



NTT
COMMUNICATIONS
DATA CENTRE


BREEM STATEMENT

February 2019

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black&white
engineering

REVISIONS

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1	19.01.18	Issued for Planning.	J. Belton / S. Horn
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1.0 INTRODUCTION

Black & White Engineering (B&W) was originally commissioned in December 2017 by NTT Communications Corporation to produce a detailed acoustic report to support a Full Planning Application for two Data Centres to be accessed from Yewtree Avenue to the east of Rainham Road South. Detailed Planning Permission was granted on 12 September 2018. A further decision letter dated 21 December 2018 relating to a non-material amendment for an electrical substation and security measures was issued by Be First. In January 2019, following receipt of additional information a further submission was made to upgrade the electrical services for the site.

This addendum to the previously approved BREEAM Assessment has been produced to accompany a further Section 96a non-material amendment which seeks alterations to the gatehouse and the previously approved office pod of building 1 together with a number of ancillary alterations.

This document demonstrates that the 'Very Good' assessment is perpetuated as per the initial planning permissions as referenced 18/00161/FUL.

2.0 BREEAM PREASSESSMENT SUMMARY

The original assessments (appended for ease of reference) sets out the results of the initial BREEAM pre-assessments for the project as follows:

Building 1 (Shell) – 66.34% BREEAM 'Very Good' rating;

Building 2 (Shell) – 66.34% BREEAM 'Very Good' rating;

Building 1 (Fit Out) – 69.43% BREEAM 'Very Good' rating.

The pre-assessments were undertaken using BREEAM for Data Centres 2010.

3.0 IMPACT OF PROPOSED AMENDMENTS

The proposed building amendments are summarised as: -

- Additional office floor to Building 1 - (396m² increase)
- Increased gate house footprint - (200m² increase)

	Original Application Building Areas		Proposed Amended Building Areas	
	(m ²)	%	(m ²)	%
Building 1 Data Centre Accommodation	17380	92.37%	17380	89.06%
Building 1 Office Accommodation	1188	6.31%	1584	8.12%
Gate House	248	1.32%	550	2.82%
	18816		19514	

The proposed increased building footprints do not change to impact the targeted credits within the appended pre-assessment.

The gatehouse remains excluded from the BREEAM assessment as it is an ancillary building on site containing approximately 50% accommodation allocated to site operations and security and is less than 3% of the proposed built up area of the development.


It is currently proposed that the development will be phased with Building 2 coming under Phase 2 of the works. A BREEAM assessment for the fit-out of Building 2 will be undertaken once the Phase 2 programme is confirmed and a fit-out design is known. Building 2 fit-out will be provided with its own separate BREEAM registration.

A1 APPENDIX A – BREEAM Reports


The following section highlights the BREEAM credits that have been awarded for the proposed development and the corresponding percentage score.

The design stage assessment and subsequent interim BREEAM Certification represents the performance of the building at the design stage of the assessment, typically with certification being achieved by the time operations begin on site. Certification at this stage does not, therefore, represent the buildings final 'As Built' BREEAM performance.

The post construction stage assessment and subsequent BREEAM Certification represents the final 'As Built' performance and BREEAM rating. A final post construction stage assessment is typically completed and certified within three months after practical completion of the building works.

Title		BREEAM Data Centres 2010 Pre-Assessment										
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
MANAGEMENT												
Man 1 Commissioning	<p>One credit where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be carried out in line with current best practice.</p> <p>Two credits where, in addition to the above, evidence provided demonstrates that seasonal commissioning will be carried out during the first year of occupation, post construction (or post fit out).</p>	2	1	1.00	1	1	1	1	2	<p>1st Credit - Letter or commissioning responsibilities schedule confirming appointment of commissioning monitor and scope of their role and specialist commissioning manager and scope of their commissioning role. A copy of the specification clause stating the standards and codes of practice to which commissioning procedures comply with. A copy of the specification clause confirming the managing contractors responsibility or a copy of the commissioning schedule highlighting the managing contractors responsibilities. A copy of the specification clause/commissioning schedule confirming the stages of the BMS/controls commissioning procedures.</p> <p>2nd Credit - Compliance with 1st credit and evidence confirming the scope of seasonal commissioning responsibilities / tasks as required.</p>	M&E Consultant	
Man 2 Considerate Constructors	<p>One credit where evidence provided demonstrates that there is a commitment to comply with best practice site management principles. (CCS score between 24 -31.5)</p> <p>Two credits where evidence provided demonstrates that there is a commitment to go beyond best practice site management principles. (CCS score between 32 -35.5)</p>	2	2	2.00				1	2	<p>1st and 2nd Credit - Copy of relevant section of main contract specification confirming the requirement to comply with the CCS and the minimum score to be achieved or a formal letter from client/developer confirming the main contract will include a clause requiring CCS certification, scope of main contractors works a completed copy of checklist A1.</p>	Contractor	
Man 3 Construction Site Impacts	<p>One credit where evidence provided demonstrates that 2 or more of items a-g (listed below) are achieved.</p> <p>Two credits where evidence provided demonstrates that 4 or more of items a-g (listed below) are achieved.</p> <p>Three credits where evidence provided demonstrates that 6 or more of items a-g are achieved:</p> <p>a. Monitor, report and set targets for CO2 or energy arising from site activities</p> <p>b. Monitor, report and set targets for CO2 or energy arising from transport to and from site</p> <p>c. Monitor, report and set targets for water consumption arising from site activities</p> <p>d. Implement best practice policies in respect of air (dust) pollution arising from the site</p> <p>e. Implement best practice policies in respect of water (ground and surface) pollution occurring on the site</p> <p>f. Main contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site</p> <p>g. Main contractor operates an Environmental Management System.</p> <p>One additional credit where evidence provided demonstrates that at least 80% of site timber is responsibly sourced and 100% is legally sourced.</p>	4	4	4.00						<p>1st - 3rd Credit - A copy of the relevant section from the main contract specification confirming contractors obligation in respect to each item on checklist,</p> <p>Additional Credit - A copy of the relevant section from the main contract specification confirming site timber will be sourced from suppliers capable of providing certification to the level required for the particular tier claimed, all timber will come from a 'legal source' and is not on the CITES list.</p>	Contractor	
Man 4 Building User Guide	<p>One credit where evidence provided demonstrates the provision of a simple guide that covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building.</p>	1	1	1.00				1	1	<p>1 Credit - A copy of the specification clause confirming the requirement to develop a building user guide and the scope of the Guide's content in compliance with BRE requirements.</p>	Contractor	

Green = Targeted
Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment										
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Man 8 Security	One credit where evidence provided demonstrates that an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted at the design stage and their recommendations incorporated into the design of the building and its parking facilities (if relevant).	1	1	1.00						1 Credit - Correspondence from or a copy of the report/feedback from ALO/CPDA confirming the scope of their advice/involvement, the stage of design in which their advice was sought and summary of their recommendations. A marked up copy of the site/design plans highlighting the development conforming to ALO/CPDA recommendations and SBD principles and guidance or a copy of the specification confirming the development will conform to recommendations.	Architect	
Man12 Life Cycle Costing	One credit where a Life Cycle Cost (LCC) analysis has been carried out based on the proposals developed during RIBA Work Stages C/D (concept design/design development), or equivalent. The Life Cycle Costs analysis, based on the concept design/design development proposals, covers the following stages: a. Construction b. Operation - includes, as a minimum, utilities c. Maintenance - includes, as a minimum, planned maintenance, replacements and repairs, cleaning, management costs d. End of life. The LCC analysis uses a study period of 25 or 30 (as applicable) AND 60 years, shown in real and discounted cash flow terms. One credit where the results of the study have been implemented in the specification, design and final construction of the assessed building.	2	2	2.00						2 Credits - Copy of the feasibility stage Life Cycle Cost analysis and detailed design Life Cycle Cost analysis. Letter from the design team confirming LCC findings have been implemented.	Architect	
Total		12	11	11.00								
HEALTH AND WELLBEING												
Hea 1 Daylighting	One credit where evidence provided demonstrates at least 35% of the sales and common floor area (if relevant) is adequately daylight (point daylight factor of 2%). At least 80% of net lettable office floor area is adequately daylight with an average daylight factor of 2%. A uniformity ratio of at least 0.4 or a minimum point daylight factor of at least 0.8% (spaces with glazed roofs, such as atria, must achieve a uniformity ratio of at least 0.7 or a minimum point daylight factor of at least 1.4%) OR a view of sky from desk height (0.7m) is achieved and room depth criterion is satisfied. The provision of daylight has been designed in accordance with the guidance in CIBSE Lighting Guide 10 'Daylighting and window design' BS8206 Part 2 and BRE Guidance Note 10	1	0	0.00						1 Credit - Design plans for each floor in the building with each room/area labelled for use and daylighting calculations confirming building areas assessed, the daylight variables/criterion measured, average daylight factor for each area, compliance with room depth criterion/uniformity ratio/view of sky, the daylight provision is in compliance with relevant standards, the percentage of area where point daylight factors are at least 2% and the position of the 2% daylight factors isolux contours in each of the rooms assessed.	Architect	
Hea 2 View Out	The relevant areas are within 7m distance of a wall with a window or permanent opening providing an adequate view out, where the window/opening is ≥20% of the total inside wall area	1	0	0.00						1 Credit - Design plan and elevation showing all relevant building areas and room depths, actual or notional workstations/desk layout, window/open areas. Site Plan showing building location and proximity to external obstructions.	Architect	
Hea 3 Glare Control	An occupant-controlled shading system on all windows, glazed doors and roof lights in all relevant building areas.	1	0	0.00						1 Credit - * Marked up copy of design plan(s) confirming a description of the function of each of the building spaces. * A copy of the relevant specification clause(s), window schedule or design plan confirming the type of shading system(s) and control to be installed	Architect	
Hea 4 High Frequency Lighting	One credit where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	1	1	0.77	1	1	1	1	1	1 Credit - A copy of the specification clause or room data sheets confirming a compliant lighting strategy.	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Hea 5 Internal and External Lighting Levels	One credit where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained Illuminance levels (in lux) recommended by CIBSE.	1	0	0.00						1 Credit - A copy of the specification clause or relevant room schedules confirming the internal/external maintained Illuminance levels and/or the standards that the illuminate levels are specified to. Or a formal declaration of conformity from the relevant design team member confirming the maintained Illuminance levels for each internal/external source are in compliance with relevant standard	M&E Consultant	
Hea 6 Lighting Zones and Controls	Lighting is Zoned to allow separate occupant control of office and circulation spaces, office areas (zones of no more than 4 work spaces), workstations adjacent to window/atria and other building areas separately zoned and controlled, seminar and lecture rooms, library zones.	1	0	0.00						1 Credit - * Design plans for each floor of the building highlighting space arrangement, * Room type and specification or design plans confirming lighting zones and location and scope of user controls.	M&E Consultant	
Hea 7 Potential for Natural Ventilation	Occupied spaces of the building are designed to be capable of providing fresh air entirely via a natural ventilation strategy by either a) openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate. For room/floor plates between 7m-15m depth, the openable window area is on opposite side and evenly distributed to promote cross ventilation. or b) the design demonstrates by calculation using ventilation tools recommended by CIBSE Am10, that the natural ventilation strategy provides adequate cross flow of air to maintain required thermal comfort conditions and ventilation rates. The strategy is capable of providing at least two levels of user-control on the supply of fresh air to occupied spaces with higher rates of ventilation to remove short term odours and prevent summer overheating.	1	0	0.00						1 Credit - Design plans and elevations, specification or calculations confirming:- * Ventilation strategy in each occupied space * The depth of the room * Gross internal floor area of each occupied space * The type of window/ventilator and total openable area * The type and degree of user-control And a copy of the results for the appropriate software modelling tool demonstrating compliance.	Architect	
Hea 8 Indoor Air Quality	One credit where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air. Air conditioned and mixed mode buildings where the buildings air intakes and exhausts are over 10m apart and the intakes are over 20m from sources of pollution. Naturally Ventilated Buildings where openable windows/vents are over 10m from sources of external pollution. Building has been designed to provide fresh air rates to dilute pollutants in accordance with best practice for office area i.e. 12l/s/person. Building with unpredictable occupancy levels have CO2 air quality sensors linked to mechanical ventilation systems in natural vent building these are linked to alerts or controls to adjust window or vent openings.	1	0	0.00						1 Credit - A marked-up proposed site plan highlighting locations of intakes, extracts, openable windows, ventilators, any existing or proposed sources of external pollution. Design team calculations and/or performance specification criteria confirming the fresh air rate set for each space, that the fresh air rate can be met using the chosen strategy and the relevant standards to which the design is in accordance with.		
Hea 9 Volatile Organic Compounds	One credit where evidence provided demonstrates that the emissions of VOCs and other substances from key internal finishes and fittings comply with best practice levels.	1	1	0.77						1 Credit - A copy of the specification clause confirming the VOC content of the relevant specified product types will comply with the standards specified by Table 8 of BREEAM Manual.	Architect / Contractor	
Hea 10 Thermal Comfort	One credit where evidence provided demonstrates that thermal comfort levels in occupied spaces of the building are assessed at the design stage to evaluate appropriate servicing options, ensuring appropriate thermal comfort levels are achieved. Assessment carried out in accordance with CIBSE AM11 and comfort levels in line with CIBSE Guide A	1	0	0.00						1 Credit - A copy of the relevant specification clause confirming the criteria for thermal comfort analysis or correspondence from design team confirming the name of the thermal comfort modelling software used and the software has been selected and applied in accordance with CIBSE AM11. A copy of the results from the modelling demonstrating the internal temperatures in compliance with the relevant standards.	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam						
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Hea 11 Thermal Zoning	The heating/cooling system is designed to allow occupant control of zoned areas within all occupied spaces in the building. The zoning allows separate occupant control (within the occupied space) of each perimeter area (within 7m of each external wall) and central zone (over 7m from external wall).	1	0	0.00							1 Credit - A copy of the relevant clauses of the specification and/or marked up M&E drawings confirming *Scope of heating/cooling system *The type of user controls for the above systems *The scope of controls i.e. control zone	M&E Consultant	
Hea 12 Microbial Contamination	One credit where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised. All water systems are designed in compliance with measures outlined in the Health and Safety Executive's "Legionnaires' disease - The control of legionella bacteria in water systems" Approved Code of Practice and Guidance, 2000	1	1	0.77	1	1	1	1	1		1 Credit - A copy of the relevant specification clause confirming all types of water system in the building and on the assessed site and the standards to which all water systems in the building will be designed. Where design responsibility is to be passed on to the contractor/installer, a copy of the relevant specification clause stating the criteria on the contractor/installer with regards to minimising the risk of Legionnaires disease from the specified water systems.	M&E Consultant	
Hea 13 Acoustic Performance	Indoor ambient noise levels in unoccupied staff office areas: <40dB Laeq,T in single occupancy office, 40-50dB Laeq,T in multiple occupancy office, <40dB Laeq,T in general spaces (staffroom), <35dB Laeq,T in seminar/lecture rooms <50dB Laeq,T in informal canteen/cafe areas Fully fitted buildings only: The sound insulation between acoustically sensitive rooms and other occupied spaces complies with section 7.6.3.1 of BS8233. Pre-completion acoustic testing is carried out by a suitably qualified acoustician to ensure that all relevant spaces achieve the performance standards required, and any remedial works are completed prior to handover and occupation	1	1	0.77							1 Credit - A copy of the design plan for each level of the building with each room/area clearly labelled. A copy of the specification clause confirming indoor ambient noise levels in each room/area clearly labelled, if relevant sound insulation levels between each acoustically sensitive room and adjacent occupied areas, the standards the which calculations/measurements have been complied. *A copy of the specification clause or a formal letter from the project team confirming a programme of pre-completion acoustic testing by acoustician will be commissioned and where room/areas do not comply appropriate remedial action will be completed.	M&E Consultant/ Contractor	
Total		13	4	3.08									
ENERGY													
Ene 1 Reduction of CO ₂ Emissions	Up to fifteen credits where evidence provided demonstrates an improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO ₂ emissions.	15	13	19.24				6	10		15 Credits - Dependent on EPC Rating - A copy of the Epic output from the approved software for the assessed building at design stage. The accredited assessor's name and accreditation number.	M&E Consultant	
Ene 2 Sub-metering of Substantial Energy Uses	One credit: Separate accessible energy sub-meters, labelled with end energy consuming use, are provided for the following systems: *Space Heating, *Domestic Hot Water, *Humidification, *Cooling, *Fans Major, *Lighting, * Small power, *Other major energy consuming items One credit: A BMS with the ability to monitor and control the following as well as the relevant systems above has been installed: a. Chillers, air handling units and pumps and other major HVAC plant (where specified) b. Internal environmental conditions The BMS must have the ability to draw to the attention of the user out of range operational values (using an alarm system).	2	1	1.48				1	1	1	2 Credits - Specification document or technical drawings confirming *Energy-consuming systems and their rated outputs *Metering arrangements for each system, type and location of meter specified *If applicable, scope of BMS and its energy-monitoring capability	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam						
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Ene 4 External Lighting	<p>*External light fittings for the building, access ways and pathways have a luminous efficacy of at least 50 lumen/ circuit watt when lamp has Ra ≥ 60. OR 60 lumens/circuit watt when lamp has Ra <60</p> <p>*External light fittings to car park areas and associated roads and flood lighting have a luminous efficacy of at least 70 lumen/ circuit watt when lamp has Ra ≥ 60. OR 80 lumens/circuit watt when lamp has Ra <60</p> <p>*External light fittings for signs and up lighting have a luminous efficacy of at least 60 lumen/ circuit watt when lamp wattage ≥ 25W. OR 50 lumens/circuit watt when lamp wattage <25W</p> <p>*All fittings are controlled through a time switch or daylight sensor</p>	1	1	1.48							<p>1 Credit - *Marked-up site plan and building elevations showing location and purpose of all external light fittings.</p> <p>*Lighting specification of lighting designers calculations confirming lumens/circuit watt for each fitting as well as Ra and external lighting control strategy.</p>	M&E Consultant	
Ene 5 Low Zero Carbon Technologies	<p>*One credit where evidence provided demonstrates that a feasibility study considering local (on-site and/or near site) low or zero carbon (LZC) technologies has been carried out and the results implemented.</p> <p>*Two credits where evidence provided demonstrates that the first credit has been achieved and there is a 10% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology.</p> <p>*Three credits where evidence provided demonstrates that the first credit has been achieved and there is a 15% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology.</p> <p>Or alternatively:</p> <p>*A maximum of one credit where evidence provided demonstrates that a contract with an energy supplier is in place to provide sufficient electricity used within the assessed building/development to meet the above criteria from a 100% renewable energy source. (Note: a standard Green Tariff will not comply)</p>	3	3	4.44				1	1	<p>1st Credit - copy of the feasibility report</p> <p>*letter from energy specialist confirming compliance with definition of energy specialist and the timing of the feasibility report within the plan of works.</p> <p>*marked up design plan or specification confirming proposed installation of LZC energy technology</p> <p>*manufacturers technical data and details or calculations stating the carbon savings as a result of the installed LZC technology</p> <p>2nd & 3rd Credit - *Evidence as above and a copy of the report illustrating the name of the approved software, confirmation of the expertise and experience of the person carrying out the modelling and total CO2 emissions for the assessed building without the LZC technology</p> <p>*and calculations/outputs confirming total carbon savings as a result of the installed LZC technology.</p>	M&E Consultant		
Ene 8 Lifts	<p>Up to two credits are available where evidence provided demonstrates the installation of energy-efficient lift(s).</p> <p>One credit - an analysis of transport demand and patterns for the building has been carried out by the design team to determine the optimum number and size of lifts and counterbalancing ratio on the basis of anticipated passenger demand. The energy consumption for at least 2 types of lift has been analysed and the lowest specified.</p> <p>Second credit - three of the following that offer the greatest energy savings are specified.</p> <p>*lifts operate in stand-by mode during off peak/idle</p> <p>*lift motors use drive controller capable of variable-speed, variable-voltage, variable frequency control</p> <p>*lift has a regenerative unit so the energy generated by lift is returned back to grid or used onsite</p> <p>*lift uses energy-efficient lighting (>60 Lumens/watt or fitting that consume less than 5W)</p>	2	0	0.00						<p>1st Credit - *A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations.</p> <p>2nd Credit - *A copy of the lift specification or formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant criteria for the number of credits sought.</p>	Architect / Lift Consultant		
Ene 22 Sustainable Procurement of IT	<p>First Credit: Where IT Equipment integral to the design and operation of the inherent building systems e.g. UPS systems, Generators, Cooling, BMS/EMS etc), is procured in accordance with the 'EU Code of Conduct on Data Centres' Best practice supplement version 2.</p> <p>Second credit: nd in use is procured in accordance with the 'EU Code of Conduct on Data Centres' Best practice supplement version 2.</p>	2	0	0.00						<p>1st Credit - *A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations.</p> <p>2nd Credit - *A copy of the lift specification or formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant criteria for the number of credits sought.</p>	Architect / Lift Consultant		
Total		25	18	26.64									

TRANSPORT

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Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment					breeam						
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Tra 1 Provision of Public Transport	Five credits available calculated from accessibility index which is determined from the following *distance (m) from the main building entrance to each compliant public transport node *public transport type serving the compliant node *frequency of service to node	3	3	1.50							5 Credits - * A copy of the output from the provision of Public Transport calc *Scale map highlighting the location of the building and all public transport nodes in proximity of building. *Timetables for each service at each public transport node considered.	BREEAM Assessor	
Tra 2 Proximity to Amenities	Where the building is within 500m of a grocery shop, post box and cash machine	1	1	0.50							1 Credit - marked-up site plan or map highlighting location of assessed building, location and type of amenities, the route to the amenities, plan/map scale *Where the amenities do not currently exist but are to be developed a letter from the client/developer confirming the location and type of amenities to be provided and the timescale for the development of the amenities	BREEAM Assessor	
Tra 3 Cyclist Facilities	First credit: a. The number of compliant cycle storage spaces equivalent to 10% of the number of full-time equivalent staff that will commute to the development. B. The staff spaces must be provided in addition to customer spaces and whilst they do not need to be separate from customer spaces, this is encouraged. PLUS c. The number of compliant cycle storage spaces is equivalent to 5% of the total number of customer car parking spaces (excluding disabled spaces and mother-and-baby spaces where provided). d. This is subject to providing a minimum of 10 cycle racks. Any development that provides at least 50 customer cycle storage spaces will comply regardless of the number of parking spaces. Two credits: The first credit must be achieved. At least two of the following compliant facilities must be provided for the building users: a. Compliant Showers. b. Compliant changing facilities and lockers for clothes. c. Compliant drying space for wet clothes.	2	1	0.50							1st & 2nd Credit - Design plans and/or documentation confirming: a. Number, type, dimension, location and layout of cycle racks provided. b. Proximity of the racks to the main building entrance. c. Racks are covered, with adequate lighting provided in accordance with BS5489 Part 1. d. Number and location of showers, changing rooms and lockers provided. e. Size and location of changing / drying space provided. f. Materials and construction specified for the facility. g. Building occupancy or net lettable / floor areas. Where the building is in a city centre location, and the benchmarks reduced, evidence as outlined under BREEAM credit Tra 1 demonstrating the relevant number of credits achieved.	Architect	
Tra 4 Pedestrian and Cyclist Safety	First Credit 1. The cycle lanes have been designed and constructed in accordance with the guidance in the National Cycle Network Guidelines and the relevant parts of Appendix VI NCN Design and Construction Checklist. 2. The cycle lanes and pedestrian paths meet the following minimum width dimensions: a. Where the cycle lane is segregated from both the pedestrian route and carriageway the minimum width of the cycle path is 2.0m and the minimum width of the pedestrian path is 1.5m. c. Where the cycle route forms a part of the carriageway, the minimum width of the lane is 1.5m. Minimum widths should not be regarded as the design target, where possible best practice as detailed in the Sustains guidelines and DIT60 guidance must be aimed for. 3. Cycle lanes provide direct access to any cycle storage facilities provided on the site, without the need to deviate from the cycle path and, if relevant, connect to offsite cycle paths where these run adjacent to the development's boundary.	1	0	0.00							1 Credit - Appropriate site plans highlighting all necessary design details and project team confirmation of requirements and that design is in accordance with best practice requirements. A signed and dated copy of the NCN Design and Construction Checklist from the design/project team (or completed by the assessor using design information). Details of the external lighting strategy.	Architect	
Tra 5 Travel Plan	One Credit where a travel plan has been developed as part of the feasibility and design stages which considers all types of travel relevant to the building type and users. The travel plan is structured to meet the needs of the site and takes into consideration the findings of a site-specific transport survey and assessment. The travel plan includes measures that have been used to steer the design of the development in order to meet the travel plan objectives and minimise car based travel patterns	1	1	0.50							1 Credit - A copy of the travel plan. A copy of the site-specific transport survey. Marked up site plan demonstrating examples of the design measures, implemented in support of the travel plan's findings; OR where a detailed site plan is not available, a formal letter from the client confirming that measures will be implemented into the final design in support of travel plan's findings.	Project Manager	
Tra 6 Maximum Car Parking Capacity.	One Credit Where there is no more than one parking space provided for every 3 building users. Two credits: Where there is no more than one parking space provided for every 4 building users.	2	1	0.50							1 Credit - Design plan and / or copy of the relevant specification clause confirming the location and scope of the travel information point / facility.	Architect	

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Title		BREEAM Data Centres 2010 Pre-Assessment							breeam			
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Total		10	7	3.50								
WATER												
Wat 1 Water Consumption	One Credit Where water efficient fittings have been specified and the effective flush volume is ≤4.5 litres AND where dual flush toilets are specified they have a guidance instructing the user on their appropriate operation.									1st, 2nd & 3rd Credit - A copy of the relevant M&E specification and/or manufacturers details confirming technical specification for sanitary fittings (flow rate) and controls to be installed. Design plan showing the location within the building of the sanitary facilities.	M&E Consultant	
	Second Credit Where all WCs have an effective flush volume of ≤3 litres OR all WC's are compliant with the requirements for the first credit and fitted with delayed action inlet valve.											
	Third Credit Where, of the following, the two that offer the greatest possible reduction in annual water consumption have been specified: a. All taps except kitchen taps, cleaners sinks and external taps have a maximum flow rate <6 litres / min for water pressure of 0.3 MPa and include either timed shut-off taps, electronic sensors, low flow screw-diver / lever or spray taps. b. All showers have a measured flow rate that does not exceed 9 litres / min for a water pressure of 0.3MPa. c. All urinals are either fitted with individual presence detectors or ultra low flush or waterless urinals.	3	1	1.06		1	1	1	2			
Wat 2 Water Meter	One Credit Where a water meter is installed to all building supplies, with a pulsed output for future connection to a Building Management System (BMS). For buildings with multiple retail units, e.g. shopping centres, separate pulsed meters are required to cover the water supply to the following areas where present: a. Letting area; on the water supply to each tenant unit. b. Common areas; covering the supply to toilet blocks. c. Service areas; covering the supply to outlets within storage; delivery, waste disposal area etc.	1	1	1.06		1	1	1	1	1 Credit - A copy of the specification clause confirming the specification and type of water meter. Design plans showing location of water meter.	M&E Consultant	
Wat 3 Major Leak Detection	One Credit Where a leak detection system is specified or installed covering all mains water supply between and within the building and the site boundary. A. Audible when activated. B. Activated when the flow of water passes through the water meter / data logger at a flow rate above a pre-set minimum for a pre-set minimum for a pre-set period of time. c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and / or low level, over set time periods. d. Programmable to suit the owner / occupiers' water consumption criteria. e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.	1	1	1.06						1 Credit - A copy of the specification clause Confirming the scope and performance criteria of leak detection system and/or manufacturers details confirming the technical specification of the specified system.	M&E Consultant	
Wat 4 Sanitary Supply Shut-Off	One Credit Where solenoid valves are installed to each toilet area in the building and the slow through that supply is controlled to a link by EITHER. Infra-red movement detectors within each toilet facility OR Sensors or switches placed at or on entry doors to each facility.	1	0	0.00						1 Credit - A copy of the specification clause confirming the controls and specification of shut-off valves. Design plan showing the location of the toilet facilities.	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Wat 5 Water Recycling	One Credit Where systems that collect store and where necessary treat, rainwater or WC and urinal flushing purposes are specified meeting one of the following requirements: a. The rainwater collection tank is sized to collect at least 50% of EITHER the total predicted rainwater run-off required to meet the total predicted flushing demand. b. Waste water from wash hand basins and showers is collected from ≥80% of fittings and recycled to meet at least 10% of the total flushing demand. c. A combination of wastewater and rainwater collection meets at ≥ 50% of EITHER the total predicted flushing demand OR the total predicted flushing demand and irrigation of planting and landscaping.	1	0	0.00						1 Credit - A copy of the specification clause confirming the type of collection system and WC, urinal, taps and shower specifications. Design team calculations for the defined period of collection demonstrating (where appropriate): a. Rainwater yield for the catchment area (mm) b. Predicted urinal /WC flushing demand. c. Estimated potential for waste water collection from taps/showers. d. Size (litres) of the rainwater / greywater collection tank specified.	M&E Consultant	
Wat 6 Irrigation Systems	One Credit Where the irrigation method specified for internal or external planting and/or landscaping complies with ANY ONE of the following: a. Drip feed subsurface irrigation that incorporates soil moisture sensors. The irrigation control should be zoned to permit variable irrigation to different planting assemblages. b. Reclaimed water from a rainwater or greywater system. c. External landscaping and planting that relies solely on precipitation, during all seasons of the year. d. The only planting specified is restricted to species that thrive in hot and dry conditions. e. Where no dedicated, mains-supplied irrigation systems (including pop-up sprinklers and hoses) are specified, and planting will rely solely on manual watering by building occupier or landlord. Where a sub surface drip feed irrigation system is to be installed for external areas, a rainstat must also be installed to prevent automatic irrigation of the planting and the landscape during periods of rainfall.	1	1	1.06						1 Credit - A copy of the specification clause confirming the type of collection system and WC, urinal, taps and shower specifications. Design team calculations for the defined period of collection demonstrating (where appropriate): a. Rainwater yield for the catchment area (mm) b. Predicted urinal /WC flushing demand. c. Estimated potential for waste water collection from taps/showers. d. Size (litres) of the rainwater / greywater collection tank specified.	M&E Consultant	
Total		8	4	4.25								


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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
MATERIALS												
Mat 1 Materials Spec - Major Building Elements	Four Credits The embodied impacts of the materials specification for the key building elements (using the Green Guide to Specification 2008), scored on a rating scale from A+ to E. The total score achieved determines the credits awarded:	6	4	1.87						6 Credits - Materials specification(s) and the appropriate Green Guide (2008) rating for the following elements External wall specification Windows Roof Upper floor slab Proportions / areas (m2) where there is more than one specification for a single element.	Architect	
Mat 2 Hard Landscaping & Boundary Protection	One credit where evidence provided demonstrates that at least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.	1	1	0.47						1 Credit - Specification confirming a detailed description of each applicable element and its constituent materials and design drawings of specification detailing location and area of each applicable material. Materials specification(s) and the appropriate Green Guide (2008) rating. Proportions / areas (m2) where there is more than one specification for a single element. Evidence of any existing man made or natural boundary / hard landscaping features and their proportions / areas (m2).	Architect	
Mat 3 Re-use of Building Fabric	One credit is awarded where evidence provided demonstrates that at least 50% of the total façade (by area) is reused and at least 80% of the reused façade (by mass) comprises in-situ reused material.	1	0	0.00						1 Credit - Drawings clearly demonstrating the reuse of 50% of total façade by are, i.e.. existing and new-build façades. Calculations demonstrating that more than 80% (by mass) of the reused façade comprises in-situ reused material.	Architect	
Mat 4 Re-use of Building Structure	One credit is awarded where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's volume.	1	0	0.00						1 Credit - Drawings or design team calculations detailing the sections of the existing structure to be reused. Any parts of the structure to be demolished and the total new structure. Where appropriate, calculations confirming any strengthening/alteration are not deemed significant in terms of the assessment criteria for mass of materials used.	Architect	
Mat 5 Responsible Sourcing of Materials	Three Credits are available where evidence provided demonstrates that 80% of the assessed materials in the following building elements are responsibly sourced: a. Structural Frame b. Ground floor c. Upper floors (including separating floors) d. Roof e. External walls f. Internal walls g. Foundation/substructure h. Staircase Additionally 100% of any timber must be legally sourced.	3	2	0.93						3 Credits - *Design plan and/or specification confirming the location of elements, materials specified and details of materials specified. *A letter of intent from the design team confirming the product shall be sourced from suppliers capable of providing certification to the level required for particular tier claimed OR *If the material has been ordered, supplied or the supplier is known Purchase order from supplier including (as appropriate) chain of custody (COC) number and/or BES6001:2008 certificate number and/or EMS certificate number *Written confirmation from the developer that all timber will come from a 'legal source' and one not on the CITIES list.	Architect/ Contractor	
Mat 6 Insulation	One credit where evidence provided demonstrates that thermal insulation products used in the building have a low embodied impact relative to their thermal properties, determined by the Green Guide to Specification ratings for *External Walls, *Ground Floor, *Roof, *Building Services. The insulation index must be ≥2 One credit where evidence provided demonstrates that 80% of thermal insulation products used in the building have been responsibly sourced.	2	2	0.93						2 Credits - *Marked-up design plan/elevations and/or a copy of the specification confirming the location of insulating materials and the area (m²) and thickness (m) or volume (m³) of insulation specified. *Manufacturers technical details confirming thickness and thermal conductivity of insulating materials specified. *The green guide rating and element number for the assessed insulation specifications.	Architect/ Contractor	

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Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Mat 7 Designing for Robustness	One credit where protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements. *Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares. *Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. *Protection against any potential vehicular collisions when vehicular parking and manoeuvring occurs within 1m of external building facade for all car parks and 2m for delivery areas.	1	1	0.47							1 Credit - Design drawings marked up to illustrate vulnerable areas/parts of the building. * Design drawing and/or specification confirming the durability measures specified.	Architect	
Total		15	10	4.67									
WASTE													
Wst 1 Construction Site Waste Management	Three credits are available where evidence provided demonstrates that the amount of non-hazardous construction waste (m ³ /100m ² or tonnes/100m ²) generated on site by the development is the same as or better than good or best practice levels. 1 credit = 13 - 16.6 m ³ /100m ² Or 6.6-8.5 tonnes/m ² 2 credit = 9.2 - 12.9 m ³ /100m ² Or 4.7-6.5tonnes/m ² 3 credit = <9.2 m ³ /100m ² Or <4.7 tonnes/m ² One credit where evidence provided demonstrates that a significant majority of non-hazardous construction waste generated by the development will be diverted from landfill and reused or recycled.	4	3	1.93							4 Credits - A copy of the compliant Site Waste Management Plan containing the appropriate benchmarks, commitments and procedures. Where relevant a copy of the pre-demolition/pre-refurbishment audit. OR a copy of the specification clause that requires the principle contractor to produce a SWMP in line with the criteria. Contains the detailed criteria with respect to resource efficiency benchmarks and targets and procedures to be included in the SWMP. Where relevant requires the principle contractor to carry out a pre-demolition/pre-refurbishment audit. OR a letter from the client or their representative containing confirmation that the specification will contain a clause on site waste management criteria and as outline of the detailed criteria will be included in that specification clause.	Contractor	
Wst 2 Recycled Aggregates	One Credit where the amount of recycled and secondary aggregate specified is over 25% (by weight or volume) of the total high-grade aggregate uses for the site. Obtained either on site or from waste processing sites within 30km or secondary aggregates obtained from non-construction post-consumer or post-industrial by-product source.	1	1	0.64							1 Credit - A copy of the relevant specification or contract clause confirming recycled and secondary aggregate use criteria for the project. A letter from the design team or main contractor confirming the source of the recycled/secondary aggregates and the amount/quality required can be obtained from this source.	Contractor	
Wst 3 Recycled Waste Storage	One Credit where a central dedicated storage space is provided for a minimum of 6 different types of recyclable materials. Which is "clearly labelled for recycling, " placed within accessible reach of the building, "sized according to number of retail units and the predicted volumes of waste that will arise, " in a location with good vehicular access to facilitate collections.	1	1	0.64					1	1	1 Credit - Marked up building/site plan and/or copy of the specification confirming *the location of the dedicated storage area *storage area for general waste *the area m ² of the storage spaces *description of labelling	Architect	
Wst 4 Compactor / Baler	One credit where evidence provided demonstrates that either an industrial waste compactor or baler is installed for compacting/baling waste materials generated on site and a. A water outlet is provided for cleaning b. The development achieves the BREEAM credit for storage of recyclable waste.	1	1	0.64							1 Credit - Marked up building/site plan and/or copy of the specification confirming *the provision of waste compactor/baler *location and size of space for waste compactor/baler *water outlet *manufacturer/supplier literature confirming the type of compactor/baler *Evidence of compliance as of Wst 3	Architect	
Total		7	6	3.86									
LANDUSE AND ECOLOGY													
LE 1 Reuse of Land	One Credit where at least 75% of the proposed development's footprint falls within the boundary of land previously developed (within 50 years)	1	1	0.60							1 Credit - *Existing site plan, report or site photographs confirming type and duration of previous land use, area (m ²) of previous land use. *Proposed site plan showing location and footprint (m ²) of proposed development and temporary works.	Architect	


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Title		BREEAM Data Centres 2010 Pre-Assessment											
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
LE 2 Contaminated Land	One credit is awarded where evidence provided demonstrates that the land used for the new development has, prior to development, been defined as contaminated and where adequate remedial steps have been taken to decontaminate the site prior to construction.	1	1	0.60							1 Credit -Specialists land contamination report confirming the degree, type and sources of site contamination. The options for remediating the site. Existing site plans showing the location of areas contaminated and to be remediated in relation to proposed development. *A letter from main contractor confirming remediation strategy for site and summary details of the implementation plan. If a contractor has not yet been appointed a letter from the client or representative confirming the appointed contractor shall undertake all necessary remediation works.	Project Manager	
LE 3 Ecological Value of Site and Protection of Ecological Features	One credit is awarded where evidence provided demonstrates that the construction zone is defined as land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works.	1	1	0.60							1 Credit - A completed copy of checklist A4 signed and dated by client or design team member and one of the following *plan and/or site photographs highlighting any ecological features OR *a copy of the ecologist report containing confirmation that the land within the construction zone is of low ecological value, description of ecological features within site and on site boundary, dates of site surveys (this also requires a signed copy of sections A and B of checklist A6, confirming ecologist professional status) *A copy of the relevant section of the contract specification confirming the requirement to protect all identified features of ecological value, scope of protection measures required and protection measures implemented prior to commencement of site activities.	Ecologist	
LE 4 Mitigating Ecological Impact	One credit where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is minimal. (less than 0 greater than -9) Two credits where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of development. (equal to or greater than 0)	2	1	0.60			1	1	1		1st & 2nd Credit - Existing and proposed site plans and, if required, maps and aerial photographs confirming landscape and vegetation plot types and area (m ²) of vegetation plot types. *OR a copy of the suitably qualified ecologists report confirming prior to and after the development landscape and vegetation plot types and area (m ²) of vegetation plot types.	Ecologist	
LE 5 Enhancing Site Ecology	One credit where the design team (or client) has appointed a suitably qualified ecologist to advise and report on enhancing and protecting the ecological value of the site; and implemented the professional's recommendations for general enhancement and protection of site ecology. Two credits where, in addition to the above, there is a positive increase in the ecological value of the site of up to (but not including) 6 species. Three credits where, in addition to the above, evidence is provided to demonstrate a positive increase in the ecological value of the site of 6 species or greater.	3	2	1.20							1st, 2nd & 3rd Credit - Copy of the ecologists report containing signed checklist A6. Proposed site plan highlighting implementation of the ecologists enhancements recommendations. Confirmation through specification or letter that the main contractor is to implement recommendations. Ecologist report highlighting the change in value of the site.	Ecologist	
LE 6 Long Term Impact on Biodiversity	One credit where the client has committed to achieving the mandatory requirements listed and at least two of the additional requirements. Two credits where the client has committed to achieving the mandatory requirements listed and at least four of the additional requirements.	2	2	1.20							1st & 2nd Credit - Copy of the ecologist's report or letter confirming the requirements where they have / will be implemented / achieved: Mandatory Requirements 1. An SQE has been appointed prior to commencement of activities on site. 2. The SQE confirms that all relevant UK and EU legislation will be complied with. 3. A landscape and habitat management plan is produced covering at least the first 5 years after project completion. Additional Requirements 1. Contractor's Biodiversity Champion to monitor site biodiversity during construction. 2. Training site work-force on ecology protection. 3. Contractor records actions taken to protect biodiversity and monitor their effectiveness. 4. New ecologically valuable habitat is created. 5. The contractor programmes site works to minimise disturbance to wildlife. - Copy of the Site Management Plan and the Site Landscape and Habitat Management Plan. - Site plans and ecologists' site investigation report, where applicable.	Ecologist/ Contractor	
Total		10	8	4.80									

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Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
POLLUTION												
Po1 Refrigerant GWP Building Services	One credit where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less than 5 or where there are no refrigerants specified for use in building services.	1	0	0.00						1 Credit - A copy of the specification clause confirming refrigerant to be used and its GWP. - If several different types of system are to be installed, the type of refrigerant used in each piece of equipment must be specified. - OR Confirmation that no refrigerants will be specified.	M&E Consultant	
Po12 Preventing Refrigerant Leaks	One credit where evidence provided demonstrates that systems using refrigerant are contained in a moderately air tight enclosure (or mechanically ventilated plant room) and a refrigerant leak detection system is installed covering high risk parts of the plant. OR An automatic permanent refrigerant leak detection system is specific, which is NOT based on the principle of detecting or measuring concentration of refrigerant in the air. Or where there are no refrigerants specified for the development. One credit where evidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves. The alarm threshold that triggers automatic pump down is set to a maximum of 2000ppm (0.2%).	2	0	0.00						1 Credit - A copy of the specification clause or letter from M&E engineer confirming type of leak detection systems, scope of systems, containment strategy for equipment. * Details of the leak detection system installed in each piece of equipment. * Details of any automatic refrigerant recovery equipment installed and confirmation of: a. Details of the enclosure / plant room where the refrigeration plant is installed; AND Alarm threshold for triggering automatic pump down. - OR confirmation that no refrigerants will be specified.	M&E Consultant	
Po14 NOx emissions from heating source	One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤100 mg/kWh (at 0% excess O2). Two credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤70 mg/kWh (at 0% excess O2). Three credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤40 mg/kWh (at 0% excess O2).	2	0	0.00						1st, 2nd & 3rd Credit - A copy of the specification confirming type of heating system specified. *For each system specified manufacturer's literature confirming dry Nox emission rate in mg/kWh. *If more than one system is specified the average NOx emissions rate.	M&E Consultant	
Po15 Flood Risk	Two credits where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. One credit where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium or high annual probability of flooding AND the ground level of the building, car parking and access is above the design flood level for the site's location. One further credit where evidence provided demonstrates that surface water run-off attenuation measures are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site due to development.	3	3	2.73						1st & 2nd Credit - A copy of a flood map or flood risk assessment confirming flood zone or annual probability of flooding in the site location, where appropriate correspondence from the appropriate statutory body confirming reduced annual probability of flooding due to existing flood defences. *Copy of the flood risk assessment. *Site plans sections confirming design flood level for site, design ground levels for all developed areas of the site, safe access and escape routes. 3rd Credit - Site plans and a copy of the specification or consultants report confirming type and storage volume (l) of the water run-off attenuation measures, total area of hard surfaces (m²), peak flow rate (l/s) for the design storm event, additional allowance for climate change designed into the system.	Flood Risk Consultant	
Po6 Minimising Watercourse Pollution	One credit here evidence provided demonstrates that effective on site treatment such as Sustainable Drainage Systems (SUDs) or oil separators have been specified in areas that are or could be a source of watercourse pollution.	1	1	0.91						1 Credit - Marked up site plan highlighting low and high risk areas of the site. * A copy of the specification or design plan confirming type of pollution control systems specified. * A letter from the design team confirming all water pollution prevention systems designed in accordance with PPG3 and the SUDS manual. Outlining indicative examples of compliance with PPG3 and the SUDS manual.	Drainage Consultant	

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Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Po17 Reduction of Night Time Light Pollution	One credit where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institution of Lighting Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.	1	1	0.91						1 Credit - A marked up site plan showing areas of the building and site that will be externally lit, and nearby properties. *A copy of the specification clause requiring, or external lighting design confirming the external lighting design in compliance with Table 1 of the ILE Guidance notes. Controls for all external lighting. Illuminated advertisements designed in compliance with ILE Technical Report 5. Note:- In the case of the external lighting design the M&E engineer must provide indicative examples of where and how the strategy complies with the assessment criteria.	M&E Consultant	
Po18 Noise Attenuation	One credit where evidence provided demonstrates that new sources of noise from the development do not give rise to the likelihood of complaints from existing noise-sensitive premises and amenity or wildlife areas that are within the locality of the site.	1	0	0.00						1 Credit - Site plan highlighting all existing and proposed noise-sensitive buildings local to, and within, the site boundary. Proposed sources of noise from the new development. Distance (m) from these buildings to the assessed development. *- A copy of the acoustician's report. Acoustics qualifications and professional status OR a copy of the specification clause requiring a noise assessment in compliance with BS4141 : 1997 by a suitably qualified acoustician. *Acousticians report with recommendations for noise attenuation measures and a marked-up design plan highlighting the specification of the acousticians attenuation measures OR a formal letter for the design team confirming attenuation measures recommended will be installed.	Contractor	
Total		11	5	4.55								
Total BREEAM Percentage Score				66.34								

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
MANAGEMENT												
Man 1 Commissioning	<p>One credit where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be carried out in line with current best practice.</p> <p>Two credits where, in addition to the above, evidence provided demonstrates that seasonal commissioning will be carried out during the first year of occupation, post construction (or post fit out).</p>	2	1	1.00	1	1	1	1	2	<p>1st Credit - Letter or commissioning responsibilities schedule confirming appointment of commissioning monitor and scope of their role and specialist commissioning manager and scope of their commissioning role. A copy of the specification clause stating the standards and codes of practice to which commissioning procedures comply with. A copy of the specification clause confirming the managing contractors responsibility or a copy of the commissioning schedule highlighting the managing contractors responsibilities. A copy of the specification clause/commissioning schedule confirming the stages of the BMS/controls commissioning procedures.</p> <p>2nd Credit - Compliance with 1st credit and evidence confirming the scope of seasonal commissioning responsibilities / tasks as required.</p>	M&E Consultant	
Man 2 Considerate Constructors	<p>One credit where evidence provided demonstrates that there is a commitment to comply with best practice site management principles. (CCS score between 24 -31.5)</p> <p>Two credits where evidence provided demonstrates that there is a commitment to go beyond best practice site management principles. (CCS score between 32 -35.5)</p>	2	2	2.00				1	2	<p>1st and 2nd Credit - Copy of relevant section of main contract specification confirming the requirement to comply with the CCS and the minimum score to be achieved or a formal letter from client/developer confirming the main contract will include a clause requiring CCS certification, scope of main contractors works a completed copy of checklist A1.</p>	Contractor	
Man 3 Construction Site Impacts	<p>One credit where evidence provided demonstrates that 2 or more of items a-g (listed below) are achieved.</p> <p>Two credits where evidence provided demonstrates that 4 or more of items a-g (listed below) are achieved.</p> <p>Three credits where evidence provided demonstrates that 6 or more of items a-g are achieved:</p> <p>a. Monitor, report and set targets for CO2 or energy arising from site activities</p> <p>b. Monitor, report and set targets for CO2 or energy arising from transport to and from site</p> <p>c. Monitor, report and set targets for water consumption arising from site activities</p> <p>d. Implement best practice policies in respect of air (dust) pollution arising from the site</p> <p>e. Implement best practice policies in respect of water (ground and surface) pollution occurring on the site</p> <p>f. Main contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site</p> <p>g. Main contractor operates an Environmental Management System.</p> <p>One additional credit where evidence provided demonstrates that at least 80% of site timber is responsibly sourced and 100% is legally sourced.</p>	4	4	4.00						<p>1st - 3rd Credit - A copy of the relevant section from the main contract specification confirming contractors obligation in respect to each item on checklist,</p> <p>Additional Credit - A copy of the relevant section from the main contract specification confirming site timber will be sourced from suppliers capable of providing certification to the level required for the particular tier claimed, all timber will come from a 'legal source' and is not on the CITES list.</p>	Contractor	
Man 4 Building User Guide	<p>One credit where evidence provided demonstrates the provision of a simple guide that covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building.</p>	1	1	1.00				1	1	<p>1 Credit - A copy of the specification clause confirming the requirement to develop a building user guide and the scope of the Guide's content in compliance with BRE requirements.</p>	Contractor	

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Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Man 8 Security	One credit where evidence provided demonstrates that an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted at the design stage and their recommendations incorporated into the design of the building and its parking facilities (if relevant).	1	1	1.00						1 Credit - Correspondence from or a copy of the report/feedback from ALO/CPDA confirming the scope of their advice/involvement, the stage of design in which their advice was sought and summary of their recommendations. A marked up copy of the site/design plans highlighting the development conforming to ALO/CPDA recommendations and SBD principles and guidance or a copy of the specification confirming the development will conform to recommendations.	Architect	
Man12 Life Cycle Costing	One credit where a Life Cycle Cost (LCC) analysis has been carried out based on the proposals developed during RIBA Work Stages C/D (concept design/design development), or equivalent. The Life Cycle Costs analysis, based on the concept design/design development proposals, covers the following stages: a. Construction b. Operation - includes, as a minimum, utilities c. Maintenance - includes, as a minimum, planned maintenance, replacements and repairs, cleaning, management costs d. End of life. The LCC analysis uses a study period of 25 or 30 (as applicable) AND 60 years, shown in real and discounted cash flow terms. One credit where the results of the study have been implemented in the specification, design and final construction of the assessed building.	2	2	2.00						2 Credits - Copy of the feasibility stage Life Cycle Cost analysis and detailed design Life Cycle Cost analysis. Letter from the design team confirming LCC findings have been implemented.	Architect	
Total		12	11	11.00								
HEALTH AND WELLBEING												
Hea 1 Daylighting	One credit where evidence provided demonstrates at least 35% of the sales and common floor area (if relevant) is adequately daylight (point daylight factor of 2%). At least 80% of net lettable office floor area is adequately daylight with an average daylight factor of 2%. A uniformity ratio of at least 0.4 or a minimum point daylight factor of at least 0.8% (spaces with glazed roofs, such as atria, must achieve a uniformity ratio of at least 0.7 or a minimum point daylight factor of at least 1.4%) OR a view of sky from desk height (0.7m) is achieved and room depth criterion is satisfied. The provision of daylight has been designed in accordance with the guidance in CIBSE Lighting Guide 10 'Daylighting and window design' BS8206 Part 2 and BRE 947 'Daylighting and window design'.	1	0	0.00						1 Credit - Design plans for each floor in the building with each room/area labelled for use and daylighting calculations confirming building areas assessed, the daylight variables/criterion measured, average daylight factor for each area, compliance with room depth criterion/uniformity ratio/view of sky, the daylight provision is in compliance with relevant standards, the percentage of area where point daylight factors are at least 2% and the position of the 2% daylight factors isolux contours in each of the rooms assessed.	Architect	
Hea 2 View Out	The relevant areas are within 7m distance of a wall with a window or permanent opening providing an adequate view out, where the window/opening is ≥20% of the total inside wall area	1	0	0.00						1 Credit - Design plan and elevation showing all relevant building areas and room depths, actual or notional workstations/desk layout, window/open areas. Site Plan showing building location and proximity to external obstructions.	Architect	
Hea 3 Glare Control	An occupant-controlled shading system on all windows, glazed doors and roof lights in all relevant building areas.	1	0	0.00						1 Credit - * Marked up copy of design plan(s) confirming a description of the function of each of the building spaces. * A copy of the relevant specification clause(s), window schedule or design plan confirming the type of shading system(s) and control to be installed.	Architect	
Hea 4 High Frequency Lighting	One credit where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	1	1	0.77	1	1	1	1	1	1 Credit - A copy of the specification clause or room data sheets confirming a compliant lighting strategy.	M&E Consultant	


Green = Targeted
Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Hea 5 Internal and External Lighting Levels	One credit where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained illuminance levels (in lux) recommended by CIBSE.	1	0	0.00						1 Credit - A copy of the specification clause or relevant room schedules confirming the internal/external maintained illuminance levels and/or the standards that the illuminate levels are specified to. Or a formal declaration of conformity from the relevant design team member confirming the maintained illuminance levels for each internal/external source are in compliance with relevant standard	M&E Consultant	
Hea 6 Lighting Zones and Controls	Lighting is Zoned to allow separate occupant control of office and circulation spaces, office areas (zones of no more than 4 work spaces), workstations adjacent to window/atria and other building areas separately zoned and controlled, seminar and lecture rooms, library zones.	1	0	0.00						1 Credit - * Design plans for each floor of the building highlighting space arrangement, * Room type and specification or design plans confirming lighting zones and location and scope of user controls.	M&E Consultant	
Hea 7 Potential for Natural Ventilation	Occupied spaces of the building are designed to be capable of providing fresh air entirely via a natural ventilation strategy by either a) openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate. For room/floor plates between 7m-15m depth, the openable window area is on opposite side and evenly distributed to promote cross ventilation. or b) the design demonstrates by calculation using ventilation tools recommended by CIBSE Am10, that the natural ventilation strategy provides adequate cross flow of air to maintain required thermal comfort conditions and ventilation rates. The strategy is capable of providing at least two levels of user-control on the supply of fresh air to occupied spaces with higher rates of ventilation to remove short term odours and prevent summer overheating.	1	0	0.00						1 Credit - Design plans and elevations, specification or calculations confirming:- * Ventilation strategy in each occupied space * The depth of the room * Gross internal floor area of each occupied space * The type of window/ventilator and total openable area * The type and degree of user-control And a copy of the results for the appropriate software modelling tool demonstrating compliance.	Architect	
Hea 8 Indoor Air Quality	One credit where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air. Air conditioned and mixed mode buildings where the buildings air intakes and exhausts are over 10m apart and the intakes are over 20m from sources of pollution. Naturally Ventilated Buildings where openable windows/vents are over 10m from sources of external pollution. Building has been designed to provide fresh air rates to dilute pollutants in accordance with best practice for office area i.e. 12l/s/person. Building with unpredictable occupancy levels have CO2 air quality sensors linked to mechanical ventilation systems in natural vent building these are linked to alerts or controls to adjust window or vent openings.	1	0	0.00						1 Credit - A marked-up proposed site plan highlighting locations of intakes, extracts, openable windows, ventilators, any existing or proposed sources of external pollution. Design team calculations and/or performance specification criteria confirming the fresh air rate set for each space, that the fresh air rate can be met using the chosen strategy and the relevant standards to which the design is in accordance with.		
Hea 9 Volatile Organic Compounds	One credit where evidence provided demonstrates that the emissions of VOCs and other substances from key internal finishes and fittings comply with best practice levels.	1	1	0.77						1 Credit - A copy of the specification clause confirming the VOC content of the relevant specified product types will comply with the standards specified by Table 8 of BREEAM Manual.	Architect / Contractor	
Hea 10 Thermal Comfort	One credit where evidence provided demonstrates that thermal comfort levels in occupied spaces of the building are assessed at the design stage to evaluate appropriate servicing options, ensuring appropriate thermal comfort levels are achieved. Assessment carried out in accordance with CIBSE AM11 and comfort levels in line with CIBSE Guide A	1	0	0.00						1 Credit - A copy of the relevant specification clause confirming the criteria for thermal comfort analysis or correspondence from design team confirming the name of the thermal comfort modelling software used and the software has been selected and applied in accordance with CIBSE AM11. A copy of the results from the modelling demonstrating the internal temperatures in compliance with the relevant standards.	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment							bream				
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Hea 11 Thermal Zoning	The heating/cooling system is designed to allow occupant control of zoned areas within all occupied spaces in the building. The zoning allows separate occupant control (within the occupied space) of each perimeter area (within 7m of each external wall) and central zone (over 7m from external wall).	1	0	0.00							1 Credit - A copy of the relevant clauses of the specification and/or marked up M&E drawings confirming *Scope of heating/cooling system *The type of user controls for the above systems *The scope of controls i.e. control zone	M&E Consultant	
Hea 12 Microbial Contamination	One credit where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised. All water systems are designed in compliance with measures outlined in the Health and Safety Executive's "Legionnaires' disease - The control of legionella bacteria in water systems" Approved Code of Practice and Guidance, 2000	1	1	0.77	1	1	1	1	1		1 Credit - A copy of the relevant specification clause confirming all types of water system in the building and on the assessed site and the standards to which all water systems in the building will be designed. Where design responsibility is to be passed on to the contractor/installer, a copy of the relevant specification clause stating the criteria on the contractor/installer with regards to minimising the risk of Legionnaires disease from the specified water systems.	M&E Consultant	
Hea 13 Acoustic Performance	Indoor ambient noise levels in unoccupied staff office areas: <40dB Laeq,T in single occupancy office, 40-50dB Laeq,T in multiple occupancy office, <40dB Laeq,T in general spaces (staffroom), <35dB Laeq,T in seminar/lecture rooms <50dB Laeq,T in informal canteen/cafe areas Fully fitted buildings only: The sound insulation between acoustically sensitive rooms and other occupied spaces complies with section 7.6.3.1 of BS8233. Pre-completion acoustic testing is carried out by a suitably qualified acoustician to ensure that all relevant spaces achieve the performance standards required, and any remedial works are completed prior to handover and occupation	1	1	0.77							1 Credit - A copy of the design plan for each level of the building with each room/area clearly labelled. A copy of the specification clause confirming indoor ambient noise levels in each room/area clearly labelled, if relevant sound insulation levels between each acoustically sensitive room and adjacent occupied areas, the standards the which calculations/measurements have been complied. *A copy of the specification clause or a formal letter from the project team confirming a programme of pre-completion acoustic testing by acoustician will be commissioned and where room/areas do not comply appropriate remedial action will be completed.	M&E Consultant/ Contractor	
Total		13	4	3.08									
ENERGY													
Ene 1 Reduction of CO ₂ Emissions	Up to fifteen credits where evidence provided demonstrates an improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO ₂ emissions.	15	13	19.24					6	10	15 Credits - Dependent on EPC Rating - A copy of the Epic output from the approved software for the assessed building at design stage. The accredited assessor's name and accreditation number.	M&E Consultant	
Ene 2 Sub-metering of Substantial Energy Uses	One credit: Separate accessible energy sub-meters, labelled with end energy consuming use, are provided for the following systems: *Space Heating, *Domestic Hot Water, *Humidification, *Cooling, *Fans Major), *Lighting, * Small power, *Other major energy consuming items One credit: A BMS with the ability to monitor and control the following as well as the relevant systems above has been installed: a. Chillers, air handling units and pumps and other major HVAC plant (where specified) b. Internal environmental conditions The BMS must have the ability to draw to the attention of the user out of range operational values (using an alarm system).	2	1	1.48					1	1	2 Credits - Specification document or technical drawings confirming *Energy-consuming systems and their rated outputs *Metering arrangements for each system, type and location of meter specified *If applicable, scope of BMS and its energy-monitoring capability	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment											
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Ene 4 External Lighting	<p>*External light fittings for the building, access ways and pathways have a luminous efficacy of at least 50 lumen/ circuit watt when lamp has Ra ≥ 60. OR 60 lumens/circuit watt when lamp has Ra <60</p> <p>*External light fittings to car park areas and associated roads and flood lighting have a luminous efficacy of at least 70 lumen/ circuit watt when lamp has Ra ≥ 60. OR 80 lumens/circuit watt when lamp has Ra <60</p> <p>*External light fittings for signs and up lighting have a luminous efficacy of at least 60 lumen/ circuit watt when lamp wattage ≥ 25W. OR 50 lumens/circuit watt when lamp wattage <25W</p> <p>*All fittings are controlled through a time switch or daylight sensor</p>	1	1	1.48							1 Credit - *Marked-up site plan and building elevations showing location and purpose of all external light fittings. *Lighting specification of lighting designers calculations confirming lumens/circuit watt for each fitting as well as Ra and external lighting control strategy.	M&E Consultant	
Ene 5 Low Zero Carbon Technologies	<p>*One credit where evidence provided demonstrates that a feasibility study considering local (on-site and/or near site) low or zero carbon (LZC) technologies has been carried out and the results implemented.</p> <p>*Two credits where evidence provided demonstrates that the first credit has been achieved and there is a 10% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology.</p> <p>*Three credits where evidence provided demonstrates that the first credit has been achieved and there is a 15% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology.</p> <p>Or alternatively: *A maximum of one credit where evidence provided demonstrates that a contract with an energy supplier is in place to provide sufficient electricity used within the assessed building/development to meet the above criteria from a 100% renewable energy source. (Note: a standard Green Tariff will not comply)</p>	3	3	4.44				1	1	1st Credit - copy of the feasibility report *letter from energy specialist confirming compliance with definition of energy specialist and the timing of the feasibility report within the plan of works. *marked up design plan or specification confirming proposed installation of LZC energy technology *manufacturers technical data and details or calculations stating the carbon savings as a result of the installed LZC technology 2nd & 3rd Credit - *Evidence as above and a copy of the report illustrating the name of the approved software, confirmation of the expertise and experience of the person carrying out the modelling and total CO2 emissions for the assessed building without the LZC technology *and calculations/outputs confirming total carbon savings as a result of the installed LZC technology.	M&E Consultant		
Ene 8 Lifts	<p>Up to two credits are available where evidence provided demonstrates the installation of energy-efficient lift(s). One credit - an analysis of transport demand and patterns for the building has been carried out by the design team to determine the optimum number and size of lifts and counterbalancing ratio on the basis of anticipated passenger demand. The energy consumption for at least 2 types of lift has been analysed and the lowest specified. Second credit - three of the following that offer the greatest energy savings are specified. *lifts operate in stand-by mode during off peak/idle *lift motors use drive controller capable of variable-speed, variable-voltage, variable frequency control *lift has a regenerative unit so the energy generated by lift is returned back to grid or used onsite *lift uses energy-efficient lighting (>60 Lumens/watt or fitting that consume less than 5W)</p>	2	0	0.00						1st Credit - *A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations. 2nd Credit - *A copy of the lift specification or formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant criteria for the number of credits sought.	Architect / Lift Consultant		
Ene 22 Sustainable Procurement of IT	<p>First Credit: Where IT Equipment integral to the design and operation of the inherent building systems e.g. UPS systems, Generators, Cooling, BMS/EMS etc), is procured in accordance with the 'EU Code of Conduct on Data Centres' Best practice supplement version 2.</p> <p>Second credit: nd in use is procured in accordance with the 'EU Code of Conduct on Data Centres' Best practice supplement version 2.</p>	2	0	0.00						1st Credit - *A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations. 2nd Credit - *A copy of the lift specification or formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant criteria for the number of credits sought.	Architect / Lift Consultant		
Total		25	18	26.64									

TRANSPORT


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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam						
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Tra 1 Provision of Public Transport	Five credits available calculated from accessibility index which is determined from the following *distance (m) from the main building entrance to each compliant public transport node *public transport type serving the compliant node *frequency of service to node	3	3	1.50							5 Credits - * A copy of the output from the provision of Public Transport calc *Scale map highlighting the location of the building and all public transport nodes in proximity of building. *Timetables for each service at each public transport node considered.	BREEAM Assessor	
Tra 2 Proximity to Amenities	Where the building is within 500m of a grocery shop, post box and cash machine	1	1	0.50							1 Credit - marked-up site plan or map highlighting location of assessed building, location and type of amenities, the route to the amenities, plan/map scale *Where the amenities do not currently exist but are to be developed a letter from the client/developer confirming the location and type of amenities to be provided and the timescale for the development of the amenities	BREEAM Assessor	
Tra 3 Cyclist Facilities	First credit: a. The number of compliant cycle storage spaces equivalent to 10% of the number of full-time equivalent staff that will commute to the development. B. The staff spaces must be provided in addition to customer spaces and whilst they do not need to be separate from customer spaces, this is encouraged. PLUS c. The number of compliant cycle storage spaces is equivalent to 5% of the total number of customer car parking spaces (excluding disabled spaces and mother-and-baby spaces where provided). d. This is subject to providing a minimum of 10 cycle racks. Any development that provides at least 50 customer cycle storage spaces will comply regardless of the number of parking spaces. Two credits: The first credit must be achieved. At least two of the following compliant facilities must be provided for the building users: a. Compliant Showers. b. Compliant changing facilities and lockers for clothes. c. Compliant drying space for wet clothes.	2	1	0.50							1st & 2nd Credit - Design plans and/or documentation confirming: a. Number, type dimension, location and layout of cycle racks provided. b. Proximity of the racks to the main building entrance. c. Racks are covered, with adequate lighting provided in accordance with BS5489 Part 1. d. Number and location of showers, changing rooms and lockers provided. e. Size and location of changing / drying space provided. f. Materials and construction specified for the facility. g. Building occupancy or net lettable / floor areas. Where the building is in a city centre location, and the benchmarks reduced, evidence as outlined under BREEAM credit Tra 1 demonstrating the relevant number of credits achieved.	Architect	
Tra 4 Pedestrian and Cyclist Safety	First Credit 1. The cycle lanes have been designed and constructed in accordance with the guidance in the National Cycle Network Guidelines and the relevant parts of Appendix VI NCN Design and Construction Checklist. 2. The cycle lanes and pedestrian paths meet the following minimum width dimensions: a. Where the cycle lane is segregated from both the pedestrian route and carriageway the minimum width of the cycle path is 2.0m and the minimum width of the pedestrian path is 1.5m. c. Where the cycle route forms a part of the carriageway, the minimum width of the lane is 1.5m. Minimum widths should not be regarded as the design target, where possible best practice as detailed in the Sustains guidelines and DIT60 guidance must be aimed for. 3. Cycle lanes provide direct access to any cycle storage facilities provided on the site, without the need to deviate from the cycle path and, if relevant, connect to offsite cycle paths where these run adjacent to the development's boundary.	1	0	0.00							1 Credit - Appropriate site plans highlighting all necessary design details and project team confirmation of requirements and that design is in accordance with best practice requirements. A signed and dated copy of the NCN Design and Construction Checklist from the design/project team (or completed by the assessor using design information). Details of the external lighting strategy.	Architect	
Tra 5 Travel Plan	One Credit where a travel plan has been developed as part of the feasibility and design stages which considers all types of travel relevant to the building type and users. The travel plan is structured to meet the needs of the site and takes into consideration the findings of a site-specific transport survey and assessment. The travel plan includes measures that have been used to steer the design of the development in order to meet the travel plan objectives and minimise car based travel patterns	1	1	0.50							1 Credit - A copy of the travel plan. A copy of the site-specific transport survey. Marked up site plan demonstrating examples of the design measures, implemented in support of the travel plan's findings; OR where a detailed site plan is not available, a formal letter from the client confirming that measures will be implemented into the final design in support of travel plan's findings.	Project Manager	
Tra 6 Maximum Car Parking Capacity.	One Credit Where there is no more than one parking space provided for every 3 building users. Two credits: Where there is no more than one parking space provided for every 4 building users.	2	1	0.50							1 Credit - Design plan and / or copy of the relevant specification clause confirming the location and scope of the travel information point / facility.	Architect	

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Title		BREEAM Data Centres 2010 Pre-Assessment							breeam			
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Total		10	7	3.50								
WATER												
Wat 1 Water Consumption	One Credit Where water efficient fittings have been specified and the effective flush volume is ≤4.5 litres AND where dual flush toilets are specified they have a guidance instructing the user on their appropriate operation.	3	1	1.06	1	1	1	2	1st, 2nd & 3rd Credit - A copy of the relevant M&E specification and/or manufacturers details confirming technical specification for sanitary fittings (flow rate) and controls to be installed. Design plan showing the location within the building of the sanitary facilities.	M&E Consultant		
	Second Credit Where all WCs have an effective flush volume of ≤3 litres OR all WC's are compliant with the requirements for the first credit and fitted with delayed action inlet valve.											
	Third Credit Where, of the following, the two that offer the greatest possible reduction in annual water consumption have been specified: a. All taps except kitchen taps, cleaners sinks and external taps have a maximum flow rate <6 litres / min for water pressure of 0.3 MPa and include either timed shut-off taps, electronic sensors, low flow screw-diver / lever or spray taps. b. All showers have a measured flow rate that does not exceed 9 litres / min for a water pressure of 0.3MPa. c. All urinals are either fitted with individual presence detectors or ultra low flush or waterless urinals.											
Wat 2 Water Meter	One Credit Where a water meter is installed to all building supplies, with a pulsed output for future connection to a Building Management System (BMS). For buildings with multiple retail units, e.g. shopping centres, separate pulsed meters are required to cover the water supply to the following areas where present: a. Letting area; on the water supply to each tenant unit. b. Common areas; covering the supply to toilet blocks. c. Service areas; covering the supply to outlets within storage; delivery, waste disposal area etc.	1	1	1.06	1	1	1	1	1 Credit - A copy of the specification clause confirming the specification and type of water meter. Design plans showing location of water meter.	M&E Consultant		
Wat 3 Major Leak Detection	One Credit Where a leak detection system is specified or installed covering all mains water supply between and within the building and the site boundary. A. Audible when activated. B. Activated when the flow of water passes through the water meter / data logger at a flow rate above a pre-set minimum for a pre-set minimum for a pre-set period of time. c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and / or low level, over set time periods. d. Programmable to suit the owner / occupiers' water consumption criteria. e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.	1	1	1.06					1 Credit - A copy of the specification clause Confirming the scope and performance criteria of leak detection system and/or manufacturers details confirming the technical specification of the specified system.	M&E Consultant		
Wat 4 Sanitary Supply Shut-Off	One Credit Where solenoid valves are installed to each toilet area in the building and the slow through that supply is controlled to a link by EITHER. Infra-red movement detectors within each toilet facility OR Sensors or switches placed at or on entry doors to each facility.	1	0	0.00					1 Credit - A copy of the specification clause confirming the controls and specification of shut-off valves. Design plan showing the location of the toilet facilities.	M&E Consultant		

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Title		BREEAM Data Centres 2010 Pre-Assessment										
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Wat 5 Water Recycling	One Credit Where systems that collect store and where necessary treat, rainwater or WC and urinal flushing purposes are specified meeting one of the following requirements: a. The rainwater collection tank is sized to collect at least 50% of EITHER the total predicted rainwater run-off required to meet the total predicted flushing demand. b. Waste water from wash hand basins and showers is collected from ≥80% of fittings and recycled to meet at least 10% of the total flushing demand. c. A combination of wastewater and rainwater collection meets at ≥ 50% of EITHER the total predicted flushing demand OR the total predicted flushing demand and irrigation of planting and landscaping.	1	0	0.00						1 Credit - A copy of the specification clause confirming the type of collection system and WC, urinal, taps and shower specifications. Design team calculations for the defined period of collection demonstrating (where appropriate): a. Rainwater yield for the catchment area (mm) b. Predicted urinal /WC flushing demand. c. Estimated potential for waste water collection from taps/showers. d. Size (litres) of the rainwater / greywater collection tank specified.	M&E Consultant	
Wat 6 Irrigation Systems	One Credit Where the irrigation method specified for internal or external planting and/or landscaping complies with ANY ONE of the following: a. Drip feed subsurface irrigation that incorporates soil moisture sensors. The irrigation control should be zoned to permit variable irrigation to different planting assemblages. b. Reclaimed water from a rainwater or greywater system. c. External landscaping and planting that relies solely on precipitation, during all seasons of the year. d. The only planting specified is restricted to species that thrive in hot and dry conditions. e. Where no dedicated, mains-supplied irrigation systems (including pop-up sprinklers and hoses) are specified, and planting will rely solely on manual watering by building occupier or landlord. Where a sub surface drip feed irrigation system is to be installed for external areas, a rainstat must also be installed to prevent automatic irrigation of the planting and the landscape during periods of rainfall.	1	1	1.06						1 Credit - A copy of the specification clause confirming the type of collection system and WC, urinal, taps and shower specifications. Design team calculations for the defined period of collection demonstrating (where appropriate): a. Rainwater yield for the catchment area (mm) b. Predicted urinal /WC flushing demand. c. Estimated potential for waste water collection from taps/showers. d. Size (litres) of the rainwater / greywater collection tank specified.	M&E Consultant	
Total		8	4	4.25								

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
MATERIALS												
Mat 1 Materials Spec - Major Building Elements	Four Credits The embodied impacts of the materials specification for the key building elements (using the Green Guide to Specification 2008), scored on a rating scale from A+ to E. The total score achieved determines the credits awarded:	6	4	1.87						6 Credits - Materials specification(s) and the appropriate Green Guide (2008) rating for the following elements External wall specification Windows Roof Upper floor slab Proportions / areas (m2) where there is more than one specification for a single element.	Architect	
Mat 2 Hard Landscaping & Boundary Protection	One credit where evidence provided demonstrates that at least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.	1	1	0.47						1 Credit - Specification confirming a detailed description of each applicable element and its constituent materials and design drawings of specification detailing location and area of each applicable material. Materials specification(s) and the appropriate Green Guide (2008) rating. Proportions / areas (m2) where there is more than one specification for a single element. Evidence of any existing man made or natural boundary / hard landscaping features and their proportions / areas (m2).	Architect	
Mat 3 Re-use of Building Fabric	One credit is awarded where evidence provided demonstrates that at least 50% of the total façade (by area) is reused and at least 80% of the reused façade (by mass) comprises in-situ reused material.	1	0	0.00						1 Credit - Drawings clearly demonstrating the reuse of 50% of total façade by area, i.e.. existing and new-build façades. Calculations demonstrating that more than 80% (by mass) of the reused façade comprises in-situ reused material.	Architect	
Mat 4 Re-use of Building Structure	One credit is awarded where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's volume.	1	0	0.00						1 Credit - Drawings or design team calculations detailing the sections of the existing structure to be reused. Any parts of the structure to be demolished and the total new structure. Where appropriate, calculations confirming any strengthening/alteration are not deemed significant in terms of the assessment criteria for mass of materials used.	Architect	
Mat 5 Responsible Sourcing of Materials	Three Credits are available where evidence provided demonstrates that 80% of the assessed materials in the following building elements are responsibly sourced: a. Structural Frame b. Ground floor c. Upper floors (including separating floors) d. Roof e. External walls f. Internal walls g. Foundation/substructure h. Staircase Additionally 100% of any timber must be legally sourced.	3	2	0.93						3 Credits - *Design plan and/or specification confirming the location of elements, materials specified and details of materials specified. *A letter of intent from the design team confirming the product shall be sourced from suppliers capable of providing certification to the level required for particular tier claimed OR *If the material has been ordered, supplied or the supplier is known Purchase order from supplier including (as appropriate) chain of custody (COC) number and/or BES6001:2008 certificate number and/or EMS certificate number *Written confirmation from the developer that all timber will come from a 'legal source' and one not on the CITIES list.	Architect/ Contractor	
Mat 6 Insulation	One credit where evidence provided demonstrates that thermal insulation products used in the building have a low embodied impact relative to their thermal properties, determined by the Green Guide to Specification ratings for *External Walls, *Ground Floor, *Roof, *Building Services. The insulation index must be ≥2 One credit where evidence provided demonstrates that 80% of thermal insulation products used in the building have been responsibly sourced.	2	2	0.93						2 Credits - *Marked-up design plan/elevations and/or a copy of the specification confirming the location of insulating materials and the area (m²) and thickness (m) or volume (m³) of insulation specified. *Manufacturers technical details confirming thickness and thermal conductivity of insulating materials specified. *The green guide rating and element number for the assessed insulation specifications.	Architect/ Contractor	

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Title		BREEAM Data Centres 2010 Pre-Assessment							bream				
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Mat 7 Designing for Robustness	One credit where protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements. *Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares. *Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. *Protection against any potential vehicular collisions when vehicular parking and manoeuvring occurs within 1m of external building facade for all car parks and 2m for delivery areas.	1	1	0.47							1 Credit - Design drawings marked up to illustrate vulnerable areas/parts of the building. * Design drawing and/or specification confirming the durability measures specified.	Architect	
Total		15	10	4.67									
WASTE													
Wst 1 Construction Site Waste Management	Three credits are available where evidence provided demonstrates that the amount of non-hazardous construction waste (m ³ /100m ² or tonnes/100m ²) generated on site by the development is the same as or better than good or best practice levels. 1 credit = 13 - 16.6 m ³ /100m ² Or 6.6-8.5 tonnes/m ² 2 credit = 9.2 - 12.9 m ³ /100m ² Or 4.7-6.5tonnes/m ² 3 credit = <9.2 m ³ /100m ² Or <4.7 tonnes/m ² One credit where evidence provided demonstrates that a significant majority of non-hazardous construction waste generated by the development will be diverted from landfill and reused or recycled.	4	3	1.93							4 Credits - A copy of the compliant Site Waste Management Plan containing the appropriate benchmarks, commitments and procedures. Where relevant a copy of the pre-demolition/pre-refurbishment audit. OR a copy of the specification clause that requires the principle contractor to produce a SWMP in line with the criteria. Contains the detailed criteria with respect to resource efficiency benchmarks and targets and procedures to be included in the SWMP. Where relevant requires the principle contractor to carry out a pre-demolition/pre-refurbishment audit. OR a letter from the client or their representative containing confirmation that the specification will contain a clause on site waste management criteria and as outline of the detailed criteria will be included in that specification clause.	Contractor	
Wst 2 Recycled Aggregates	One Credit where the amount of recycled and secondary aggregate specified is over 25% (by weight or volume) of the total high-grade aggregate uses for the site. Obtained either on site or from waste processing sites within 30km or secondary aggregates obtained from non-construction post-consumer or post-industrial by-product source.	1	1	0.64							1 Credit - A copy of the relevant specification or contract clause confirming recycled and secondary aggregate use criteria for the project. A letter from the design team or main contractor confirming the source of the recycled/secondary aggregates and the amount/quality required can be obtained from this source.	Contractor	
Wst 3 Recycled Waste Storage	One Credit where a central dedicated storage space is provided for a minimum of 6 different types of recyclable materials. Which is "clearly labelled for recycling, " placed within accessible reach of the building, "sized according to number of retail units and the predicted volumes of waste that will arise, " in a location with good vehicular access to facilitate collections.	1	1	0.64					1	1	1 Credit - Marked up building/site plan and/or copy of the specification confirming *the location of the dedicated storage area *storage area for general waste *the area m ² of the storage spaces *description of labelling	Architect	
Wst 4 Compactor / Baler	One credit where evidence provided demonstrates that either an industrial waste compactor or baler is installed for compacting/baling waste materials generated on site and a. A water outlet is provided for cleaning b. The development achieves the BREEAM credit for storage of recyclable waste.	1	1	0.64							1 Credit - Marked up building/site plan and/or copy of the specification confirming *the provision of waste compactor/baler *location and size of space for waste compactor/baler *water outlet *manufacturer/supplier literature confirming the type of compactor/baler *Evidence of compliance as of Wst 3	Architect	
Total		7	6	3.86									
LANDUSE AND ECOLOGY													
LE 1 Reuse of Land	One Credit where at least 75% of the proposed development's footprint falls within the boundary of land previously developed (within 50 years)	1	1	0.60							1 Credit - *Existing site plan, report or site photographs confirming type and duration of previous land use, area (m ²) of previous land use. *Proposed site plan showing location and footprint (m ²) of proposed development and temporary works.	Architect	

Green = Targeted
Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment					bream					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
LE 2 Contaminated Land	One credit is awarded where evidence provided demonstrates that the land used for the new development has, prior to development, been defined as contaminated and where adequate remedial steps have been taken to decontaminate the site prior to construction.	1	1	0.60						1 Credit -Specialists land contamination report confirming the degree, type and sources of site contamination. The options for remediating the site. Existing site plans showing the location of areas contaminated and to be remediated in relation to proposed development. *A letter from main contractor confirming remediation strategy for site and summary details of the implementation plan. If a contractor has not yet been appointed a letter from the client or representative confirming the appointed contractor shall undertake all necessary remediation works.	Project Manager	
LE 3 Ecological Value of Site and Protection of Ecological Features	One credit is awarded where evidence provided demonstrates that the construction zone is defined as land of low ecological value and all existing features of ecological value will be fully protected from damage during site preparation and construction works.	1	1	0.60						1 Credit - A completed copy of checklist A4 signed and dated by client or design team member and one of the following *plan and/or site photographs highlighting any ecological features OR *a copy of the ecologist report containing confirmation that the land within the construction zone is of low ecological value, description of ecological features within site and on site boundary, dates of site surveys (this also requires a signed copy of sections A and B of checklist A6, confirming ecologist professional status) *A copy of the relevant section of the contract specification confirming the requirement to protect all identified features of ecological value, scope of protection measures required and protection measures implemented prior to commencement of site activities.	Ecologist	
LE 4 Mitigating Ecological Impact	One credit where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is minimal. (less than 0 greater than -9) Two credits where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of development. (equal to or greater than 0)	2	1	0.60			1	1	1	1st & 2nd Credit - Existing and proposed site plans and, if required, maps and aerial photographs confirming landscape and vegetation plot types and area (m ²) of vegetation plot types. *OR a copy of the suitably qualified ecologists report confirming prior to and after the development landscape and vegetation plot types and area (m ²) of vegetation plot types.	Ecologist	
LE 5 Enhancing Site Ecology	One credit where the design team (or client) has appointed a suitably qualified ecologist to advise and report on enhancing and protecting the ecological value of the site; and implemented the professional's recommendations for general enhancement and protection of site ecology. Two credits where, in addition to the above, there is a positive increase in the ecological value of the site of up to (but not including) 6 species. Three credits where, in addition to the above, evidence is provided to demonstrate a positive increase in the ecological value of the site of 6 species or greater.	3	2	1.20						1st, 2nd & 3rd Credit - Copy of the ecologists report containing signed checklist A6. Proposed site plan highlighting implementation of the ecologists enhancements recommendations. Confirmation through specification or letter that the main contractor is to implement recommendations. Ecologist report highlighting the change in value of the site.	Ecologist	
LE 6 Long Term Impact on Biodiversity	One credit where the client has committed to achieving the mandatory requirements listed and at least two of the additional requirements. Two credits where the client has committed to achieving the mandatory requirements listed and at least four of the additional requirements.	2	2	1.20						1st & 2nd Credit - Copy of the ecologist's report or letter confirming the requirements where they have / will be implemented / achieved: Mandatory Requirements 1. An SQE has been appointed prior to commencement of activities on site. 2. The SQE confirms that all relevant UK and EU legislation will be complied with. 3. A landscape and habitat management plan is produced covering at least the first 5 years after project completion. Additional Requirements 1. Contractor's Biodiversity Champion to monitor site biodiversity during construction. 2. Training site work-force on ecology protection. 3. Contractor records actions taken to protect biodiversity and monitor their effectiveness. 4. New ecologically valuable habitat is created. 5. The contractor programmes site works to minimise disturbance to wildlife. - Copy of the Site Management Plan and the Site Landscape and Habitat Management Plan. - Site plans and ecologists' site investigation report, where applicable.	Ecologist/ Contractor	
Total		10	8	4.80								

POLLUTION


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Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Pol 1 Refrigerant GWP Building Services	One credit where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less than 5 or where there are no refrigerants specified for use in building services.	1	0	0.00						1 Credit - A copy of the specification clause confirming refrigerant to be used and its GWP. - If several different types of system are to be installed, the type of refrigerant used in each piece of equipment must be specified. - OR Confirmation that no refrigerants will be specified.	M&E Consultant	
Pol 2 Preventing Refrigerant Leaks	One credit where evidence provided demonstrates that systems using refrigerant are contained in a moderately air tight enclosure (or mechanically ventilated plant room) and a refrigerant leak detection system is installed covering high risk parts of the plant. OR An automatic permanent refrigerant leak detection system is specific, which is NOT based on the principle of detecting or measuring concentration of refrigerant in the air. Or where there are no refrigerants specified for the development. One credit where evidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves. The alarm threshold that triggers automatic pump down is set to a maximum of 2000ppm (0.2%).	2	0	0.00						1 Credit - A copy of the specification clause or letter from M&E engineer confirming type of leak detection systems, scope of systems, containment strategy for equipment. * Details of the leak detection system installed in each piece of equipment. * Details of any automatic refrigerant recovery equipment installed and confirmation of: a. Details of the enclosure / plant room where the refrigeration plant is installed; AND Alarm threshold for triggering automatic pump down. - OR confirmation that no refrigerants will be specified.	M&E Consultant	
Pol 4 NOx emissions from heating source	One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤100 mg/kWh (at 0% excess O2). Two credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤70 mg/kWh (at 0% excess O2). Three credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤40 mg/kWh (at 0% excess O2).	2	0	0.00						1st, 2nd & 3rd Credit - A copy of the specification confirming type of heating system specified. *For each system specified manufacturer's literature confirming dry Nox emission rate in mg/kWh. *If more than one system is specified the average NOx emissions rate.	M&E Consultant	
Pol 5 Flood Risk	Two credits where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. One credit where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium or high annual probability of flooding AND the ground level of the building, car parking and access is above the design flood level for the site's location. One further credit where evidence provided demonstrates that surface water run-off attenuation measures are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site due to development.	3	3	2.73						1st & 2nd Credit - A copy of a flood map or flood risk assessment confirming flood zone or annual probability of flooding in the site location, where appropriate correspondence from the appropriate statutory body confirming reduced annual probability of flooding due to existing flood defences. *Copy of the flood risk assessment. *Site plans sections confirming design flood level for site, design ground levels for all developed areas of the site, safe access and escape routes. 3rd Credit - Site plans and a copy of the specification or consultants report confirming type and storage volume (l) of the water run-off attenuation measures, total area of hard surfaces (m ²), peak flow rate (l/s) for the design storm event, additional allowance for climate change designed into the system.	Flood Risk Consultant	
Pol 6 Minimising Watercourse Pollution	One credit here evidence provided demonstrates that effective on site treatment such as Sustainable Drainage Systems (SUDs) or oil separators have been specified in areas that are or could be a source of watercourse pollution.	1	1	0.91						1 Credit - Marked up site plan highlighting low and high risk areas of the site. * A copy of the specification or design plan confirming type of pollution control systems specified. * A letter from the design team confirming all water pollution prevention systems designed in accordance with PPG3 and the SUDS manual. Outlining indicative examples of compliance with PPG3 and the SUDS manual.	Drainage Consultant	

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Title		NTT Communications Data Centre - Building Two Shell					BREEAM Data Centres 2010 Pre-Assessment					breeam		
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes		
					Pass	Good	Very Good	EXC	OS					
Po17 Reduction of Night Time Light Pollution	One credit where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institution of Lighting Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.	1	1	0.91						1 Credit - A marked up site plan showing areas of the building and site that will be externally lit, and nearby properties. *A copy of the specification clause requiring, or external lighting design confirming the external lighting design in compliance with Table 1 of the ILE Guidance notes. Controls for all external lighting. Illuminated advertisements designed in compliance with ILE Technical Report 5. Note:- In the case of the external lighting design the M&E engineer must provide indicative examples of where and how the strategy complies with the assessment criteria.	M&E Consultant			
Po18 Noise Attenuation	One credit where evidence provided demonstrates that new sources of noise from the development do not give rise to the likelihood of complaints from existing noise-sensitive premises and amenity or wildlife areas that are within the locality of the site.	1	0	0.00						1 Credit - Site plan highlighting all existing and proposed noise-sensitive buildings local to, and within, the site boundary. Proposed sources of noise from the new development. Distance (m) from these buildings to the assessed development. *- A copy of the acoustician's report. Acoustics qualifications and professional status OR a copy of the specification clause requiring a noise assessment in compliance with BS4141 : 1997 by a suitably qualified acoustician. *Acousticians report with recommendations for noise attenuation measures and a marked-up design plan highlighting the specification of the acousticians attenuation measures OR a formal letter for the design team confirming attenuation measures recommended will be installed.	Contractor			
Total		11	5	4.55										
Total BREEAM Percentage Score				66.34										

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Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment										
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
MANAGEMENT												
Man 1 Commissioning	<p>One credit where evidence provided demonstrates that an appropriate project team member has been appointed to monitor commissioning on behalf of the client to ensure commissioning will be carried out in line with current best practice.</p> <p>Two credits where, in addition to the above, evidence provided demonstrates that seasonal commissioning will be carried out during the first year of occupation, post construction (or post fit out).</p>	2	1	1.14	1	1	1	1	2	<p>1st Credit - Letter or commissioning responsibilities schedule confirming appointment of commissioning monitor and scope of their role and specialist commissioning manager and scope of their commissioning role. A copy of the specification clause stating the standards and codes of practice to which commissioning procedures comply with. A copy of the specification clause confirming the managing contractors responsibility or a copy of the commissioning schedule highlighting the managing contractors responsibilities. A copy of the specification clause/commissioning schedule confirming the stages of the BMS/controls commissioning procedures.</p> <p>2nd Credit - Compliance with 1st credit and evidence confirming the scope of seasonal commissioning responsibilities / tasks as required.</p>	M&E Consultant	
Man 2 Considerate Constructors	<p>One credit where evidence provided demonstrates that there is a commitment to comply with best practice site management principles. (CCS score between 24 -31.5)</p> <p>Two credits where evidence provided demonstrates that there is a commitment to go beyond best practice site management principles. (CCS score between 32 -35.5)</p>	2	2	2.27				1	2	<p>1st and 2nd Credit - Copy of relevant section of main contract specification confirming the requirement to comply with the CCS and the minimum score to be achieved or a formal letter from client/developer confirming the main contract will include a clause requiring CCS certification, scope of main contractors works a completed copy of checklist A1.</p>	Contractor	
Man 3 Construction Site Impacts - Fit Out Only	<p>One credit where evidence provided demonstrates that the fit-out contractor adopts best practice policies in respect of air (dust) pollution arising from the site.</p> <p>One credit where evidence provided demonstrates that the fit-out contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site.</p> <p>One credit where evidence provided demonstrates that the fit-out contractor operates an Environmental Management System.</p>	3	3	3.41						<p>1st - 3rd Credit - A copy of the relevant section from the main contract specification confirming contractors obligation in respect to each item.</p>	Contractor	
Man 4 Building User Guide	<p>One credit where evidence provided demonstrates the provision of a simple guide that covers information relevant to the tenant/occupants and non-technical building manager on the operation and environmental performance of the building.</p>	1	1	1.14				1	1	<p>1 Credit - A copy of the specification clause confirming the requirement to develop a building user guide and the scope of the Guide's content in compliance with BRE requirements.</p>	Contractor	
Man 8 Security	<p>One credit where evidence provided demonstrates that an Architectural Liaison Officer (ALO) or Crime Prevention Design Advisor (CPDA) from the local police force has been consulted at the design stage and their recommendations incorporated into the design of the building and its parking facilities (if relevant).</p>	1	1	1.14						<p>1 Credit - Correspondence from or a copy of the report/feedback from ALO/CPDA confirming the scope of their advice/involvement, the stage of design in which their advice was sought and summary of their recommendations. A marked up copy of the site/design plans highlighting the development conforming to ALO/CPDA recommendations and SBD principles and guidance or a copy of the specification confirming the development will conform to recommendations.</p>	Architect	

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Mam12 Life Cycle Costing	<p>One credit where a Life Cycle Cost (LCC) analysis has been carried out based on the proposals developed during RIBA Work Stages C/D (concept design/design development), or equivalent.</p> <p>The Life Cycle Costs analysis, based on the concept design/design development proposals, covers the following stages:</p> <p>a. Construction b. Operation - includes, as a minimum, utilities c. Maintenance - includes, as a minimum, planned maintenance, replacements and repairs, cleaning, management costs d. End of life.</p> <p>The LCC analysis uses a study period of 25 or 30 (as applicable) AND 60 years, shown in real and discounted cash flow terms.</p> <p>One credit where the results of the study have been implemented in the specification, design and final construction of the assessed building.</p>	2	2	2.27						2 Credits - Copy of the feasibility stage Life Cycle Cost analysis and detailed design Life Cycle Cost analysis. Letter from the design team confirming LCC findings have been implemented.	Architect	
Total		11	10	11.36								
HEALTH AND WELLBEING												
Hea 1 Daylighting	<p>One credit where evidence provided demonstrates at least 35% of the sales and common floor area (if relevant) is adequately daylight (point daylight factor of 2%).</p> <p>At least 80% of net lettable office floor area is adequately daylight with an average daylight factor of 2%.</p> <p>A uniformity ratio of at least 0.4 or a minimum point daylight factor of at least 0.8% (spaces with glazed roofs, such as atria, must achieve a uniformity ratio of at least 0.7 or a minimum point daylight factor of at least 1.4%) OR a view of sky from desk height (0.7m) is achieved and room depth criterion is satisfied.</p> <p>The provision of daylight has been designed in accordance with the guidance in CIBSE Lighting Guide 10 'Daylighting and window design' BS8206 Part 2 and BRE</p>	1	0	0.00						1 Credit - Design plans for each floor in the building with each room/area labelled for use and daylighting calculations confirming building areas assessed, the daylight variables/criterion measured, average daylight factor for each area, compliance with room depth criterion/uniformity ratio/view of sky, the daylight provision is in compliance with relevant standards, the percentage of area where point daylight factors are at least 2% and the position of the 2% daylight factors isolux contours in each of the rooms assessed.	Architect	
Hea 2 View Out	The relevant areas are within 7m distance of a wall with a window or permanent opening providing an adequate view out, where the window/opening is ≥20% of the total inside wall area	1	0	0.00						1 Credit - Design plan and elevation showing all relevant building areas and room depths, actual or notional workstations/desk layout, window/open areas. Site Plan showing building location and proximity to external obstructions.	Architect	
Hea 3 Glare Control	An occupant-controlled shading system on all windows, glazed doors and roof lights in all relevant building areas.	1	0	0.00						1 Credit - * Marked up copy of design plan(s) confirming a description of the function of each of the building spaces. * A copy of the relevant specification clause(s), window schedule or design plan confirming the type of shading system(s) and control to be installed	Architect	
Hea 4 High Frequency Lighting	One credit where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	1	1	0.81	1	1	1	1	1	1 Credit - A copy of the specification clause or room data sheets confirming a compliant lighting strategy.	M&E Consultant	
Hea 5 Internal and External Lighting Levels	One credit where evidence provided demonstrates that all internal and external lighting, where relevant, is specified in accordance with the appropriate maintained Illuminance levels (in lux) recommended by CIBSE.	1	1	0.81						1 Credit - A copy of the specification clause or relevant room schedules confirming the internal/external maintained Illuminance levels and/or the standards that the illuminate levels are specified to. Or a formal declaration of conformity from the relevant design team member confirming the maintained Illuminance levels for each internal/external source are in compliance with relevant standard	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Hea 6 Lighting Zones and Controls	Lighting is Zoned to allow separate occupant control of office and circulation spaces, office areas (zones of no more than 4 work spaces), workstations adjacent to window/atria and other building areas separately zoned and controlled, seminar and lecture rooms, library zones.	1	1	0.81						1 Credit - * Design plans for each floor of the building highlighting space arrangement, * Room type and specification or design plans confirming lighting zones and location and scope of user controls.	M&E Consultant	
Hea 7 Potential for Natural Ventilation	Occupied spaces of the building are designed to be capable of providing fresh air entirely via a natural ventilation strategy by either a) openable window area in each occupied space is equivalent to 5% of the gross internal floor area of that room/floor plate. For room/floor plates between 7m-15m depth, the openable window area is on opposite side and evenly distributed to promote cross ventilation. or b) the design demonstrates by calculation using ventilation tools recommended by CIBSE Am10, that the natural ventilation strategy provides adequate cross flow of air to maintain required thermal comfort conditions and ventilation rates. The strategy is capable of providing at least two levels of user-control on the supply of fresh air to occupied spaces with higher rates of ventilation to remove short term odours and prevent summer overheating.	1	0	0.00						1 Credit - Design plans and elevations, specification or calculations confirming:- * Ventilation strategy in each occupied space * The depth of the room * Gross internal floor area of each occupied space * The type of window/ventilator and total openable area * The type and degree of user-control And a copy of the results for the appropriate software modelling tool demonstrating compliance.	Architect	
Hea 8 Indoor Air Quality	One credit where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air. Air conditioned and mixed mode buildings where the buildings air intakes and exhausts are over 10m apart and the intakes are over 20m from sources of pollution. Naturally Ventilated Buildings where openable windows/vents are over 10m from sources of external pollution. Building has been designed to provide fresh air rates to dilute pollutants in accordance with best practice for office area i.e. 12l/s/person. Building with unpredictable occupancy levels have CO2 air quality sensors linked to mechanical ventilation systems in natural vent building these are linked to alerts or controls to adjust window or vent openings.	1	0	0.00						1 Credit - A marked-up proposed site plan highlighting locations of intakes, extracts, openable windows, ventilators, any existing or proposed sources of external pollution. Design team calculations and/or performance specification criteria confirming the fresh air rate set for each space, that the fresh air rate can be met using the chosen strategy and the relevant standards to which the design is in accordance with.		
Hea 9 Volatile Organic Compounds	One credit where evidence provided demonstrates that the emissions of VOCs and other substances from key internal finishes and fittings comply with best practice levels.	1	1	0.81						1 Credit - A copy of the specification clause confirming the VOC content of the relevant specified product types will comply with the standards specified by Table 8 of BREEAM Manual.	Architect / Contractor	
Hea 10 Thermal Comfort	One credit where evidence provided demonstrates that thermal comfort levels in occupied spaces of the building are assessed at the design stage to evaluate appropriate servicing options, ensuring appropriate thermal comfort levels are achieved. Assessment carried out in accordance with CIBSE AM11 and comfort levels in line with CIBSE Guide A	1	0	0.00						1 Credit - A copy of the relevant specification clause confirming the criteria for thermal comfort analysis or correspondence from design team confirming the name of the thermal comfort modelling software used and the software has been selected and applied in accordance with CIBSE AM11. A copy of the results from the modelling demonstrating the internal temperatures in compliance with the relevant standards.	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment							bream				
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Hea 11 Thermal Zoning	The heating/cooling system is designed to allow occupant control of zoned areas within all occupied spaces in the building. The zoning allows separate occupant control (within the occupied space) of each perimeter area (within 7m of each external wall) and central zone (over 7m from external wall).	1	0	0.00							1 Credit - A copy of the relevant clauses of the specification and/or marked up M&E drawings confirming *Scope of heating/cooling system *The type of user controls for the above systems *The scope of controls i.e. control zone	M&E Consultant	
Hea 12 Microbial Contamination	One credit where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised. All water systems are designed in compliance with measures outlined in the Health and Safety Executive's "Legionnaires' disease - The control of legionella bacteria in water systems" Approved Code of Practice and Guidance, 2000	1	1	0.81	1	1	1	1	1		1 Credit - A copy of the relevant specification clause confirming all types of water system in the building and on the assessed site and the standards to which all water systems in the building will be designed. Where design responsibility is to be passed on to the contractor/installer, a copy of the relevant specification clause stating the criteria on the contractor/installer with regards to minimising the risk of Legionnaires disease from the specified water systems.	M&E Consultant	
Hea 13 Acoustic Performance	Indoor ambient noise levels in unoccupied staff office areas: <40dB Laeq,T in single occupancy office, 40-50dB Laeq,T in multiple occupancy office, <40dB Laeq,T in general spaces (staffroom), <35dB Laeq,T in seminar/lecture rooms <50dB Laeq,T in informal canteen/cafe areas Fully fitted buildings only: The sound insulation between acoustically sensitive rooms and other occupied spaces complies with section 7.6.3.1 of BS8233. Pre-completion acoustic testing is carried out by a suitably qualified acoustician to ensure that all relevant spaces achieve the performance standards required, and any remedial works are completed prior to handover and occupation	1	1	0.81							1 Credit - A copy of the design plan for each level of the building with each room/area clearly labelled. A copy of the specification clause confirming indoor ambient noise levels in each room/area clearly labelled, if relevant sound insulation levels between each acoustically sensitive room and adjacent occupied areas, the standards the which calculations/measurements have been complied. *A copy of the specification clause or a formal letter from the project team confirming a programme of pre-completion acoustic testing by acoustician will be commissioned and where room/areas do not comply appropriate remedial action will be completed.	M&E Consultant/ Contractor	
Total		13	6	4.85									
ENERGY													
Ene 1 Reduction of CO ₂ Emissions	Up to fifteen credits where evidence provided demonstrates an improvement in the energy efficiency of the building's fabric and services and therefore achieves lower building operational related CO ₂ emissions.	15	13	20.54					6	10	15 Credits - Dependent on EPC Rating - A copy of the Epic output from the approved software for the assessed building at design stage. The accredited assessor's name and accreditation number.	M&E Consultant	
Ene 2 Sub-metering of Substantial Energy Uses	One credit: Separate accessible energy sub-meters, labelled with end energy consuming use, are provided for the following systems: *Space Heating, *Domestic Hot Water, *Humidification, *Cooling, *Fans Major), *Lighting, * Small power, *Other major energy consuming items One credit: A BMS with the ability to monitor and control the following as well as the relevant systems above has been installed: a. Chillers, air handling units and pumps and other major HVAC plant (where specified) b. Internal environmental conditions The BMS must have the ability to draw to the attention of the user out of range operational values (using an alarm system)	2	1	1.58			1	1	1		2 Credits - Specification document or technical drawings confirming *Energy-consuming systems and their rated outputs *Metering arrangements for each system, type and location of meter specified *If applicable, scope of BMS and its energy-monitoring capability	M&E Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment							bream				
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Ene 4 External Lighting	<p>*External light fittings for the building, access ways and pathways have a luminous efficacy of at least 50 lumen/ circuit watt when lamp has Ra ≥ 60. OR 60 lumens/circuit watt when lamp has Ra <60</p> <p>*External light fittings to car park areas and associated roads and flood lighting have a luminous efficacy of at least 70 lumen/ circuit watt when lamp has Ra ≥ 60. OR 80 lumens/circuit watt when lamp has Ra <60</p> <p>*External light fittings for signs and up lighting have a luminous efficacy of at least 60 lumen/ circuit watt when lamp wattage ≥ 25W. OR 50 lumens/circuit watt when lamp wattage <25W</p> <p>*All fittings are controlled through a time switch or daylight sensor</p>	1	1	1.58							1 Credit - *Marked-up site plan and building elevations showing location and purpose of all external light fittings. *Lighting specification of lighting designers calculations confirming lumens/circuit watt for each fitting as well as Ra and external lighting control strategy.	M&E Consultant	
Ene 5 Low Zero Carbon Technologies	<p>*One credit where evidence provided demonstrates that a feasibility study considering local (on-site and/or near site) low or zero carbon (LZC) technologies has been carried out and the results implemented.</p> <p>*Two credits where evidence provided demonstrates that the first credit has been achieved and there is a 10% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology.</p> <p>*Three credits where evidence provided demonstrates that the first credit has been achieved and there is a 15% reduction in the building's CO2 emissions as a result of the installation of a feasible local LZC technology.</p> <p>Or alternatively: *A maximum of one credit where evidence provided demonstrates that a contract with an energy supplier is in place to provide sufficient electricity used within the assessed building/development to meet the above criteria from a 100% renewable energy source. (Note: a standard Green Tariff will not comply)</p>	3	3	4.74				1	1	1st Credit - copy of the feasibility report *letter from energy specialist confirming compliance with definition of energy specialist and the timing of the feasibility report within the plan of works. *marked up design plan or specification confirming proposed installation of LZC energy technology *manufacturers technical data and details or calculations stating the carbon savings as a result of the installed LZC technology 2nd & 3rd Credit - *Evidence as above and a copy of the report illustrating the name of the approved software , confirmation of the expertise and experience of the person carrying out the modelling and total CO2 emissions for the assessed building without the LZC technology *and calculations/outputs confirming total carbon savings as a result of the installed LZC technology.	M&E Consultant		
Ene 8 Lifts	<p>Up to two credits are available where evidence provided demonstrates the installation of energy-efficient lift(s). One credit - an analysis of transport demand and patterns for the building has been carried out by the design team to determine the optimum number and size of lifts and counterbalancing ratio on the basis of anticipated passenger demand. The energy consumption for at least 2 types of lift has been analysed and the lowest specified. Second credit - three of the following that offer the greatest energy savings are specified. *lifts operate in stand-by mode during off peak/idle *lift motors use drive controller capable of variable-speed, variable-voltage, variable frequency control *lift has a regenerative unit so the energy generated by lift is returned back to grid or used onsite *lift uses energy-efficient lighting (>60 Lumens/watt or fitting that consume less than 5W)</p>	2	2	3.16						1st Credit - *A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations. 2nd Credit - *A copy of the lift specification or formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant criteria for the number of credits sought.	Architect / Lift Consultant		
Ene 22 Sustainable Procurement of IT	<p>First Credit: Where IT Equipment integral to the design and operation of the inherent building systems e.g. UPS systems, Generators, Cooling, BMS/EMS etc), is procured in accordance with the 'EU Code of Conduct on Data Centres' Best practice supplement version 2. Second credit: nd in use is procured in accordance with the 'EU Code of Conduct on Data Centres' Best practice supplement version 2.</p>	2	0	0.00						1st Credit - *A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations. 2nd Credit - *A copy of the lift specification or formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant criteria for the number of credits sought.	Architect / Lift Consultant		
Total		25	20	31.60									

TRANSPORT

Green = Targeted
Blue = Not Targeted

Title		BREEAM Data Centres 2010 Pre-Assessment					breeam						
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Tra 1 Provision of Public Transport	Five credits available calculated from accessibility index which is determined from the following *distance (m) from the main building entrance to each compliant public transport node *public transport type serving the compliant node *frequency of service to node	3	3	1.65							5 Credits - * A copy of the output from the provision of Public Transport calc *Scale map highlighting the location of the building and all public transport nodes in proximity of building. *Timetables for each service at each public transport node considered.	BREEAM Assessor	
Tra 2 Proximity to Amenities	Where the building is within 500m of a grocery shop, post box and cash machine	1	1	0.55							1 Credit - marked-up site plan or map highlighting location of assessed building, location and type of amenities, the route to the amenities, plan/map scale *Where the amenities do not currently exist but are to be developed a letter from the client/developer confirming the location and type of amenities to be provided and the timescale for the development of the amenities	BREEAM Assessor	
Tra 3 Cyclist Facilities	First credit: a. The number of compliant cycle storage spaces equivalent to 10% of the number of full-time equivalent staff that will commute to the development. B. The staff spaces must be provided in addition to customer spaces and whilst they do not need to be separate from customer spaces, this is encouraged. PLUS c. The number of compliant cycle storage spaces is equivalent to 5% of the total number of customer car parking spaces (excluding disabled spaces and mother-and-baby spaces where provided). d. This is subject to providing a minimum of 10 cycle racks. Any development that provides at least 50 customer cycle storage spaces will comply regardless of the number of parking spaces. Two credits: The first credit must be achieved. At least two of the following compliant facilities must be provided for the building users: a. Compliant Showers. b. Compliant changing facilities and lockers for clothes. c. Compliant drying space for wet clothes.	2	1	0.55							1st & 2nd Credit - Design plans and/or documentation confirming: a. Number, type, dimension, location and layout of cycle racks provided. b. Proximity of the racks to the main building entrance. c. Racks are covered, with adequate lighting provided in accordance with BS5489 Part 1. d. Number and location of showers, changing rooms and lockers provided. e. Size and location of changing / drying space provided. f. Materials and construction specified for the facility. g. Building occupancy or net lettable / floor areas. Where the building is in a city centre location, and the benchmarks reduced, evidence as outlined under BREEAM credit Tra 1 demonstrating the relevant number of credits achieved.	Architect	
Tra 4 Pedestrian and Cyclist Safety	First Credit 1. The cycle lanes have been designed and constructed in accordance with the guidance in the National Cycle Network Guidelines and the relevant parts of Appendix VI NCN Design and Construction Checklist. 2. The cycle lanes and pedestrian paths meet the following minimum width dimensions: a. Where the cycle lane is segregated from both the pedestrian route and carriageway the minimum width of the cycle path is 2.0m and the minimum width of the pedestrian path is 1.5m. c. Where the cycle route forms a part of the carriageway, the minimum width of the lane is 1.5m. Minimum widths should not be regarded as the design target, where possible best practice as detailed in the Sustains guidelines and DIT60 guidance must be aimed for. 3. Cycle lanes provide direct access to any cycle storage facilities provided on the site, without the need to deviate from the cycle path and, if relevant, connect to offsite cycle paths where these run adjacent to the development's boundary.	1	0	0.00							1 Credit - Appropriate site plans highlighting all necessary design details and project team confirmation of requirements and that design is in accordance with best practice requirements. A signed and dated copy of the NCN Design and Construction Checklist from the design/project team (or completed by the assessor using design information). Details of the external lighting strategy.	Architect	
Tra 5 Travel Plan	One Credit where a travel plan has been developed as part of the feasibility and design stages which considers all types of travel relevant to the building type and users. The travel plan is structured to meet the needs of the site and takes into consideration the findings of a site-specific transport survey and assessment. The travel plan includes measures that have been used to steer the design of the development in order to meet the travel plan objectives and minimise car based travel patterns	1	1	0.55							1 Credit - A copy of the travel plan. A copy of the site-specific transport survey. Marked up site plan demonstrating examples of the design measures, implemented in support of the travel plan's findings; OR where a detailed site plan is not available, a formal letter from the client confirming that measures will be implemented into the final design in support of travel plan's findings.	Project Manager	
Tra 6 Maximum Car Parking Capacity.	One Credit Where there is no more than one parking space provided for every 3 building users. Two credits: Where there is no more than one parking space provided for every 4 building users.	2	1	0.55							1 Credit - Design plan and / or copy of the relevant specification clause confirming the location and scope of the travel information point / facility.	Architect	

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Title		BREEAM Data Centres 2010 Pre-Assessment							breeam			
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Total		10	7	3.85								
WATER												
Wat 1 Water Consumption	One Credit Where water efficient fittings have been specified and the effective flush volume is ≤4.5 litres AND where dual flush toilets are specified they have a guidance instructing the user on their appropriate operation.	3	1	1.13	1	1	1	2	1st, 2nd & 3rd Credit - A copy of the relevant M&E specification and/or manufacturers details confirming technical specification for sanitary fittings (flow rate) and controls to be installed. Design plan showing the location within the building of the sanitary facilities.	M&E Consultant		
	Second Credit Where all WCs have an effective flush volume of ≤3 litres OR all WC's are compliant with the requirements for the first credit and fitted with delayed action inlet valve.											
	Third Credit Where, of the following, the two that offer the greatest possible reduction in annual water consumption have been specified: a. All taps except kitchen taps, cleaners sinks and external taps have a maximum flow rate <6 litres / min for water pressure of 0.3 MPa and include either timed shut-off taps, electronic sensors, low flow screw-diver / lever or spray taps. b. All showers have a measured flow rate that does not exceed 9 litres / min for a water pressure of 0.3MPa. c. All urinals are either fitted with individual presence detectors or ultra low flush or waterless urinals.											
Wat 2 Water Meter	One Credit Where a water meter is installed to all building supplies, with a pulsed output for future connection to a Building Management System (BMS). For buildings with multiple retail units, e.g. shopping centres, separate pulsed meters are required to cover the water supply to the following areas where present: a. Letting area; on the water supply to each tenant unit. b. Common areas; covering the supply to toilet blocks. c. Service areas; covering the supply to outlets within storage; delivery, waste disposal area etc.	1	1	1.13	1	1	1	1	1 Credit - A copy of the specification clause confirming the specification and type of water meter. Design plans showing location of water meter.	M&E Consultant		
Wat 3 Major Leak Detection	One Credit Where a leak detection system is specified or installed covering all mains water supply between and within the building and the site boundary. A. Audible when activated. B. Activated when the flow of water passes through the water meter / data logger at a flow rate above a pre-set minimum for a pre-set minimum for a pre-set period of time. c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and / or low level, over set time periods. d. Programmable to suit the owner / occupiers' water consumption criteria. e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.	1	1	1.13					1 Credit - A copy of the specification clause Confirming the scope and performance criteria of leak detection system and/or manufacturers details confirming the technical specification of the specified system.	M&E Consultant		
Wat 4 Sanitary Supply Shut-Off	One Credit Where solenoid valves are installed to each toilet area in the building and the slow through that supply is controlled to a link by EITHER. Infra-red movement detectors within each toilet facility OR Sensors or switches placed at or on entry doors to each facility.	1	0	0.00					1 Credit - A copy of the specification clause confirming the controls and specification of shut-off valves. Design plan showing the location of the toilet facilities.	M&E Consultant		

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Title		BREEAM Data Centres 2010 Pre-Assessment							breeam			
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Wat 5 Water Recycling	One Credit Where systems that collect store and where necessary treat, rainwater or WC and urinal flushing purposes are specified meeting one of the following requirements: a. The rainwater collection tank is sized to collect at least 50% of EITHER the total predicted rainwater run-off required to meet the total predicted flushing demand. b. Waste water from wash hand basins and showers is collected from ≥80% of fittings and recycled to meet at least 10% of the total flushing demand. c. A combination of wastewater and rainwater collection meets at ≥ 50% of EITHER the total predicted flushing demand OR the total predicted flushing demand	1	0	0.00						1 Credit - A copy of the specification clause confirming the type of collection system and WC, urinal, taps and shower specifications. Design team calculations for the defined period of collection demonstrating (where appropriate): a. Rainwater yield for the catchment area (mm) b. Predicted urinal /WC flushing demand. c. Estimated potential for waste water collection from taps/showers. d. Size (litres) of the rainwater / greywater collection tank specified.	M&E Consultant	
Wat 6 Irrigation Systems	One Credit Where the irrigation method specified for internal or external planting and/or landscaping complies with ANY ONE of the following: a. Drip feed subsurface irrigation that incorporates soil moisture sensors. The irrigation control should be zoned to permit variable irrigation to different planting assemblages. b. Reclaimed water from a rainwater or greywater system. c. External landscaping and planting that relies solely on precipitation, during all seasons of the year. d. The only planting specified is restricted to species that thrive in hot and dry conditions. e. Where no dedicated, mains-supplied irrigation systems (including pop-up sprinklers and hoses) are specified, and planting will rely solely on manual watering by building occupier or landlord. Where a sub surface drip feed irrigation system is to be installed for external areas, a rainstat must also be installed to prevent automatic irrigation of the planting and the landscape during periods of rainfall.	1	1	1.13						1 Credit - A copy of the specification clause confirming the type of collection system and WC, urinal, taps and shower specifications. Design team calculations for the defined period of collection demonstrating (where appropriate): a. Rainwater yield for the catchment area (mm) b. Predicted urinal /WC flushing demand. c. Estimated potential for waste water collection from taps/showers. d. Size (litres) of the rainwater / greywater collection tank specified.	M&E Consultant	
Total		8	4	4.50								

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
MATERIALS												
Mat 1 Materials Specification - Fit Out Elements	Four Credits The embodied impacts of the materials specification for the key building elements (using the Green Guide to Specification 2008), scored on a rating scale from A+ to E. The total score achieved determines the credits awarded:	2	1	0.75						2 Credits - Materials specification(s) and the appropriate Green Guide (2008) rating for the following elements Internal wall specification Floor finishes/ coverings	Architect	
Mat 2 Hard Landscaping & Boundary Protection	One credit where evidence provided demonstrates that at least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an A or A+ rating, as defined by the Green Guide to Specification.	1	1	0.75						1 Credit - Specification confirming a detailed description of each applicable element and its constituent materials and design drawings of specification detailing location and area of each applicable material. Materials specification(s) and the appropriate Green Guide (2008) rating. Proportions / areas (m2) where there is more than one specification for a single element. Evidence of any existing man made or natural boundary / hard landscaping features and their proportions / areas (m2).	Architect	
Mat 3 Re-use of Building Fabric	One credit is awarded where evidence provided demonstrates that at least 50% of the total façade (by area) is reused and at least 80% of the reused façade (by mass) comprises in-situ reused material.	1	0	0.00						1 Credit - Drawings clearly demonstrating the reuse of 50% of total façade by are, i.e.. existing and new-build facades. Calculations demonstrating that more than 80% (by mass) of the reused façade comprises in-situ reused material.	Architect	
Mat 4 Re-use of Building Structure	One credit is awarded where evidence provided demonstrates that a design reuses at least 80% of an existing primary structure and for part refurbishment and part new build, the volume of the reused structure comprises at least 50% of the final structure's volume.	1	0	0.00						1 Credit - Drawings or design team calculations detailing the sections of the existing structure to be reused. Any parts of the structure to be demolished and the total new structure. Where appropriate, calculations confirming any strengthening/alteration are not deemed significant in terms of the assessment criteria for mass of materials used.	Architect	
Mat 5 Responsible Sourcing of Materials - Fit Out Only	Three Credits are available where evidence provided demonstrates that 80% of the assessed materials in the following building elements are responsibly sourced: a. Structural Frame b. Ground floor c. Upper floors (including separating floors) d. Roof e. External walls f. Internal walls g. Foundation/substructure h. Staircase Additionally 100% of any timber must be legally sourced.	2	1	0.75						2 Credits - *Design plan and/or specification confirming the location of elements, materials specified and details of materials specified. *A letter of intent from the design team confirming the product shall be sourced from suppliers capable of providing certification to the level required for particular tier claimed OR *If the material has been ordered, supplied or the supplier is known Purchase order from supplier including (as appropriate) chain of custody (COC) number and/or BES6001:2008 certificate number and/or EMS certificate number *Written confirmation from the developer that all timber will come from a 'legal source' and one not on the CITIES list.	Architect/ Contractor	
Mat 6 Insulation	One credit where evidence provided demonstrates that thermal insulation products used in the building have a low embodied impact relative to their thermal properties, determined by the Green Guide to Specification ratings for *External Walls, *Ground Floor, *Roof, *Building Services. The insulation index must be ≥2 One credit where evidence provided demonstrates that 80% of thermal insulation products used in the building have been responsibly sourced.	2	2	1.50						2 Credits - *Marked-up design plan/elevations and/or a copy of the specification confirming the location of insulating materials and the area (m²) and thickness (m) or volume (m³) of insulation specified. *Manufacturers technical details confirming thickness and thermal conductivity of insulating materials specified. *The green guide rating and element number for the assessed insulation specifications.	Architect/ Contractor	


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Title		BREEAM Data Centres 2010 Pre-Assessment							bream				
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes	
					Pass	Good	Very Good	EXC	OS				
Mat 7 Designing for Robustness	One credit where protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements. *Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares. *Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. *Protection against any potential vehicular collisions when vehicular parking and manoeuvring occurs within 1m of external building facade for all car parks and 2m for delivery areas.	1	1	0.75							1 Credit - Design drawings marked up to illustrate vulnerable areas/parts of the building. * Design drawing and/or specification confirming the durability measures specified.	Architect	
Total		10	6	4.50									
WASTE													
Wst 1 Construction Site Waste Management - Fit Out Only	One credit where Where there is a SWMP that contains: a. Procedures and commitments for minimising non-hazardous and hazardous waste b. Procedures for sorting, reusing and recycling construction waste into defined waste groups either on site or through a licensed external contractor c. The name or job title of the individual responsible for implementing the above Construction waste generated from the fit-out works is monitored and measured. Waste materials will be sorted into separate key waste groups (according to the waste streams generated by the fit-out works) either onsite or offsite through a licensed contractor for recovery. I One credit where at least 75% by weight or 65% by volume of non-hazardous construction waste generated by the project has been diverted from landfill and either: a. Reused on site (in-situ or for new applications) b. Reused on other sites c. Salvaged/reclaimed for reuse d. Returned to the supplier via a 'take-back' scheme e. Recovered from site by an approved waste management contractor and recycled.	2	1	1.00							2 Credits - A copy of the compliant Site Waste Management Plan containing the appropriate benchmarks, commitments and procedures. Where relevant a copy of the pre-demolition/pre-refurbishment audit. OR a copy of the specification clause that requires the principle contractor to produce a SWMP in line with the criteria. Contains the detailed criteria with respect to resource efficiency benchmarks and targets and procedures to be included in the SWMP. Where relevant requires the principle contractor to carry out a pre-demolition/pre-refurbishment audit. OR a letter from the client or their representative containing confirmation that the specification will contain a clause on site waste management criteria and as outline of the detailed criteria will be included in that specification clause.	Contractor	
Wst 2 Recycled Aggregates	One Credit where the amount of recycled and secondary aggregate specified is over 25% (by weight or volume) of the total high-grade aggregate uses for the site. Obtained either on site or from waste processing sites within 30km or secondary aggregates obtained from non-construction post-consumer or post-industrial by-product source.	1	1	1.00							1 Credit - A copy of the relevant specification or contract clause confirming recycled and secondary aggregate use criteria for the project. A letter from the design team or main contractor confirming the source of the recycled/secondary aggregates and the amount/quality required can be obtained from this source.	Contractor	
Wst 3 Recycled Waste Storage	One Credit where a central dedicated storage space is provided for a minimum of 6 different types of recyclable materials. Which is "clearly labelled for recycling," placed within accessible reach of the building, "sized according to number of retail units and the predicted volumes of waste that will arise," in a location with good vehicular access to facilitate collections.	1	1	1.00				1	1		1 Credit - Marked up building/site plan and/or copy of the specification confirming *the location of the dedicated storage area *storage area for general waste *the area m² of the storage spaces *description of labelling	Architect	
Wst 4 Compactor / Baler	One credit where evidence provided demonstrates that either an industrial waste compactor or baler is installed for compacting/baling waste materials generated on site and a. A water outlet is provided for cleaning b. The development achieves the BREEAM credit for storage of recyclable waste.	1	1	1.00							1 Credit - Marked up building/site plan and/or copy of the specification confirming *the provision of waste compactor/baler *location and size of space for waste compactor/baler *water outlet *manufacturer/supplier literature confirming the type of compactor/baler *Evidence of compliance as of Wst 3	Architect	
Total		5	4	4.00									

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Title		BREEAM Data Centres 2010 Pre-Assessment					breeam					
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
POLLUTION												
Po 1 Refrigerant GWP Building Services	One credit where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less than 5 or where there are no refrigerants specified for use in building services.	1	0	0.00						1 Credit - A copy of the specification clause confirming refrigerant to be used and its GWP. - If several different types of system are to be installed, the type of refrigerant used in each piece of equipment must be specified. - OR Confirmation that no refrigerants will be specified.	M&E Consultant	
Po 12 Preventing Refrigerant Leaks	One credit where evidence provided demonstrates that systems using refrigerant are contained in a moderately air tight enclosure (or mechanically ventilated plant room) and a refrigerant leak detection system is installed covering high risk parts of the plant. OR An automatic permanent refrigerant leak detection system is specific, which is NOT based on the principle of detecting or measuring concentration of refrigerant in the air. Or where there are no refrigerants specified for the development. One credit where evidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves. The alarm threshold that triggers automatic pump down is set to a maximum of 2000ppm (0.2%).	2	0	0.00						1 Credit - A copy of the specification clause or letter from M&E engineer confirming type of leak detection systems, scope of systems, containment strategy for equipment. * Details of the leak detection system installed in each piece of equipment. * Details of any automatic refrigerant recovery equipment installed and confirmation of: a. Details of the enclosure / plant room where the refrigeration plant is installed; AND Alarm threshold for triggering automatic pump down. - OR confirmation that no refrigerants will be specified.	M&E Consultant	
Po 4 NOx emissions from heating source	One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤100 mg/kWh (at 0% excess O2). Two credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤70 mg/kWh (at 0% excess O2). Three credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are ≤40 mg/kWh (at 0% excess O2).	2	0	0.00						1st, 2nd & 3rd Credit - A copy of the specification confirming type of heating system specified. *For each system specified manufacturer's literature confirming dry Nox emission rate in mg/kWh. *If more than one system is specified the average NOx emissions rate.	M&E Consultant	
Po 15 Flood Risk	Two credits where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. One credit where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium or high annual probability of flooding AND the ground level of the building, car parking and access is above the design flood level for the site's location. One further credit where evidence provided demonstrates that surface water run-off attenuation measures are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site due to development.	3	3	2.86						1st & 2nd Credit - A copy of a flood map or flood risk assessment confirming flood zone or annual probability of flooding in the site location, where appropriate correspondence from the appropriate statutory body confirming reduced annual probability of flooding due to existing flood defences. *Copy of the flood risk assessment. *Site plans sections confirming design flood level for site, design ground levels for all developed areas of the site, safe access and escape routes. 3rd Credit - Site plans and a copy of the specification or consultants report confirming type and storage volume (l) of the water run-off attenuation measures, total area of hard surfaces (m²), peak flow rate (l/s) for the design storm event, additional allowance for climate change designed into the system.	Flood Risk Consultant	
Po 6 Minimising Watercourse Pollution	One credit here evidence provided demonstrates that effective on site treatment such as Sustainable Drainage Systems (SUDs) or oil separators have been specified in areas that are or could be a source of watercourse pollution.	1	1	0.95						1 Credit - Marked up site plan highlighting low and high risk areas of the site. * A copy of the specification or design plan confirming type of pollution control systems specified. * A letter from the design team confirming all water pollution prevention systems designed in accordance with PPG3 and the SUDS manual. Outlining indicative examples of compliance with PPG3 and the SUDS manual.	Drainage Consultant	

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Title		BREEAM Data Centres 2010 Pre-Assessment										
Credit	Criteria	Available Credits	Credits likely /	BRE % weighting	Minimum Standards					Design Stage Evidence Requirement	Action by	Notes
					Pass	Good	Very Good	EXC	OS			
Po17 Reduction of Night Time Light Pollution	One credit where evidence provided demonstrates that the external lighting design is in compliance with the guidance in the Institution of Lighting Engineers (ILE) Guidance notes for the reduction of obtrusive light, 2005.	1	1	0.95						1 Credit - A marked up site plan showing areas of the building and site that will be externally lit, and nearby properties. *A copy of the specification clause requiring, or external lighting design confirming the external lighting design in compliance with Table 1 of the ILE Guidance notes. Controls for all external lighting. Illuminated advertisements designed in compliance with ILE Technical Report 5. Note:- In the case of the external lighting design the M&E engineer must provide indicative examples of where and how the strategy complies with the assessment criteria.	M&E Consultant	
Po18 Noise Attenuation	One credit where evidence provided demonstrates that new sources of noise from the development do not give rise to the likelihood of complaints from existing noise-sensitive premises and amenity or wildlife areas that are within the locality of the site.	1	0	0.00						1 Credit - Site plan highlighting all existing and proposed noise-sensitive buildings local to, and within, the site boundary. Proposed sources of noise from the new development. Distance (m) from these buildings to the assessed development. *- A copy of the acoustician's report. Acoustics qualifications and professional status OR a copy of the specification clause requiring a noise assessment in compliance with BS4141 : 1997 by a suitably qualified acoustician. *Acousticians report with recommendations for noise attenuation measures and a marked-up design plan highlighting the specification of the acousticians attenuation measures OR a formal letter for the design team confirming attenuation measures recommended will be installed.	Contractor	
Total		11	5	4.77								
Total BREEAM Percentage Score				69.43								

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