0.52%		Stage 3	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
	Transport of Construction Materials & Waste	Criteria 13-14	1	1	1		0.52%		Stage 3	
	Commissioning Schedule and Responsibilities	Criteria 1-4	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 2	A schedule of commissioning and testing
Man 04	Commissioning Building Services	Criterion 5	1	1	1		0.52%	Mechanical Engineer Contractor	Stage 2	A specialist commissioning manager is appointed by the contractor
stan 04	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
	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
Man 05		1-2 Criterion						Contractor Mechanical Engineer		
	Seasonal Commissioning	3 Criteria	1	1	1		0.52%	Contractor PM	Stage 3	Seasonal commissioning activities will be completed over a minimum 12-month period, The Client makes a commitment to carry out a third party post-occupancy evaluation (POE) exercise
	Post Occupancy Evaluation	4-5	1	1	1		0.52%	Client	Stage 3	one year after initial building occupation.
	Total		21	21	21	0	0.52%		11.00%	
	and Wellbeing							1	[	
Health a	and Wellbeing Section Weighting	Criterion					14%			
	High Frequency Ballasts	1			Pre-requ	iisite		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
Hea 01	View Out	Criteria 5-6	2	0	I		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 adoptionate view out. The window/opening size required as a percentage of surrounding will area depending on the distance of the desk or work space to the window or opening can wars. 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 210m for patient occupied spaces, e.g. wards and dayrooms. Certain areas can be excluded e.g. workstations located centrally for observational and/or security
		Colorada								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
	No Asbestos	Criterion 1			Pre-requ	risite		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. Design drawings showing building's air intakes and exhausts are over 10m apart and intakes are over
Hea 02	Ventilation	Criteria 3-8	1	1	1		0.67%	Mechanical Engineer	Stage 2	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-controller 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.
U	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
Hea 03	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.
	Thermal Modelling	Criteria	1	1	1		0.67%		Stage 3	Thermal Model Results and thermal modelling analysis has informed the temperature control strategy
	Adaptability - Projected Climate Change Scenario	1-5 Criteria		1	1		0.67%	Mechanical Engineer		for the building and its users. The thermal modelling demonstrates that building requirements are achieved for a projected climate
Hea 04		6-9 Criteria	1					Mashanias P1	Stage 3	change environment The strategy for proposed heating/cooling system(s) demonstrates that it has addressed zoning,
	Thermal Zoning and Controls Mandatory Appointment of Acoustician	9-11 Criterion	1	1	1 Pre-requ	risite	0.67%	Mechanical Engineer Acoustician	Stage 3 Stage 2	courpart control, interaction with other systems and manual override. Acoustician appointed
Hea 05		1 Criterion			-	ante				Acoustician appointed Arborne sound insulation values are at least 5dB higher and impact sound insulation values are at least
	Acoustic Performance - Noise Levels	2	2	2	2		1.33%	Acoustician	Stage 2	Autorne sound insulation values are at least 30th higher and impact sound insulation values are at least 5dB lower than the performance standards in the relevant Building Regulations or Standards.

Vertical						Creo	lits		Design Team	Target		
Normal Part of the sector of the se		Credit	Ref	Available	Recoline	Potential	Achieved	Woighting	Member	Action	Outline Design Stage Actions	
Image: state in the state				Available	Baseline	Potential	Achieved	Weighting	Responsible	Date	off-site cycle paths.	
	Hea 06	Safe Access		1	0	1		0.00%	Architect	Stage 3	Where provided, drop-off areas are designed off, or adjoining, the access road and provide direct access to pedestrian footpaths.	
image         image <t< td=""><td></td><td>Inclusive and Accessible Design</td><td></td><td>I</td><td>1</td><td>1</td><td></td><td>0.67%</td><td>Architect</td><td>Stage 2</td><td>minimum, access to and throughout the development for all users, with particular emphasis on the following: <sup>a</sup> Disabled users; addressing and proposing design solutions that remove obstacles that define disability <sup>a</sup> People of different age groups, genders, ethnicity and fitness levels</td></t<>		Inclusive and Accessible Design		I	1	1		0.67%	Architect	Stage 2	minimum, access to and throughout the development for all users, with particular emphasis on the following: <sup>a</sup> Disabled users; addressing and proposing design solutions that remove obstacles that define disability <sup>a</sup> People of different age groups, genders, ethnicity and fitness levels	
Participant state	Hea 07	Hazards		0	0	0		0.00%	Mechanical Engineer	Stage 2	A risk assessment is carried out at the outline proposal or Concept Design stage by an appropriate	
Unitary (Constrained and Constrained Action of Constrained Action	Hea 09	Water Quality		1	1	1		0.67%	Architect	Stage 2	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	
		Total		21	15	18	0	0.67%		10.00%	Minimum standard (criterion 1 only)	
Image: Set with the set of the		Hazards Total		0	0	0	0	#DIV/0!		0.00%		
Number of the constraint of the sector of the sector of the constraint of the sector of the		Soution Waighting					1	15%				
Marka         A <td>Ene 01</td> <td>Reduction of Energy Use &amp; CO2 Emissions</td> <td>1-4</td> <td></td> <td></td> <td></td> <td></td> <td>4.00%</td> <td></td> <td>-</td> <td>IES Model Design team co-ordination required to significantly reduce the buildings energy consumption in the most cost effective way possible</td>	Ene 01	Reduction of Energy Use & CO2 Emissions	1-4					4.00%		-	IES Model Design team co-ordination required to significantly reduce the buildings energy consumption in the most cost effective way possible	
Number of the second		Monitoring of Major Energy Systems		1	1	1		0.50%	Mechanical Engineer	Stage 2	consumption includes lifts.	
matrix	Ene 02	Monitoring of Energy Use by Area	Criterion 3	1	1	1		0.50%	Mechanical Engineer	Stage 2	2) Moritary and post-mortem department 3) Pharmacy department 4) Laboratories 5) MRI 6) Oncology	
Marge and matrix is a single and matrix is a	Ene 03	External Lighting	1-4	1	1	1		0.50%	Mechanical Engineer	Stage 2		
Markadi     Algoing			1-3								decisions made during Concept Design stage	
Mathematical control         Control         Control         And         Control         Mathematical control         Control         Mathematical control is and provided in the control is and	Ene 04		4-5									
Mathematical matrix         Matrix<		Energy Efficient Design, Installation and	Criteria								LZC study and specification of technology e.g. PV & Solar Thermal Hot Water	
Image: Section of the secti	Ene 05								Mechanical Engineer Medical Planner	-	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	
Mature interview         Mature interview<										-	Technology Product List.	
Image matrix				1							Lift analysis to be carried out.	
image in the second	Ene 06			-		-						
Image matrix and sequences of the sequence of the seque			Criteria	2	2	2		1.00%	Mechanical Engineer	Stage 3	Manufacturer's product data	
Image sharps and the strateging of the stra	Ene 07	Laboratory Design Specification and Best Practice Efficient Measures	Criteria	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	
Transport Section Weighting       Section Weighting         Urmsport Section Weighting       Control       S       2       2       2       2       2.007       Tamport Contain       Suppression       Suppression         URL       Note Tamport Accessibly Make       Control       S       2       2       2       2       2       2.007       Tamport Contain       Suppression       Sup	Ene 08	Energy Efficient Equipment	Criterion 1	2	2	2		1.00%	DfI Mechanical Engineer	Stage 3	Identify unregulated energy load from significantly contributing systems (small power or kitchen &	
Framework versionVersionVersionNo. 6%No. 6%No. 6%No. 6%No. 6%100No. Trangert Accounding hashsCrissenS22220%Trangert ContainSeg. 2Selve Main State Responsible Accounding hashsSeg. 2Seg. 2 <t< td=""><td></td><td>Total</td><td></td><td>30</td><td>21</td><td>24</td><td>0</td><td>0.50%</td><td></td><td>10.50%</td><td></td></t<>		Total		30	21	24	0	0.50%		10.50%		
Name Note Notice 							1		1			
Image: Constraint of the standard of th	Transpo	rt Section Weighting						10.0%			Other building - Visitors.	
1011101100 (Addition)Calcing (Addition)<	Tra 01	Public Transport Accessibility Index	Criterion 1	5	2	2		2.00%	Transport Consultant	Stage 2	Scale Map highlighting the transport nodes Timetables for each service	
Main         Main <th< td=""><td>Tra 02</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Scale Map highlighting the accessible amenities Other building - Visitors. A single credit can be awarded where spaces for staff only are provided as well as the appropriate</td></th<>	Tra 02										Scale Map highlighting the accessible amenities Other building - Visitors. A single credit can be awarded where spaces for staff only are provided as well as the appropriate	
In dumm Cr Paking     Cloin Internation	Tra 03	Alternative Modes of Transport	Criterion 1	2	2	2		2.00%	Transport Consultant	Stage 2	Compliant cycle facilities i.e. racks [1 cycle space per 10 staff]	
Norman         Norman         Norman         Norman         DM         Marphan         An updated race plan has been developed as part of the feasibility and design tages.           Intermed as part of the feasibility and design tages.           Total         7         0         0         0         7.00°         7.00°         7.00°           Value           Value         Value         Support to the feasibility and design tages.           Value           Value         Support to the feasibility and design tages.           Value           Value <td colspan<="" t<="" td=""><td>Tra 04</td><td>Maximum Car Parking</td><td>Criterion 1</td><td>1</td><td>1</td><td>1</td><td></td><td>1.00%</td><td>Transport Consultant</td><td>Stage 2</td><td><ul> <li>One parking space for every four beds, plus</li> </ul></td></td>	<td>Tra 04</td> <td>Maximum Car Parking</td> <td>Criterion 1</td> <td>1</td> <td>1</td> <td>1</td> <td></td> <td>1.00%</td> <td>Transport Consultant</td> <td>Stage 2</td> <td><ul> <li>One parking space for every four beds, plus</li> </ul></td>	Tra 04	Maximum Car Parking	Criterion 1	1	1	1		1.00%	Transport Consultant	Stage 2	<ul> <li>One parking space for every four beds, plus</li> </ul>
Number between the second se	Tra 05	Travel Plan		1	1	1		1.00%	Transport Consultant DfI	Stage 2		
Water Section WeightingValuer Performance 15%11110%100%Sage 3Precipitation are 1 Precipitation are 1 The water consumption (Uperson/day) for the assessed building is compared against a baceline Precipitation are 1 The water consumption (Uperson/day) for the assessed building is compared against a baceline Precipitation are 1 The water consumption (Uperson/day) for the assessed building is compared against a baceline Precipitation are 1 The water consumption (Uperson/day) for the assessed building is compared against a baceline Precipitation are 1 The water consumption (Uperson/day) for the assessed building is compared against a baceline Precipitation are 1 The water consumption (Uperson/day) for the assessed building is compared against a baceline 		Total		10	7	7	0	1.00%		7.00%		
Wate Performance 12%Name Performance 25%IIII100%Wate Performance 25%IIII100%Wate Performance 26%IIII100%Wate Performance 5%IIII100%Wate Performance 5%IIII100%Wate Performance 5%II0II000%Wate Performance 5%II0II000%Wate Performance 5%III0III000%Wate Performance 5%IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII		and an Websheller						0.07				
NAMEImage: Participant of the participant of	water S			1	1	1				Stage 3		
WateWateWateWatePrimate </td <td></td> <td></td> <td>4</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>The water consumption (L/person/day) for the assessed building is compared against a baseline</td>			4								The water consumption (L/person/day) for the assessed building is compared against a baseline	
Mar Performance 59%         Mar         O         Mar         O <td>Wat 01</td> <td></td> <td>Criteria 1-7</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>Architect Mechanical Engineer</td> <td>Stage 3</td> <td>performance.</td>	Wat 01		Criteria 1-7						Architect Mechanical Engineer	Stage 3	performance.	
Maddary Varie       Maddary Criteria       Maddary Criteria       Maddary Criteria       Maddary Criteria       Verter ver		Water Performance 50%		1	0	1		0.00%		Stage 3	Level 4 Specification required	
Var 00       Criteria       Criteria       1		Water Performance 55%		1	0	1		0.00%		Stage 3	Level 5 Specification required	
Lak Detection SystemCriterion 1Criterion 1Criterion 1Criterion 1Criterion 1Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 2Criterion 	Wat 02	Water Monitoring	Criteria 1 Criteria	1	1		uisite	1.00%	Mechanical Engineer		Water-consuming plant or building areas, consuming 10% or more of the building's total water domand, 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	
Val 03Val 0Val		Leak Detection System		1	1	1		1.00%		Stage 3		
vanow want Linken Lapapieren 1:3 · · · · · · · · · · · · · · · · · · ·	Wat 03		Criterion						Mechanical Engineer	-	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	
Total         9         6         8         0         1000         6.00%	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	1.00%		6.00%		

					Cred	lits		Design Team	Target	
		Ref	Available	Baseline	Potential	Achieved	Weighting	Member Responsible	Action Date	Outline Design Stage Actions
Materia	ls									
Materia	ls Section Weighting						15.0%			Breakdown of Material Specification inc GG Ratings (ideally A or A+)
Mat 01	Material Specification - Major Building Elements	Criteria 1-3	6	2	2		2.50%	Architect	Stage 2	Measurown of Materia specification in COC staings (usany 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
	Responsible Sourcing of Timber	Criterion 1		1	Pre-req	uisite		Contractor	Stage 3	Legally harvested and traded timber
Mat 03	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
								Contactor		Protecting vulnerable parts of the building from damage
Mat 05	Designing for Durability and Resilience	Criteria 1-1	1	1	1		1.25%	Architect	Stage 2	The building incorporates studied durability and protection measures <b>Protecting exposed parts of the building from naterial degradation</b> The relevant building dements 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	1.25%		6.25%	CORSULTE ROOT.
Waste										1
Waste S	ection Weighting	1	1				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 100m <sup>2</sup> or tonnes of waste per 100m <sup>2</sup> "Procedires are in place to minismic non-hazardous and hazardous waste in line with the targets. "The amount of site construction waste created is their monitored and targets regularly reviewed. "The design or site management team has nominated an individual responsible for implementing the above. Second Credit Procedires 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	I		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. Iso coupun(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 composible waste generated by the building's use and operation, the following facilities are provided: as Static waste compactor(s) or buller(s) situated in a service area or dedicated waste management space. b adequate space(s) for storing segregated food waste and compositable organic material prior to collection and delivery to an alternitive compositing builty. A compliant waste management strategy (i.e. one which covers hazardous waste, clinical staff and Ph, ph to 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%	
	e and Ecology					1 1		1	[	
Land Us	e and Ecology Section Weighting 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
LE 01	Contaminated Land	Criteria	1	0	0		0.00%	Ecologist	Stage 2	proposed development We don't believe the site to be contaminated to the level requiring remediation
	Ecological Value of Site	2-3 Criterion 1	1	1	1		1.10%	Ecologist	Stage 2	Land within the construction zone is defined as 'land of low ecological value'
LE 02	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 boundar area are adequately protected from damage
		Criterion 1	0	0	0		0.00%	Landscape Architect Ecologist	Stage 1	
LE 03	Mitigating Ecological Impact	Criterion 2	0	0	0		0.00%	Landscape Architect Ecologist	Stage 2	Not assessed in BREEAM International
LE 04	Enhancing Site Ecology	Criteria 1-4 Criteria	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,
		3-5 Criteria	2	1	2		1.10%	Landscape Architect Ecologist	Stage 2	Imprevenence in use into accesso and outar, S Year Landscape and habitat management plan (where required)
LE 05	Long Term Impact on Biodiversity	1-4 Criteria	2	2	Pre-req 2	uisite	2.20%	Ecologist PM	Stage 2 Stage 3	All relevant UK and EU legislation relating to the protection and enhancement of ecology has been complied with during the design and construction process. Where additional measures to improve the assessed site's long term biodiversity are adopted
	Total	5-9	10	8	9	0	1.10%	Contractor	8.80%	
Pollutio	n									
Pollutio	n Section Weighting	1						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 \$\leq1000 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 $\leq$ 56
L	NOx Emissions ≤ 40 mg/kWh	Criterion 1 Criteria	1	0	0		0.00%		Stage 2	mg/kWh. Currently, French grid electricity has a default NOx value of 250mg/kWh.
	Flood Risk	Criteria 1-5 Criterion	2	2	2 Pro 500	nieite	1.17%	-	Stage 2	Commission a Flood Risk Assessment to provide confirm of low probability of flooding
		6 Criteria 7-8	1	1	Pre-req	wrAllC	0.58%	-	Stage 2 Stage 3	Consultant's report 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-
Pol 03	Surface Water Run Off	Criteria 9-14	1	0	1		0.00%	Civil Engineer	Stage 3	development site. 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%	1	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
									•	·

					Cred	lits		Design Team	Target	Curry out a initial background noise survey.           Carry out a initial background noise survey.           The noise level from the proposed side/balling, as messured 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.
Credit		Ref	Available	Baseline	Potential	Achieved	Weighting	Member Responsible	Action Date	Outline Design Stage Actions
										Carry out a initial background noise survey.
Pol 05	Noise Attenuation	Criteria 1-5	1	1	1		0.58%	Acoustician	Stage 2	exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to
	Total		12	6	7	0	0.58%		1.750%	
Innovati	on									
							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		At least four of the five relevant product types meet emission limits, testing requirements and any additional requirements <b>Two Credits:</b>
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
	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 275% (by weight) or $265%$ (by volume) of construction waste diverted from landfill 275% (by weight) or $265%$ (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 1BWestaway Court BREEAM 2016 Intl



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

	Bespoke : Healthcare (General Hospita	1)								requirements *
										Credit at risk of time out OR loss
	Target					Score	2	]		Credit requires early stage actions
	Excellent = 70%				Bas	eline	Potential			Potential credit to target
		-			70.	52%	75.80%			Credit not currently targeted
					Exe	ellent	Excellent			Mandatory credit to achieve Excellent rating
					Credi	its		Design Team	Torgot	
	Credit	Ref	Available	Baseline	Potential	Achieved	Weighting	Member Responsible	Target Action Date	Outline Design Stage Actions
Manage	ment									
Manage	ment Section Weighting		1		1		11.0%			
	Stakeholder Consultation (Project Delivery)	Criteria 1-3	1	1	1		0.52%	РМ	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]
dan 01	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 Criteria	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
	Elemental Life Cycle Cost (LCC)	1-2 Criteria	2	2	2		1.05%	PM	Stage 2	An elemental life cycle cost (LCC) analysis has been carried out
dan 02	Component Level LCC Plan	3-4 Criterion	1	0	1		0.00%		Stage 4	A component level LCC plan has been developed
	Capital Cost Reporting	5 Criteria	1	1	1		0.52%	PM	Stage 5	Report the capital cost for the building in pounds per square metre (£k/ m2 )
	Environmental Management	1-3 Criteria	1	1	1		0.52%	-	Stage 3	Relevant commitments in Contractor Specification
	Sustainability Champion (Construction) Considerate Construction	4-6 Criterion	1	1	1		0.52%		Stage 3	The principal contractor operates an environmental management system (EMS) covering their main operations.
dan 03	Monitoring of Construction Site Impacts	7 Criterion	2	2	2 Pre-requi	icite	1.05%	PM Contractor	Stage 3 Stage 3	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
	Utility Consumption	8 Criteria	1	1	1		0.52%	-	Stage 3	Construction, Handover and Close Out stages Responsibility has been assigned to an individual(s) for monitoring, recording and reporting energy
	Transport of Construction Materials & Waste	9-12 Criteria	1		1		0.52%	-	Stage 3	use, water consumption and transport data resulting from all on-site construction processes
	Commissioning Schedule and Responsibilities	13-14 Criteria	1		1		0.52%	Mechanical Engineer	Stage 2	A schedule of commissioning and testing
	Commissioning Building Services	1-4 Criterion	1	1	1		0.52%	Contractor Mechanical Engineer	Stage 2	A specialist commissioning manager is appointed by the contractor
dan 04		5 Criteria	1	1				Contractor Architect		This can be demonstrated through the completion of a thermographic survey and an airtightness test
	Commissioning Building Fabric	6-8 Criteria			1		0.52%	Contractor PM	Stage 2	and inspection
		10-13 Criteria	1	1	1			Contractor Mechanical Engineer	Stage 3	Building User Guide, Training Schedule will be developed by the contractor
	Aftercare Support	1-2	1	1	1		0.52%	Contractor	Stage 3	Operational infrastructure and resources in place to provide aftercare support to the building occupier-
dan 05	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 Díl	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	0.52%		9.95%	
	and Wellbeing and Wellbeing Section Weighting									
							1407		1	
Health a		Criterion			Pre-requi	site	14%	Electrical Engineer	Stage 2	All fluorescent and compact fluorescent lamos are fitted with high frequency ballasts
Health a	High Frequency Ballasts Glare Control	Criterion 1 Criteria 2-3	1	1	Pre-requi	site	14% 0.67%	Electrical Engineer Architect	Stage 2 Stage 2	All fluorescent and compact fluorescent lamps are fitted with high frequency ballasts The glare-control system is designed to maximize daylight levels under all conditions while avoiding disabling agine in the workplace or other sensitive areas.
Health a	High Frequency Ballasts	1 Criteria	1	1		isite				
Health a	High Frequency Ballasts Glare Control	1 Criteria 2-3			0	site	0.67%	Architect	Stage 2	The glure control system is designed to maximise daylight levels under all conditions while avoiding disabiling glure in the workplace or other sensitive areas. The relevant building meas meet good practice daylight factor(s) 1 centir = 80% of an exha saverage daylight factor (2) four solutional uniformity reqs
	High Frequency Ballasts Glare Control Daylighting	1 Criteria 2-3 Criterion 4 Criteria	2	0	0	sie	0.67%	Architect	Stage 2 Stage 3	The glure control system is designed to maximise daylight levels under all conditions while avoiding disabiling glure in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 coeffit = 80% of sense has average daylight factor of 2% plus additional uniformity reqs Certain areas can be excluded from the requirements 95% of the floor areas in relevant building areas is within 7m of a wall which has a window or permanent openeing that provides an adequate view out. The windowspreaming size required as a percentage of surrounding wall area depending on the damance of the desite or work space to the window or openment openeing and nearest external solid object (e.g. building, screens, valid/teeps is \2006 for for plution exception pluce in a struct solid daylet (e.g. building, screens, valid/teeps is \2006 for plution exception pluce in a struct solid action of loyet(e.g. building, screens, valid/teeps is \2006 for the plution exception pluce in a struct solid back of loyet (e.g. building, screens), valid/teeps is \2006 for the plution exception pluce the structure solid back of loyet (f.g. building, screens), valid back plution of the distance of the dashed byte (f.g. building, screens), valid back plution (f.g. building the distance of the dashed back of loyet (f.g. building, screens), valid back plution (f.g. building) for the distance of the dashed back of low plutions of the low plution (f.g. building).
	High Frequency Ballasts Glare Control Daylighting	1 Criteria 2-3 Criterion 4 Criteria	2	0	0	sie	0.67%	Architect	Stage 2 Stage 3	The glare control system is designed to maximise daylight levels under all conditions while avoiding disabiling glare in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor() Levelits 20% or ben has verage daylight factor of 2% plus additional uniformity reqs Certain areas can be excluded from the requirements 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/pipering its required area percentage of maximum ding wall area depending on the datance of the deak or work appace to the window or expering on areas. The second credit can be avoided where the distance between the wall with the window/opening and nearest texternal solid object (c.g. buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces c.g. wards and daynoons. Certain areas an be excluded from the citestice between the wall with the window/opening and nearest texternal solid object (c.g. buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces c.g. vards and daynoons.
	High Frequency Ballasts Glare Control Daylighting View Out	1 Criteria 2:3 Criterion 4 Criteria 5:6	2	0	0		0.67%	Architect Architect	Stage 2 Stage 3 Stage 2	The glare control system is designed to maximise daylight levels under all conditions while avoiding disabiling glare in the workplace or other sensitive areas. The relevant building areas must good practice daylight factor(1) (readit = 80% of new has verying daylight factor of 3% plus additional uniformity reqs Certain areas can be excluded from the requirements 95% of the floor area in network building areas is visitin 7m of a wall which has a window or permanent opening that provides an adaptive twier out. The window/spening size required as a percentage of surrounding will area depending on the datance of the deck are work space to the window or opening can wary. The second certafic can be awarded where the distance thereare 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 dayoons. Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes or the mortury
	High Frequency Ballasts Glare Control Daylighting View Out Internal & External Lighting Levels, Zoning & Control	1 Criteria 2:3 Criterion 4 Criteria 5:6	2	0			0.67%	Architect Architect Electrical Engineer	Stage 2 Stage 3 Stage 2	The glare control system is designed to maximise dsylight keeks under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The relevant building areas meet good practice dsylight factor(3) 1. crofits 50% of the tabs averaged dsylight factor (7 3% plas additional uniformity reqs Certain areas can be excluded from the requirements 95% of the floor area in relevant building areas. is within 7 m of a wall which has a window or permanent opening the provides an adaptate view out. The window/spening size required as a percentage of surrounding wall area depending on the distance of the deark or work space to the window or opening can usay:. The second credit can be awarded where the distance thereaen the wall with the window/sopening and nearest ternal solid object (c
lea Ol	High Frequency Ballasts Clare Control Daylighting View Out Internal & External Lighting Levels, Zoning & Control No Asbeston	1 Criteria 2-3 Criterion 4 Criteria 5-6 Criteria 7-11 Criterion 1 Criterion	2	0	0 1 1 1 1 Pre-requi		0.67%	Architect Architect Electrical Engineer Architect	Stage 2 Stage 3 Stage 2 Stage 2	The glure control system is designed to maximise daylight keels under all conditions while avoiding disabling glure in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 cordit = 80% of area has verage daylight factor of 2% plus additional uniformity regs Certain areas can be excluded from the requirements 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 adaptuse view out. The windows/pening size required as a percentage of surrounding wall area depending on the distance of the device on vork space to the window or pengenic can vary. The second credit can be awarded where the distance between the wall with the window/opening and nearest termal solid object (e.g. buildings, sceens, walloffences) is 2 10m for patient occupied spaces (e.g. wards and dynoroms). Certain areas can be excluded e.g. buildings, sceens, walloffences) is 2 10m for patient occupied spaces (e.g. wards and dynoroms). Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes or the mortuary. Lighting design in compliance with BREEAM requirements. Materials containing absets are prohibited from being specified and uned within the building. An indow ar junging blan has been produced and implemented that minimise indoor air pollution during the design, construction and occupation of the building. Design farming building' (a) initiates and exhausts are over 10m apart and intakes are over Dim from sources of euternal pollution; Areas of the building subject to large and unpredictable or variable coupany patterns have carbon dioxide (CO2) or any quality senses with the in finked to the mechanici ventilities system and provides.
	High Frequency Ballasts Clare Control Daylighting View Out Internal & External Lighting Levels, Zoning & Control No Aubentos Indoor Air Quality (IAQ) Plan	1 Criteria 2-3 Criteria 4 Criteria 5-6 Criteria Criterion 1 Criterion 2 Criteria	2 2 1 1	0 1 1	0 1 1 1 Pre-requi		0.67% 0.00% 0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Mechanical Engineer	Stage 2 Stage 3 Stage 2 Stage 2 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. The relevant building areas meet good practice daylight (heterof) () Lordin = 50% of new has versage daylight (heterof) 3% plass additional uniformity reqs. Certain areas can be excluded from the requirements 95% of the floor area in relevant building areas, its vision 7m of a wall which has a window or permanent opengin that provides an adaptate view out. The window/spening size required as a percentage of surrounding wall area depending on the distance of the deak or work space to the window or opening can work. The scond credit can be awarded where the distance between the wall with the window/opening and nearest testemal solid object (c.g., buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces e.g. wards and daylogens. Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes or the mortany Lighting design in compliances with BREEAM requirements Materials containing abetors are prohibited from being specified and used within the building. An indoor air quality plan has been produced and implemented that minimise indoor air pollution during the design, construction and accuption of the building. Design drawings browing building's air intakes and echausts are over 10m apart and intakes are over 10m apart and intakes are over 10m spattems have carbon.
lea Ol	High Prequency Ballasts Clare Control Daylighting View Out Internal & External Lighting Levels, Zoning & Control No Asbestos Indoor Air Quality (IAQ) Plan Ventilation	1 Criteria 2-3 Criterion 4 Criteria 5-6 Criteria 7-11 Criterion 1 Criteria 3-8 Criteria	2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 1 1 1 1	0 I I Pre-requi		0.67% 0.67% 0.67% 0.67%	Architect Architect Electrical Engineer Architect Architect Architect Architect Architect Architect	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2	The glure control system is designed to maximise daylight levels under all conditions while avoiding disabling glue in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 credit= 80% of areas has verage daylight factor (2%) pastimum of the solution of solution sources of external pollution; where and exception of the building. Areas of the building solution solution of solution of the solution of solution sources of external pollution; where and exception of the building contained solution system and provides and allocation of the solution of contains solution system and provides down and exception of the solution. The solution system and provides of and solution of the solution contains solution system and provides down and exception of the solution. Contains of solution system and provides down and exception of the solution. Contains of solution system and provides down and exception of the solution covers where and provide down and exception and and consolution of
lea Ol	High Frequency Ballasts Glare Control Daylighting View Out Internal & External Lighting Levels, Zoning & Control No Asbestos Indoor Air Quality (IAQ) Plan Ventilation VOCs (PostConstruction) Potential for Natural Ventilation	1 Criteria 2-3 Criteria 5-6 Criteria 	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 1 1 1 1	0 1 1 1 Pre-requi		0.67% 0.60% 0.67% 0.67% 0.65% 0.65%	Architect Architect Architect Electrical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3	The glare control system is designed to maximise daylight levels under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 crofits : 80% or areas has verace daylight factor of 2% plas additional uniformity reqs Certain areas can be excluded from the requirements 95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening the provides an adaptate view out. The window/spening tize required at a percentage of surrounding wall area depending on the distance of the decise on work-pace to the window or opening can wary. The second credit can be awarded where the distance breven the wall with the window/spening and nearest ternal solid object (e.g. buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces e.g. vards and daylooms. Certain areas can be excluded e.g. buildings, screens, walls/fences) is ≥ 10m for patient occupied spaces e.g. vards and daylooms. Certain areas can be excluded e.g. workitations located centrally for observational and/or security purposes or the mortaary Lighting design in compliance with BREEAM requirements Materiah containing absensor are prohibited from being specified and used within the building. An indoor air quality plan has been produced and implemented that minimise indoor air pollution dinsing the design, construction and occupation of the building. Areas of the building subject to large and unpedictable or variable occupancy patients have carbon disolad (COZ) or air quality plans with are linked to the mechanical ventilian system and provide demand controled ventiling reading and emission kovecurpancy platters have carbon disolad (COZ) or air quality sorrows which are linked to the mechanical involutio reganic compound tVOC) constisment to carry out post construction (but pre-occupancy) testing for formaklehyde and total validle organic compound (TVOC) concentration level. The building ve
łea 01 łea 02	High Frequency Ballasts Clare Control Daylighting View Oat Internal & External Lighting Levels, Zoning & Control No Asbeatos Indoor Air Quality (IAQ) Plan Ventilation VOCs (Products) VOCs (Products) VOCs (Products)	1 Criteria 2-3 Criteria 5-6 Criteria 7-11 Criteria 2 Criteria 3-8 Criteria 2-10 Criteria 9-10 Criteria 11-17 Criteria	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	0 1 1 1 1 1 1 1	0 1 1 1 Pre-requi		0.67% 0.00% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Mechanical Engineer Architect Contractor Contractor PM Contractor PM Contractor PM Contractor Mechanical Engineer	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3	The glure control system is designed to maximise daylight keels under all conditions while avoiding disabling glure in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 coefficients of the system of the sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 coefficients of the system of the
lea Ol	High Frequency Ballasts Glare Control Daylighting View Out Internal & External Lighting Levels, Zoning & Control No Asbestos Indoor Air Quality (IAQ) Plan Ventilation VOCs (PostConstruction) Potential for Natural Ventilation	1 Criteria 2-3 Criteria 5-6 Criteria 7-11 Criteria 2 Criteria 3-8 Criteria 9-10 Criteria 9-10 Criteria 9-10 Criteria 5-8	2 2 1 1 1 1 1 1 1 1 1 1 1	0 1 1 1 1 1 1 1 1 0	0 1 1 1 1 Pre-requi		0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect Architect Architect Mechanical Engineer Architect	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3	The glare control system is designed to maximise daylight keels under all conditions while avoiding disabling glare in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 events 80% of areas has verage daylight factor (3% plus additional uniformity reqs Certain areas can be excluded from the requirements. 95% of the floor areas in relevant building gaues wise woil. The window/opening size required as a percentage of surrounding wall which has a window or permanent opening that provides an adaptate view out. The window/opening size required as a percentage of surrounding wall area depending on the distance of the leaft on work space to the window or opening can very. The scenad credit can be surveded when the distance three on the wall with the window in opening can very. The scenad credit can be surveded when the distance between the wall with the window in opening can very. The scenad credit can be surveded when the distance between the wall with the window in opening and many starts extrate value distance of the leaft of the start of t
łea 01 łea 02	High Frequency Ballasts Glare Control Daylighting Vew Out Internal & External Lighting Levels, Zoning & Control No Akbeatos Indoor Air Quality (IAQ) Plan Venilation VOCs (Products) VOCs (Products) VOCs (Post Construction) Patential for Natural Veniliation Laboratory Containment Devices and Containment Areas Buildings with Constinuent Level 2 and 3 Laboratory	1           Criteria           2-3           Criteria           -           Criteria           5-6           Criteria           7-11           Criteria           7-6           Criteria           7-11           Criteria           7-11           Criteria           9-10           Criteria           9-10           Criteria           11-17           Criteria           15-10           Criteria           1-3           Criteria           10           Criteria           10           Criteria           10           Criteria           10           Criteria           10           Criteria           10           Criteria           1-3	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1	0 1 1 1 1 1 1 1 1 0 0	0 1 1 1 1 Pre-requi		0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect Mechanical Engineer	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3	The glure control system is designed to maximise daylight levels under all conditions while avoiding disabling glure in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 readies 30% of areas has verage daylight factor (2%) plus additional uniformity regs Certain areas can be excluded from the requirements. 95% of the floor areas in relevant building areas within 7m of a wall which has a window or permanent opening har provides an adaptate view or all areas dayned and on your day of the structure of the dayned of the or areas in relevant building areas is within 7m of a wall which has a window or permanent opening its required as a percentage of surrounding wall area depending on the distance of the dayned on work space to the window or eperment contents in the owner Agueet to havindow or eperment contents areas can be excluded where the distance the wealt with the window or eperment opening and nearest external odd object (e.g. buildings, screens, wallsfencet) is ≥ 10m for patient occupied spaces e.g. wards and dayncorns. Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes of the nortany. Lighting design in compliance with BREEAM requirements Materials containing absents are prohibited from being specified and used within the building. An indoor air quality plan has been produced and implemented that minimise indoor air pollution during the design, construction and occupation of the building. Design drawings howing building is in indexes and exhausts are over 10m apart and intakes are over 20m form sources of external pollution; thinkes and exhausts are discussed company patterns have carbon disoutie (CD2) are aquality sources which are linked to the mechanical ventilation system and provide damand counseled ventilation sub-tayse. Commitment to carry out post construction (but pre-occupancy) testing for formaldehyde and total volatile expain. Compound (VCOC) emission Commitment to carry out post c
4ea 01 4ea 02 4ea 03	High Proquency Ballasts Glare Control Daylighting Vew Out Internal & External Lighting Levels, Zoning & Control No Absentos Indoor Air Quality (IAQ) Plan Ventilation VOCs (Products) VOCs (Products) VOCs (Products) Potential for Natural Ventilation Laboratory Containment Devices and Containment Areas Buildings with Constinuent Level 2 and 3 Laboratory Facilities Thermal Modelling	1           Criteria           2-3           Criteria           -           Criteria           11-17           Criteria           1-3           Criteria	2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0 1 1 1 1 Pre-requi 1 1 1 1 1 1 1 1 1 1 1 1		0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect Mechanical Engineer Architect Mechanical Engineer	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3	The glure control system is designed to maximise daylight keels under all conditions while avoiding disabiling glure in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 reaching system is not assuring adaptification (s) is plus additional uniformity regs Certain areas can be excluded from the requirements. 95% of the floor area in relevant building areas is within 7m of a wall which has a window or permanent opening the provides an adaptate view ord. The window/spening size required as a percentage of surrounding wall area depending on the distance of the desite or work space to the window or eprime can very and the window or eprime can very and the window or eprime can very an order of the window or eprime can very any order to window goed ending can way. The sciend credit can be awarded where the distance of the desite or work space to the window or eprime can very space to the window or eprime can very space to the window or eprime can very space the value with the window or eprime can very space to the order work space to the window or eprime can very space to the window or eprime can very the end of design. Certain areas can be excluded where the distance of the design or compliance with IREEAM requirements. Materials constaining adbectos are prohibited from being specified and used within the building. An indoor air quality plan has been produced and implemented that minimise indoor air pollution during the design, construction and exception for the building. Design drawings howing building 's viry indukes are over 10m apart and intakes are ore? Mereas of the building subject to large and appredictable versinale occupancy patterns have carbon advance to the space. Relevant clanaes in architect specification or workmutuality clanaes? Mereas of the building velocit to inger and appredictable weight for formaddehyde and total voidale coganic contained with in the space. Relevant diances in architect specification workmutushing clanaes? Where contain
łea 01 łea 02	High Proquency Ballasts Glare Control Glare Control Daylighting View Oat Internal & External Lighting Levels, Zoning & Control No Asbeston Indoor Air Quality (IAQ) Plan Vestilation VOCs (Products) VOCs (Products) VOCs (Products) Potential for Natural Vestiliation Leboatry Containment Devices and Containment Actes Buildings with Containment Level 2 and 3 Laboratory Daching Thermal Modelling Adaptability - Projected Climate Change Scenario	1           Criteria           2-3           Criteria           5-6           Criteria           5-6           Criteria           Criteria           7-11           Criteria           7-12           Criteria           7-13           Criteria           7-10           Criteria           9-10           Criteria           11-17           Sciteria           13-19           Criteria           13-19           Criteria           13-19           Criteria           13-19           Criteria           1-10           Criteria           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11           1-11	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Contractor Architect Archi	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3	The glure control system is designed to maximise daylight keels under all conditions while avoiding disabling glure in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 events 70% of a new law end good plug factor (2 %) plus additional uniformity regs Certain areas can be excluded from the requirements. 95% of the floor areas in relevant building areas in without within 7m of a wall which has a window or permanent opening that provides an adaptive two cot. The windows/pening size required as a percentage of surrounding wall area depending on the distance of the desite on work space to the window or eperment opening in the yorks and adaptive two cot. The windows/pening size required as a percentage of surrounding wall area depending on the distance of the desite on work space to the window or eperment or the window or eperment opening and nearest external old object (e.g. buildings, screens, wallofences) is ≥ 10m for patient occupied spaces e.g. wards and daycorens. Certain areas can be excluded e.g. workstations located centrally for observational and/or security purposes of the nortany. Lighting design in compliance with BREEAM requirements Materials containing absetos are produced and implemented that minimise indoor air pollution during the design, construction and eccupation of the building. Areas of the studing subject or large and unpredictable or variable occupancy patterns have carbon doxide (COZ) or quarkity serves which are linked to the machanical ventilation system and provide downed or outs which are linked to the machanical ventilation system and provide damade counsile ventilation is the space. Products meet the testing requirements and emission levels criteria for volatile organic compound (VOC) concentration levels criteria for volatile organic compound (VOC) concentration levels. The building ventilation strategy is designed to be the chief and adspitched to practice adfey and percentilation in the space. Therwill down and there weed a
4ea 01 4ea 02 4ea 03	High Proquency Ballasts Glare Control Daylighting Usew Oat Internal & External Lighting Levels, Zoning & Control No Athestos Indoor Air Quality (IAQ) Plan Vestilation VOCs (Post Construction) VOCs (Post Construction) Potential for Natural Vestiliation Laboratoy Containment Devices and Containment Areas Bailding with Containment Level 2 and 3 Laboratory Facilities Thermal Modelling Adaptability - Projected Climate Change Scenario Thermal Zoning and Controls	1           Criteria           2-3           Criteria           -           Criteria           11-17           Criteria           1-3           Criteria	2 2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ste	0.67% 0.67%	Architect Architect Electrical Engineer Contractor Architect Architect Electrical Engineer Architect Archi	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3	The glure control system is designed to maximise daylight levels under all conditions while avoiding disabling glue in the workplace or other sensitive areas. The relevant building uses meet good practice daylight factor(s) 1 credit- 80% of areas has verage daylight factor (2%) has addisinal uniformity regs Certain areas can be excluded from the requirements. 95% of the floor area in inelevant building areas is within 7m of a wall which has a window or permanent opening in provides an adaptive two ord. The window/opening size required at a percentage of surrounding wall area depending on the distance of the desite or work space is the window or epening on work space is the window or epening on two and to do spect (e.g. buildings, screens, walls/fenceo) is ≥ 10m for patient occupied spaces e.g. want areas can be excluded where the distance of the desite of work space is the window or epening on two spaces is the window or epening on two spaces is the window or epening on the distance of the desite of work space is the window or epening on two spaces of the mortany. The second credit can be sweeded where the distance between the wall with the window or epening and nearest external odd object (e.g. buildings, screens, walls/fenceo) is ≥ 10m for patient occupied spaces e.g. want areas can be excluded e.g. worktations located centrally for observational and/or security paposes of the mortany. Lighting design in compliance with BREEAM requirements Materials containing ablestos are prohibited from being specified and used within the building. As and downing building visit induces and execupation of the building. Design dawings showing building visit induces and every flow any and an induces are over 20m from sources of external pollution; Areas of the building ubject to large and superclicitable variable cocquacy patterns have carbon droxide (cO2O) or air quality passors which are linked to the machanical ventilation system and provide downed within exesting requirements and emission levels criteria for volatile orga
4ea 01 4ea 02 4ea 03	High Proquency Ballasts Glare Control Glare Control Daylighting View Oat Internal & External Lighting Levels, Zoning & Control No Asbeston Indoor Air Quality (IAQ) Plan Vestilation VOCs (Products) VOCs (Products) VOCs (Products) Potential for Natural Vestiliation Leboatry Containment Devices and Containment Actes Buildings with Containment Level 2 and 3 Laboratory Daching Thermal Modelling Adaptability - Projected Climate Change Scenario	1           Criteria           2-3           Criteria           -           Criteria           5-6           Criteria           7-11           Criteria           7-11           Criteria           7-11           Criteria           7-11           Criteria           1-3-8           Criteria           0-10           Criteria           11-17           Criteria           1-3           Griteria           1-3           Griteria           1-3           Griteria           1-3           Griteria           1-3           Griteria           1-4           6-9           Criteria           9-11 <td>2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td></td> <td>0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1</td> <td>ste</td> <td>0.67% 0.67%</td> <td>Architect Architect Architect Electrical Engineer Architect Contractor Architect Archi</td> <td>Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3</td> <td>The glure control system is designed to maximise daylight levels under all conditions while avoiding disabling glue in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 credit= 80% of areas has verage daylight factor (2%) pastimum of the standard sense and the sensitive areas. 95% of the floor areas in average daylight factor (3%) pastimum of the standard sense and the standard sense area (area dayling areas in the excluded from the requirements. 95% of the floor areas in the standard building areas is within 7m of a wall which has a window or permanent opening in provides an adapticate view or and the standard of the s</td>	2 2 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	ste	0.67% 0.67%	Architect Architect Architect Electrical Engineer Architect Contractor Architect Archi	Stage 2 Stage 3 Stage 2 Stage 2 Stage 2 Stage 2 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3 Stage 3	The glure control system is designed to maximise daylight levels under all conditions while avoiding disabling glue in the workplace or other sensitive areas. The relevant building areas meet good practice daylight factor(s) 1 credit= 80% of areas has verage daylight factor (2%) pastimum of the standard sense and the sensitive areas. 95% of the floor areas in average daylight factor (3%) pastimum of the standard sense and the standard sense area (area dayling areas in the excluded from the requirements. 95% of the floor areas in the standard building areas is within 7m of a wall which has a window or permanent opening in provides an adapticate view or and the standard of the s

					Credi	ts		Design Team	Target	
		Ref	Available	Doosline	Detential	Ashioved	Weighting	Member	Action	Outline Design Stage Actions
			Available	Baseline	Potential	Achieved	Weighting	Responsible	Date	
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. Foropaths 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 polestrian foropaths. 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 * Porepole of different age props, genders, ethnicity and finness levels * Parents with children
Hea 09	Water Quality	Criteria 1-3	1	1	1		0.67%	Mechanical Engineer Architect Díl	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 wholeones support 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%	1		
Ene 01	Reduction of Energy Use & CO2 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
	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.
Ene 02	Monitoring of Energy Use by Area	Criterion 3	1	1	1		0.50%	Mechanical Engineer	Stage 2	1) Operating department 2) Mottuny and post-mortem department 3) Pharmacy department 4) Labontories 5) MRI 6) Oncology 7) Renal datysis
Ene 03	External Lighting	Criteria 1-4	1	1	1		0.50%	Mechanical Engineer	Stage 2	Lighting design in compliance with BREEAM requirements
	Passive Design Analysis	Criteria 1-3 Criteria	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
Ene 04	Free Cooling	4-5 Criteria	1	0	0		0.00%	Mechanical Engineer	Stage 2	The building uses ANY of the free cooling strategies and no mechanical cooling.
	Feasibility Study Energy Efficient Design, Installation and	6-7 Criteria	1	1	1		0.50%	Mechanical Engineer	Stage 2 Stage 3	LZC study and specification of technology e.g. PV & Solar Thermal Hot Water
Ene 05	Commissioning Energy Efficiency Criteria	1-2 Criterion	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
	Indirect Greenhouse Gas Emissions	Criteria 4-5	1	0	1		0.00%	Mechanical Engineer Medical Planners	Stage 2	Technology Product List.
	Lift/Transportation Analysis Systems	Criterion 1	1	1	1		0.50%	Mechanical Engineer	Stage 2	Lift analysis to be carried out. Energy analysis completed
Ene 06	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
	Regenerative Drives	Criteria 5-6	-	2	2		1.00%	Mechanical Engineer	Stage 3	The use of regenerative drives is demonstrated to save energy, if so, they are specified.
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 unerguitated energy consuming kads and estimate their contribution to the total annual unerguitated 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%	catering factures).
Transp						1		1	1	
Transp	ort Section Weighting						10.0%			Other building - Visitors.
Tra 01	Public Transport Accessibility Index	Criterion 1	5	2	2		2.00%	Transport Consultant	Stage 2	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 awated where spaces for staff only are provided as well as the appropriate compliant cyclic facilities i.e. mcks [1 cycle space per 10 staff] Compliant cycle facilities i.e. mcks [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 back, plus; - One parking spaces for every for back, 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 Díl	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 S	Section Weighting						9.0%			
	Water Performance 12.5%		1	1	1		0.90%	-	Stage 3	Precipitation zone 1
Wat 01	Water Performance 25% Water Performance 40%	Criteria	1	1	1		0.90%	Architect	Stage 3 Stage 3	The water consumption (L/person/day) for the assessed building is compared against a baseline performance.
	Water Performance 50%	1-7	1	0	1		0.00%	Mechanical Engineer	Stage 3	Level 4 Specification required
	Water Performance 55%		1	0	0		0.00%	1	Stage 3	Level 5 Specification required
		Mandatory Criteria 1			Pre-requi	site		_	Stage 3	The specification of a water meter on the mains water supply to each building Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either filted with easily accessible sub-meters
Wat 02	Water Monitoring	Criteria 2-4	1	1	1		0.90%	Mechanical Engineer	Stage 3	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
	Leak Detection System	Criterion 1	1	1	1		0.90%		Stage 3	A leak detection system is specified
Wat 03	Flow Control Devices	Criterion 2	1	0	0		0.00%	Mechanical Engineer	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 formation).
	Leak Isolation	Criterion 3	1	1	1		0.90%		Stage 3	fittings). 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	1-5	10	7	8	0	0.90%		6.30%	components in the building this issue is not applicable and does not require assessment.

					Credi	ts		Design Team Target		
		Ref	Available	Baseline	Potential	Achieved	Weighting	Member Responsible	Action Date	Outline Design Stage Actions
Materia	ls				<u> </u>				<u> </u>	
Materia	ls 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
	Responsible Sourcing of Timber	Criterion 1			Pre-requi	site		Contractor	Stage 3	Legally harvested and traded timber
Mat 03	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	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%	Contractor	Stage 2	Protecting vulnerable parts of the building from damage The building incorporates suitable durability and protection measures Perforcing expande parts of the building from material degradation for relevant building demensis 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	1.25%		7.50%	
Waste						1		T	1	
Waste S	ection Weighting 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 m <sup>2</sup> of waste per 100m <sup>2</sup> of tomms of waste per 100m <sup>2</sup> "Procedures are in place to minimise most hazardous waste in line with the targets. "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 waster.
	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	I		1.14%	Architect Medical Planners	Stage 3	Dedicated space(s) is provided for the segregation and storage of operational recyclable wate 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 buber(s); situated in service area or dedicated waste management space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composing facilities are econopoint facilities are composing facilities. The composing facilities are composing facilities. The composing facilities are co
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 Us	e and Ecology									
Land Us	e and Ecology Section Weighting	1			1		11.0%			Design drawings indicating area (m2) of previously developed land and location and footprint (m2) of
LE 01	Re-Use of Land Contaminated Land	Criteria 2-3	2	2	2		2.20%	Architect Ecologist	Stage 2 Stage 2	proposed development We don't believe the site to be contaminated to the level requiring remediation
	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'
LE 02	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 Criterion 2	0	0	0		0.00%	Landscape Architect Ecologist Landscape Architect Ecologist	Stage 1 Stage 2	Not assessed in BREEAM International
LE 04	Enhancing Site Ecology	Criteria 1-4 Criteria 3-5	1	1	1		1.10%	Landscape Architect Ecologist Landscape Architect Ecologist	Stage 2 Stage 2	The recommendations of the Ecology Report for the enhancement of site ecology have been implemented in the final design and build.
LE 05	Long Term Impact on Biodiversity	Criteria 1-4			Pre-requi	site		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	1.10%		8.80%	
Pollutio										
Pollutio	n Section Weighting Impact of Refrigerants	Criteria	2	1	1		0.583%	7.0%	Stage 3	Where the systems using refrigerants have Direct Effect Life Cycle CO2 equivalent emissions (DELC
Pol 01	Refrigerant Leak Detection	2-4 Criteria	1	0	1		0.000%	Mechanical Engineer	Stage 3	CO2e) of \$\2000 kgCO2erkW cooling/heating capacity.
	NOx Emissions ≤ 56 mg/kWh	5-9 Criterion 1	1	0	0		0.000%		Stage 2	installed Where the plant installed to meet the building's delivered heating and hot water demand has, under
Pol 02	NOx Emissions ≤ 40 mg/kWh	Criterion 1	1	0	0		0.000%	Mechanical Engineer	Stage 2	normal operating conditions, a NOx emission level (measured on a dry basis at 0% excess O₂) of ≤56 mg/kWh. Comments French and electricity has a default NOv ratio of 250ma0/Wh
	Flood Risk	Criteria 1-5	2	2	2		1.167%		Stage 2	Currently, French grid electricity has a default NOx value of 250mg/kWh. Commission a Flood Risk Assessment to provide confirm of low probability of flooding
		Criterion 6			Pre-requi	site			Stage 2	Consultant's report
	Surface Water Run Off	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.
Pol 03		Criteria 9-14	1	0	1		0.000%	Civil Engineer	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					Credi	ts		Design Team	Target	One         Outline Design Stage Actions           c3         Lighting design in compliance with BREEAM requirements           Carry out a initial background noise survey.           re noise level from the proposed site/balding, as measured in the locality of the nearest or most exposed noise-survive, ensemble carriers of the sensitive deslynement, is a difference no greater than +SHB during the day (07:90 to 23:00) and +34B at night (23:00 to 07:90) compared to the background noise level.
	Credit	Ref	Available	Baseline	Potential	Achieved	Weighting	Member Responsible	Action Date	Outline Design Stage Actions
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
										Carry out a initial background noise survey.
Pol 05	Noise Attenuation	Criteria 1-5	1	1	1		0.583%	Acoustician	Stage 2	exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 to
	Total		12	7	9	0	0.58%		1.750%	
Innovat	ion									
							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%	ħd		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%	DfI 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 $\geq 75\%$ (by weight) or $\geq 65\%$ (by volume) of construction waste diverted from landfill $\geq 75\%$ (by weight) or $\geq 65\%$ (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%	