

BREEAM Pre-Assessment

BREEAM Offices 2008

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170 Tottenham Court Road
Derwent London

CONFIDENTIAL



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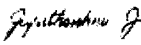
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Table of Contents

1 EXECUTIVE SUMMARY	1
1.1 PURPOSE	1
2 THE DESIGN TEAM	2
3 INTRODUCTION	3
3.1 BREEAM	3
3.2 BREEAM SCORING	4
4 SUMMARY OF BUILDING PERFORMANCE	5
4.1 SCORE CALCULATION	5
5 CREDITS BREAKDOWN	6
5.1 MANAGEMENT CREDITS	7
5.2 HEALTH & WELLBEING CREDITS	12
5.3 ENERGY CREDITS	17
5.4 TRANSPORT CREDITS	20
5.5 WATER CREDITS	24
5.6 MATERIALS CREDITS	25
5.7 WASTE CREDITS	28
5.8 LAND USE AND ECOLOGY	30
5.9 POLLUTION CREDITS	37
6 APPENDIX A – MAN2 CONSIDERATE CONSTRUCTORS	41
7 APPENDIX B – MAN3 CONSTRUCTION SITE IMPACTS	42
8 APPENDIX C – MAT5 RESPONSIBLY SOURCED MATERIALS	46
9 APPENDIX D – MAN4 BUILDING USER GUIDE	49
10 APPENDIX E – LE6 LONG TERM IMPACT ON BIODIVERSITY	51

1 EXECUTIVE SUMMARY

1.1 PURPOSE

Norman Disney & Young has been commissioned to carry out a Preliminary BREEAM assessment of 170 Tottenham Court Road, London.

This report details the predicted performance of the proposed development against the BREEAM Offices 2008 criteria.

A breakdown describing each credit and the member of the design team who is responsible for ensuring that credit is implemented in the final BREEAM assessment is given. Other information provided within this breakdown is a list of the evidence that will be required in order to allow the awarding of the credit in the final assessment. At this stage of the assessment, not all evidence is currently available and therefore a commitment from the design team to achieve the credit forms the basis of the assessment.

This report details the current preliminary assessment and predicted likely score, as discussed and agreed with the project manager, Michael Ward of Derwent London. At pre-assessment stage, the score is an estimation of the final BREEAM score and associated rating, and this score is subject to change as the design progresses. As such, there are several issues that may need to be addressed during the later stages of design to provide a more accurate view of the BREEAM credit scores within each section.

The development is predicted to achieve a score of **66.65%** and a likely BREEAM rating of '**Very Good**', based on the commitments made by the design team. It should be noted that this is a pre-assessment, and the final assessment score will be based on evidences provided by the design team. It is therefore important for all design team members to ensure that commitments made at this stage are carried through the design process and are implemented.

It is also important to note that the cost implication of the assumptions made in this report have not been evaluated as part of this study.

2 THE DESIGN TEAM

The design team that are currently involved in the Preliminary BREEAM Offices 2008 assessment are as follows:

Developer

Derwent London

25 Savile Row, London W1S 2ER

Architect

Stiff + Trevillion

16, Woodland Road, London W9 2BE

Planning Consultants

DP9

100, Pall Mall, London SW1Y 5NQ

As the formal assessment progresses, inputs will be required from various design team members, who will be responsible for providing information and pieces of evidence for the formal assessment. Evidence is generally required from the developer/project manager, contractor/construction manager, M&E engineers, architect, cost consultant as well as a transport consultant and ecologist where applicable.

3 INTRODUCTION

Norman Disney & Young has been commissioned to carry out a BREEAM (**BRE** Environmental Assessment **M**ethod) Office 2008 assessment of 170 Tottenham Court Road for Derwent London as a part of a planning application to the London Borough of Camden for a change of use to Class B1 offices for the fifth and sixth floors of 1 University Street / 163-170 Tottenham Court Road (referred to as 170 Tottenham Court Road).

This report presents a 'Preliminary Assessment', which precedes the formal assessment. The aim of this preliminary assessment is to define the criteria for the design to meet in order to achieve the current likely BREEAM rating.

A breakdown of each criterion is provided, along with a brief description, and responsibility for implementation is allocated to a member of the design team, who is responsible for ensuring the criteria are met. It is imperative therefore that each design team member reviews the items assigned to them and provide any comments.

A list of the evidences that will be required for the credits to be awarded in the interim and final assessments is provided to the design team during the full Design & Procurement and Post Construction assessment stages.

It is important, at this stage, that the design team are aware of the specific requirements of each credit and ensure that these can be met and implemented within the design of the development. The requirements of the credits are very specific and can often be overlooked by the design team. Therefore it is important at this stage that workshops are conducted between the design team and assessor to discuss the specific details of the credits.

It should be noted that under the BREEAM 2008 scheme, a Post Construction assessment is required prior to BRE issuing the final BREEAM certificate. This will require the assessor to carry out site visit and the design team to provide evidences showing that the commitments made at design stage have been implemented in the development.

3.1 BREEAM

BREEAM is a voluntary scheme that aims to quantify and reduce the environmental burdens of buildings by rewarding those designs that take positive steps to minimise their environmental impacts.

Projects are assessed using a system of credits. The credits are grouped within the following categories:

- Management
- Energy
- Transport
- Health and Well Being
- Water
- Materials
- Waste
- Land use
- Site Ecological Value
- Pollution

The assessment process results in a report covering the issues assessed together with a formal certification giving a rating on a scale of PASS, GOOD, VERY GOOD, EXCELLENT and OUTSTANDING.

3.2 BREEAM SCORING

Within each of the BREEAM categories outlined above, there are a number of credit requirements that reflect the options available to designers and managers of buildings.

An environmental weighting is applied to the scores achieved under each category, as shown below, in order to calculate the final BREEAM score. The weighting factors have been derived from consensus based research with various groups such as government, material suppliers and lobbyists. This research was carried out by BRE to establish the relative importance of each environmental issue.

The environmental weightings are as follows:

Issue Category	Issue Weighting
Management	0.12
Health and Wellbeing	0.15
Energy	0.19
Transport	0.08
Water	0.06
Materials	0.125
Waste	0.075
Land Use and Ecology	0.10
Pollution	0.10

The BREEAM rating bands are as follows:

RATING	MINIMUM SCORE
UNCLASSIFIED	<30%
PASS	≥35%
GOOD	≥45%
VERY GOOD	≥55%
EXCELLENT	≥70%
OUTSTANDING	≥85%

4 SUMMARY OF BUILDING PERFORMANCE

Based on the information provided by the design team, the development is predicted to achieve a score of **66.65%**, which equates to a BREEAM rating of '**Very Good**'. This rating is based on the assumption that evidence required for each of the credits will be fulfilled.

4.1 SCORE CALCULATION

The table below illustrates how the predicted score of **66.65%** has been calculated.

This score is based on achieving all the credits listed under 'Likely Credits' as presented in Section 5 of this report.

BREEAM Building Performance Score Calculation					
Management	10	8	80%	0.12	9.6%
Health & Wellbeing	13	9	69%	0.15	10.4%
Energy	23	14	61%	0.19	11.6%
Water	10	8	80%	0.08	6.4%
Materials	6	4	67%	0.06	4.0%
Waste	13	9	69%	0.125	8.7%
Land Use & Ecology	7	3	43%	0.075	3.2%
Pollution	10	6	60%	0.1	6.0%
	12	7	58%	0.1	5.8%
Weighted Score				66.65%	
Rating				VERY GOOD	

5 CREDITS BREAKDOWN

The following sections of this report provide a breakdown of the individual criteria within each category, giving the:

- description of each criterion;
- credits available;
- number of credits the development is likely to achieve, (i.e. equating to a rating of **Very Good**);
- evidence required to demonstrate that each criterion has been satisfied for full assessment;
- party responsible for providing the evidences required;



5.1 MANAGEMENT CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Man 1 Commissioning 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. 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).	2	2	0	First credit		
				1&4	A copy of a letter or commissioning responsibilities schedule confirming the appointment of [or commitment to appoint]: · Design team member(s) as commissioning monitor and scope of their commissioning role. · Specialist commissioning manager and scope of their commissioning role.	Contractor
				2	A copy of the specification clause stating: · The standards and codes of practice to which commissioning procedures are to comply with.	Contractor
				3	A copy of the specification clause confirming: · The managing contractor's responsibilities with respect to this requirement. OR A copy of a commissioning schedule highlighting: · Managing contractor's commissioning responsibilities.	Contractor
				5	A copy of the specification clause/commissioning schedule confirming: · The stages of the BMS/Controls commissioning procedures.	Contractor
				Second credit		
				1	Evidence (as outlined above) confirming compliance with the first credit.	Contractor
				2	As evidence requirements for 1 & 3 of the first credit. This evidence must confirm the scope of seasonal commissioning responsibilities/tasks (as required).	Contractor

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Man 2 Considerate Constructors Scheme (CCS) One credit where evidence provided demonstrates that there is a commitment to comply with best practice site management principles. Two credits where evidence provided demonstrates that there is a commitment to go beyond best practice site management principles.	2	2	0	1	A copy of the relevant section of the main contract specification confirming: <ul style="list-style-type: none"> · A requirement to comply with the CCS · The minimum score to be achieved in each CCS section. OR A formal letter from the client/developer confirming: <ul style="list-style-type: none"> · The main contract will include a clause requiring CCS certification · The scope of the main contractor's works · A completed copy of checklist A1. 	Contractor
				2	A copy of the assessment criteria for the alternative scheme that allows the assessor to complete checklist A2. AND A formal letter from the client/developer confirming: <ul style="list-style-type: none"> · The main contract will include a clause requiring compliance with the alternative scheme · The procedure, and individual/ organisation responsible for third party assessment of site compliance. · The scope of the main contractor's works 	Contractor
				Exemplary credit		
				1&2	A formal letter from the main contractor confirming their commitment to: <ol style="list-style-type: none"> 3. Gaining CCS or equivalent certification 4. A minimum score of ≥36 	Contractor

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
<p>Man 3 Construction Site Impacts</p> <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	2	1		<p>A copy of the relevant section from the main contract specification confirming:</p> <ul style="list-style-type: none"> · Contractor's obligations in respect to each item on the checklist · Site timber will be sourced from suppliers capable of providing certification to the level required for the particular tier claimed (see table 1 of BREEAM credit MAT 5) · All timber will Come from a 'legal source' and is not on the CITES list*. <p>OR Where the main contract specification is not yet available, a formal letter from the client/developer including:</p> <ul style="list-style-type: none"> · Completed checklist A3 identifying which items will form part of the main E16contractor's obligations. · The policy for sourcing site timber for the project. · Confirmation that the above will be implemented in compliance with BREEAM's requirements. <p>* Or in the case of Appendix III of the CITES list, it has not been sourced from the country seeking to protect this species as listed in Appendix III.</p>	Contractor

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
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Man 4 Building User Guide 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.	1	1	0	1&2	A copy of the specification clause confirming: <ul style="list-style-type: none"> · Requirement to develop a Building User Guide · Scope of the Guide's contents. OR A formal letter from the client/developer confirming: <ul style="list-style-type: none"> · That the design team will be required to develop a Building User Guide. · The contents of the Guide will be developed in compliance with the BREEAM requirements. 	Contractor
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	0	1&2	Correspondence from or a copy of the report/feedback from the ALO/CPDA confirming: <ul style="list-style-type: none"> · Scope of their advice/involvement · The stage of design in which their advice was sought · Summary of their recommendations 	Architect
				3	A marked-up copy of the site/design plan(s) highlighting examples of: <ul style="list-style-type: none"> · The development conforming to ALO/CPDA recommendations and SBD principles and guidance. OR If the timing of assessment does not permit the above, a copy of the specification clause confirming:	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
					The development will conform to ALO/CPDA recommendations and SBD principles and guidance.	
	10	8	1			

5.2 HEALTH & WELLBEING CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Hea1 Daylighting One credit where evidence provided demonstrates that at least 80% of floor area in each occupied space is adequately daylight.	1	0	1	All	Design plans for each floor in the building with each room/area appropriately labelled for use AND daylight calculations confirming: <ul style="list-style-type: none"> · Building areas assessed · The daylighting variables/criterion measured · Average daylight factor for each area · Compliance with room depth criterion, uniformity ratio, view of sky (if required) · The daylight provision is in compliance with the relevant standards. 	Architect
Hea2 View out The relevant building areas are within 7m distance of a wall with a window or permanent opening providing an adequate view out, where the window/opening is $\geq 20\%$ of the total inside wall area (refer to compliance notes for a definition of relevant building areas and adequate view out).	1	0	1	All	Design plan and elevation showing: <ul style="list-style-type: none"> · All relevant building areas and room depths · Actual or notional workstations/desk layout · Window/open areas Site plan showing: <ul style="list-style-type: none"> · Building location and proximity to external obstructions. 	Architect
Hea3 Glare Control One credit where evidence provided demonstrates that an occupant-controlled shading system (e.g. internal or external blinds) is fitted in relevant building areas.	1	1	0	1	Marked-up copy of the design plan(s) confirming: <ul style="list-style-type: none"> · 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: <ul style="list-style-type: none"> · Type of shading system(s) and control to be installed. 	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Hea4 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	1	A copy of the specification clause or room data sheets confirming a compliant lighting strategy.	Services
Hea5 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	All	EITHER A copy of the specification or relevant room schedules confirming the internal/external maintained illuminance levels AND/OR the standards that the illuminance levels are specified to. OR A formal written declaration of conformity from the relevant member of the design team confirming: · The maintained illuminance levels for each internal/external space are in compliance with the relevant Standard.	Services
Hea6 Lighting Zones & controls One credit where evidence provided demonstrates that, in all relevant building areas, lighting is appropriately zoned and occupant controllable.	1	1	0	All	Design plans for each floor of the building highlighting: · Space arrangement and room type AND Specification or design plans confirming: · Lighting zones · Location and scope of user-controls.	Services

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Hea7 Potential for natural ventilation One credit where evidence provided demonstrates that fresh air is capable of being delivered to the occupied spaces of the building via a natural ventilation strategy, and there is sufficient user-control of the supply of fresh air.	1	1	0	1&2	Design plans and elevations, specification or calculations confirming: <ul style="list-style-type: none"> · 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 location of openings · The type and degree of user-control. AND (where relevant) A copy of the results from the appropriate software modelling tool demonstrating compliance. *Manufacturers'/suppliers' literature may also be used as evidence.	Services
Hea8 Indoor air quality One credit where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.	1	1	0	1&2	A marked-up proposed site plan highlighting: <ul style="list-style-type: none"> • Locations of intakes, extracts, openable windows, ventilators • Any existing or proposed sources of external pollution. 	Services
				3	Design team calculations and/or performance specification requirements confirming: <ul style="list-style-type: none"> • The fresh air rate set for each space • That the fresh air rate can be met using the chosen strategy • The relevant standard(s) to which the design is in accordance with. 	Services
Hea9 Volatile Organic Compounds	1	1	0	1	A copy of the relevant specification clause confirming:	Services

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
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.					the VOC content of the relevant specified product types will comply with the standards specified above.	
Hea10 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.	1	0	1	1&3	A copy of the relevant specification analysis. OR A clause confirming the requirements for thermal comfort Correspondence (e.g. letter, email or meeting minutes) from the design team confirming: • The name of the thermal comfort modelling software used. • The software has been selected and applied in accordance with CIBSE AM11.	Services
				2	A copy of the results from the modelling demonstrating the internal temperatures in compliance with the relevant standards.	Services
Hea11 Thermal zoning						
One credit where evidence provided demonstrates that local occupant control is available for temperature adjustment in each occupied space to reflect differing user demands.	1	1	0	1&2	A copy of the relevant clauses of specification and/or marked-up M&E drawings confirming: • Scope of the heating/cooling system • The type of user controls for the above systems • The scope of the controls i.e. control zone.	Services
Hea12 Microbial Contamination						
One credit where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised.	1	1	0	1&2	A copy of the relevant specification clause(s) confirming: • All types of water system in the building and on the assessed site. • 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(s) stating:	Services

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
					<ul style="list-style-type: none"> The requirements on the contractor/installer with regards to minimising the risk of Legionnaires disease from the specified water systems. 	
Hea13 Acoustic Performance One credit where evidence provided demonstrates that the building achieves appropriate indoor ambient noise levels in offices areas. In addition, for fully fitted buildings only: Appropriate airborne sound insulation levels are achieved between acoustically sensitive spaces and occupied spaces, sufficient to ensure adequate privacy.	1	0	1	1&2	A copy of the design plan for each level of the building with each room/area clearly labelled. A copy of the specification clause or acousticians calculations confirming: <ul style="list-style-type: none"> Indoor ambient noise levels in each relevant room/area. If relevant, sound insulation levels between each acoustically sensitive room and adjacent occupied areas. The standards to which calculations/measurements have complied, or are required to comply with. 	Acoustic Consultant
				3	A copy of the specification clause or a formal letter from the project team confirming: <ul style="list-style-type: none"> A programme of pre-completion acoustic testing by a suitably qualified acoustician will be commissioned. Where rooms/areas do not comply with the required levels, appropriate remedial works will be actioned and completed. 	Acoustic Consultant
	13	9	4			



5.3 ENERGY CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
ENE1 Reduction of CO₂ 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	8	0	All	A copy of the EPC output from the approved software for the assessed building at the design stage. The accredited energy assessor's name and accreditation number (this information will be on the EPC).	Services
ENE2 Sub-metering of Substantial Energy Uses One credit where evidence provided demonstrates the provision of direct sub-metering of energy uses within the building.	1	1	0	All	Specification document or technical drawings confirming: <ul style="list-style-type: none"> · 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. 	Services
ENE3 Sub-metering of High Energy Load Areas/Tenancy One credit is awarded where evidence provided demonstrates sub-metering of energy use by tenancy or areas/departments (single tenant) is installed within the building.	1	1	0	1	Marked-up drawings and site plan detailing: <ul style="list-style-type: none"> · Building areas by department/function and/or tenancy · Location of meters. Specification document or technical drawings confirming: <ul style="list-style-type: none"> · Metering arrangements for each department/function and/or tenancy area · Type of meter specified. 	Services

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
ENE4 External Lighting One credit where energy-efficient external lighting is specified and all light fittings are controlled for the presence of daylight.	1	1	0	All	Marked-up site plan and building elevations showing: · Location and purpose of all external lighting fittings. Lighting specification or lighting designer's calculations confirming: · Lamp lumens/circuit watt for each type of fitting as well as the colour rendering index Ra (where appropriate) · External lighting control strategy..	Services
ENE5 Low zero carbon technologies 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. Two credits where evidence provided demonstrates that the first credit has been achieved and there is a 10% reduction in the building's CO ₂ emissions as a result of the installation of a feasible local LZC technology. Three credits where evidence provided demonstrates that the first credit has been achieved and there is a 15% reduction in the building's CO ₂ emissions as a result of the installation of a feasible local LZC technology. Or alternatively: A maximum of one credit where evidence provided demonstrates that a contract with an energy	3	1	0	First credit		
				1&3	A copy of the feasibility study report. Letter from the energy specialist confirming: · Compliance with the definition of an energy specialist · The timing of the feasibility report within the plan of works.	Services
				2	Marked-up design plan or specification confirming: · Proposed installation of LZC energy technology. Manufacturer's technical data and details or calculations stating the carbon savings as a result of the installed LZC technology.	Services
				Second, Third and Exemplary Level Credit		
				1	Evidence (as outlined above) confirming compliance with the first credit.	Services
				2&3	A copy of the report produced by the approved energy modelling software illustrating; · The name of the approved software used to carry out the modelling · Confirmation of the expertise and experience of the individual carrying out the modelling	Services

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
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)					<ul style="list-style-type: none"> Total CO2 emissions for the assessed building (without LZC energy technology) AND Calculations/outputs from the manufacturer, supplier, engineer or approved software confirming: Total carbon savings as a result of the installed LZC technology. 	
<p>ENE8 Lifts</p> <p>Up to two credits are available where evidence provided demonstrates the installation of energy-efficient lift(s).</p>	2	2	0	1&2	<p>A copy of the relevant report or documentation detailing the analysis undertaken and findings/recommendations.</p> <p>A copy of the lift specification.</p> <p>OR</p> <p>Formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant requirements for the number of credits sought.</p>	Services
				3&4	<p>A copy of the lift specification. OR</p> <p>Formal letter from the lift manufacturer/supplier confirming that the lift to be installed on the project meets the relevant requirements for the number of credits sought.</p>	Services
Total to carry forward	23	14	0			



5.4 TRANSPORT CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
T1 Provision of public transport Up to three credits are awarded on a sliding scale based on the assessed buildings' accessibility to the public transport network.	3	3	0	1	A copy of the output from the Tra1 Provision of Public Transport calculator *. *Or via the alternative means for buildings in Greater London (see additional information).	Transport Consultant / Project Manager
				2	Scale map highlighting the location of the building and all public transport nodes in proximity of the building. Timetables for each service at each public transport node considered.	Transport Consultant / Project Manager
T2 Proximity to amenities One credit where evidence provided demonstrates that the building is located within 500m of accessible local amenities appropriate to the building type and its users.	1	1	0	1	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 due to be developed, a letter from the client/developer confirming: • The location and type of amenities to be provided • The timescale for development of the amenities.	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
T3 Cyclist facilities One credit where evidence provided demonstrates that covered, secure and well-lit cycle storage facilities are provided for all building users. Two credits where, in addition to the above, adequate changing facilities are provided for staff use.	2	0	2	First credit		
				1	Site plan, design drawings and/or a copy of the specification confirming: <ul style="list-style-type: none"> • The location of the cycle storage facilities • The number of cycle spaces provided • The type, dimensions and layout of cycle racks • The materials and construction specified for the facility. • The lighting for the facility is in accordance with BS5489 Part 1. • Building occupancy or, where relevant, net lettable/floor area. Where the building is in a city centre location, and the benchmarks reduced, evidence as outlined under BREEAM credit T1 demonstrating the relevant number of credits achieved.	Architect
				Second credit		
				1	Evidence (as outlined above) confirming compliance with the first credit.	Architect
				2	Design drawings or a copy of the specification confirming: <ul style="list-style-type: none"> • Number of showers • Changing room • Secure locker locations, dimensions and numbers • Drying space 	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
T4 Pedestrian and cycle safety				1&3to9	A scaled proposed site plan, specification and/or design details highlighting all necessary features and dimensions.	Transport Consultant / Project Manager
One credit where evidence provided demonstrates that the site layout has been designed in accordance with best practice to ensure safe and adequate pedestrian and cycle access.	1	1	0	2	A copy of the specification or scaled proposed site plan confirming: · Cycle routes have been or will be designed in accordance with the best practice guidance AND · 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).	Transport Consultant / Project Manager
				10	A copy of the specification, site plan and/or manufacturer's technical details confirming: · External lighting design strategy.	Project Manager
T5 Travel Plan				1,2&3	A copy of the Travel Plan. A copy of the site-specific transport survey/ assessment.	Transport Consultant / Project Manager
One credit where evidence is provided to demonstrate that a travel plan has been developed and tailored to the specific needs of the building users.	1	1	0	3	A marked-up copy of the site plan demonstrating examples of design measures, implemented in support 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 the travel plan's findings.	Transport Consultant / Project Manager
T6 Maximum car parking capacity	2	2	0	1	A site plan or copy of the specification confirming:	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
One credit where evidence provided demonstrates no more than one parking space is provided for every three building users.					· Number and type of parking spaces provided for the building. Relevant documentation or correspondence from the design team or client confirming the number of building users.	
Two credits where evidence provided demonstrates no more than one parking space is provided for every four building users.						
Total to carry forward	10	8	2			



5.5 WATER CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
W1 Water Consumption Up to three credits where evidence provided demonstrates that the specification includes taps, urinals, WCs and showers that consume less potable water in use than standard specifications for the same type of fittings.	3	1	0	1,2&3	A copy of the relevant section of the M&E specification and/or manufacturer's details confirming: <ul style="list-style-type: none"> • Technical specification of sanitary fittings and controls to be installed • Location, size and details of any rainwater and greywater collection system. Design plan showing the location within the building of the sanitary and grey/rainwater collection facilities. A copy of the output from the BREEAM Water Calculator tool.	Architect
W2 Water meter One credit where evidence provided demonstrates that a water meter with a pulsed output will be installed on the mains supply to each building/unit.	1	1	0	All	A copy of the specification clause confirming: <ul style="list-style-type: none"> • The specification and type of water meter(s). 	Services
W3 Major leak detection One credit where evidence provided demonstrates that a leak detection system is specified or installed on the building's water supply.	1	1	0	1&2	A copy of the specification clause confirming: <ul style="list-style-type: none"> • Scope and performance requirements of leak detection system. AND/OR Manufacturer's details confirming:	Services
W4 Sanitary Supply Shutoff One credit where evidence provided demonstrates that proximity detection shut-off is provided to the water supply to all toilet areas.	1	1	0	1	A copy of the specification clause confirming: <ul style="list-style-type: none"> • The specification of shut-off valves • The controls for the shut-off valves. A design plan showing: <ul style="list-style-type: none"> • The location of the toilet facilities. 	Services
Total to carry forward	6	4	0			



5.6 MATERIALS CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Mat1 Materials Specification - Major building elements Up to four credits are available, determined by the Green Guide to Specification ratings for the major building elements.	4	3	0	1&Exempl level req.	Specification confirming: · A detailed description of each applicable element and its constituent materials. Design drawings or specification detailing: · Location and area (m2) of each applicable element. A copy of the output from the Mat 1 Calculator, including Green Guide rating and element number for each specification assessed.	Architect
Mat2 Hard Landscape and 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	1	Specification confirming: · A detailed description of each applicable element and its constituent materials. Design drawings or specification detailing: · Location and area (m2) of each applicable element. The Green Guide rating and element number for the assessed specifications.	Architect
Mat3 Re-use of building façade 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	1	0	1&2	Drawings detailing: · The elevations of the existing and the new-build façades. Calculations demonstrating: · The % of façade comprising in situ material. These calculations should be simply based on the volume of each material and its density, with totals compared for the new and retained parts of the structure.	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
Mat4 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	1	0	1&2	Drawings or design team calculations detailing: <ul style="list-style-type: none"> · 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 credit requirements for the mass of materials used. 	Architect
Mat5 Responsible sourcing of materials Up to 3 credits are available where evidence provided demonstrates that 80% of the assessed materials in the following building elements are responsibly sourced: <ol style="list-style-type: none"> Structural Frame Ground floor Upper floors (including separating floors) Roof External walls Internal walls Foundation/substructure Staircase Additionally 100% of any timber must be legally sourced.	3	0	0	1	Design plan and/or specification confirming: <ul style="list-style-type: none"> · the location of elements and materials specified · Details of the materials specified. 	Architect
				2&3	A copy of the output from the Responsible Sourcing of Materials Calculator Tool. For materials certified through the EMS route, a letter of intent from the design team confirming: <ul style="list-style-type: none"> • The relevant materials shall be sourced from suppliers who can provide an EMS certificate (or equivalent) for the process and/or extraction stages of their product. Certified timber requires a letter of intent from the design team confirming: <ul style="list-style-type: none"> • The timber shall be sourced from suppliers capable of providing certification to the level required for the particular tier claimed. 	Architect
				4	Written confirmation from the developer confirming that: <ul style="list-style-type: none"> • All timber will come from a 'legal source' and one not on the CITES list*. 	Architect

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
					* Or in the case of Appendix III of the CITES list, it has not been sourced from the country seeking to protect this species as listed in Appendix III.	
Mat6 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. One credit where evidence provided demonstrates that thermal insulation products used in the building have been responsibly sourced.	2	2	0	1,2,3&4	Marked-up design plan/elevations and/or a copy of the specification confirming: <ul style="list-style-type: none"> • The location of insulating materials. • The area (m2) and thickness (m) or volume (m3) of insulation specified. • Manufacturer's technical details confirming: <ul style="list-style-type: none"> • Thickness and thermal conductivity of the insulating materials specified. A copy of the output from the Insulation Index Calculator Tool. The Green Guide rating and element number for the assessed insulation specifications.	Architect
				5	Evidence (as outlined in Mat 5) confirming compliance for the insulating materials.	Project Manager
Mat7 Design 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.	1	1	0	1&2	Design drawings marked up to illustrate: <ul style="list-style-type: none"> • Vulnerable areas/parts of the building. 	Architect
				2	Design drawings and/or specification confirming: <ul style="list-style-type: none"> • The durability measures specified. 	Architect
Total to carry forward						
	13	9	0			

5.7 WASTE CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
<p>WST1 Construction Site Waste Management</p> <p>Up to three credits are available where evidence provided demonstrates that the amount of non-hazardous construction waste (m3/100m2 or tonnes/100m2) generated on site by the development is the same as or better than good or best practice levels.</p> <p>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.</p>	4	0	1	All	<p>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:</p> <ul style="list-style-type: none"> · Requires the principal contractor to produce a SWMP in line with the requirements · Contains the detailed requirements with respect to resource efficiency benchmarks and target(s) and procedures to be included in the SWMP · Where relevant, requires the principal contractor to carry out a pre-demolition/pre-refurbishment audit. <p>OR A letter from the client or their representative containing:</p> <ul style="list-style-type: none"> · Confirmation that the specification will contain a clause on site waste management requirements. · An outline of the detailed requirements that will be included in that specification clause. 	Contractor

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
WST2 Recycled aggregates One credit where evidence provided demonstrates the significant use of recycled or secondary aggregates in 'high-grade' building aggregate uses.	1	1	0	1	A copy of the relevant specification or contract clause confirming: <ul style="list-style-type: none"> Recycled and secondary aggregate use requirements for the project. A letter from the design team or main contractor confirming: <ul style="list-style-type: none"> The source of recycled/secondary aggregates The amount and quality required can be obtained from this source. 	Project Manager
WST3 Recycle waste storage One credit where a central, dedicated space is provided for the storage of the building's recyclable waste streams.	1	1	0	All	Marked-up building/site plan and/or copy of the specification confirming: <ul style="list-style-type: none"> The location of the dedicated recyclable storage area Storage area for general waste The area (m2) of the storage space(s) Description of the labelling. 	Architect
WST6 Floor finishes One credit where carpets and other floor finishes are specified by the future occupant or, in tenanted areas of speculative buildings, where carpets or floor finishes are installed in a limited show area only.	1	1	0	1&2	Marked-up design plans and a copy of the specification confirming: <ul style="list-style-type: none"> The type and coverage (m2) of any specified floor finishes. Where the future occupant is known, a letter from the client or design team confirming: <ul style="list-style-type: none"> That the type and coverage of carpets and other floor finishes have been specified (or agreed to) by the future occupant/client. 	Architect
Total to carry forward	7	3	1			



1.2.1 Land Use and Ecology

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
One credit where evidence provided demonstrates that the majority of the footprint of the proposed development falls within the boundary of previously developed land.	1	1	0	1	Existing site plan, report or site photographs confirming: · Previous land use. · Area (m2) of previous land use. Proposed site plan showing: · Location and footprint (m2) of proposed development and temporary works.	Project Manager
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	0	0	1	A copy of the specialist's land contamination report confirming: · The degree, type and sources of site contamination. · The options for remediating the site. Existing site plan(s) showing: · Location of areas contaminated and to be remediated in relation to any proposed development.	Project Manager
				2	A letter from the main contractor or remediation contractor confirming: · The remediation strategy for the site. · Summary details of the implementation plan. If a contractor has not yet been appointed, a letter from the client, or their representative confirming: · That the appointed contractor will undertake necessary remediation works to mitigate the risks identified in the specialist report.	Project Manager

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
<p>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.</p>	1	1	0	1&2	<p>A completed copy of checklist A4 signed and dated by the client, their representative or a design team member e.g. architect.</p> <p>AND One of the following:</p> <p>A plan and/or site photographs of the existing site highlighting any ecological features OR</p> <p>A copy of the ecologist's report containing:</p> <ul style="list-style-type: none"> · Confirmation that the land within the construction zone is of low ecological value. · A description of any ecological features within the site or on the site boundary. · Date(s) of site survey(s). <p>A completed, signed copy of sections A and B of checklist A6 'Guidance for relating ecology reports to BREEAM' to confirm the ecologist's professional status</p> <p>OR a copy of the ecologist's report containing the information in sections A and B from the above.</p>	Ecologist
				2&3	<p>A copy of the relevant section of the contract specification confirming:</p> <ul style="list-style-type: none"> • Requirement to protect all identified features of ecological value. • Scope of protection measures required. • Protection measures implemented prior to commencement of site activities. 	Ecologist

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
<p>One credit where evidence provided demonstrates that the change in the site's existing ecological value, as a result of development, is minimal.</p> <p>Two credits where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of development.</p>	2	2	0	1,2&3	<p>Existing and proposed site plans and, if required, maps and aerial photographs confirming:</p> <ul style="list-style-type: none"> • Landscape and vegetation plot types • Area (m2) of vegetation plot types <p>AND A completed copy of Ecology Calculator 1</p>	Ecologist
				1,2&4	<p>A copy of the suitably qualified ecologist's report confirming prior to and after the development:</p> <ul style="list-style-type: none"> • Landscape and vegetation plot types • Area (m2) of vegetation plot types <p>AND A completed, signed copy of checklist</p> <p>A6 – Relating ecology reports to BREEAM</p> <p>OR a copy of the ecology report containing the information outlined in checklist A6.</p> <p>AND A completed copy of Ecology Calculator 2</p>	Ecologist

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
<p>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.</p> <p>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.</p> <p>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.</p>	3	1	1	1	<p>A copy of the ecologist's report containing:</p> <ul style="list-style-type: none"> • Details and scope of the site survey. • Information as outlined in checklist A6 – Relating ecology reports to BREEAM. <p>OR A copy of the ecologist's report containing a completed, signed copy of checklist A6.</p>	Ecologist
				2	<p>Proposed site plan highlighting implementation of the ecologist enhancement recommendations.</p> <p>AND One of the following: A copy of the relevant section of the specification requiring the main contractor to implement the SQE's recommendations for protection and enhancement</p> <p>OR A letter from the client or design team member confirming: • That the specification will require the main contractor to implement the ecologist's recommendations.</p>	Ecologist
				1,2&3	<p>Evidence as outlined above, confirming compliance with the first credit. A copy of the SQE's report containing the information outlined in checklist A6 – Relating ecology reports to BREEAM. OR A copy of the SQE's report containing a completed, signed copy of checklist A6.</p> <p>AND A completed copy of Ecology Calculator 2.</p>	Ecologist

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
<p>One credit where the client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements.</p> <p>Two credits where the client has committed to achieving the mandatory requirements listed below and at least four of the additional requirements.</p>	2	1	1	First and Second Credits		
				Mandatory requirements		
				1&2	<p>The SQE report or letter confirming:</p> <ul style="list-style-type: none"> • That they were appointed prior to commencement of activities on site. • All relevant UK and EU legislations will be complied with. AND <p>A completed, signed copy of checklist A6 – Relating ecology reports to BREEAM</p> <p>OR</p> <p>A copy of ecology report containing the information outlined in checklist A6.</p>	Ecologist
				3	<p>A copy of the site management plan. OR</p> <p>A copy of the specification requiring the development of plan and outlining the scope of its content. OR Where the timing of assessment does not permit either of the above, a letter from the client confirming:</p> <ul style="list-style-type: none"> • A commitment to produce a management plan • The scope of the management plan 	Ecologist
				Additional requirements		
				1	<p>A letter from the contractor confirming:</p> <ul style="list-style-type: none"> • The appointment of the biodiversity champion and their job title. • Their onsite role and responsibilities. OR <p>Where not yet appointed, a copy of the specification clause requiring the appointment of a biodiversity champion.</p>	Ecologist

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
				2	Training schedule or letter of confirmation from the contractor committing to provide relevant training. OR Where not yet appointed, a copy of the specification clause requiring the training of the site's workforce.	Ecologist
				3	A letter from the contractor confirming: • Monitoring and reporting requirements for the development. • The records will be publicly available if and when requested. OR Where not yet appointed, a copy of the specification clause outlining the contractor's monitoring and reporting requirements.	Ecologist
				4	A copy of the proposed site plan highlighting the new ecologically valuable habitat. A SQE's report or letter confirming that the habitat supports the relevant biodiversity action plan(s)	Ecologist
				5	The SQE's report or letter confirming: • Wildlife on site that needs to be accounted for in programming works. • Actions required with respect to programming site works to minimise disturbance. A copy of the contractor's main programme of works. OR A copy of the relevant section of the main contract confirming:	Ecologist

					• The programme of site works will minimise disturbance to wildlife in accordance with SQE's recommendations.	
Total to carry forward	10	6	2			



5.9 POLLUTION CREDITS

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
P1 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	1	0	1&2	A copy of the specification clause confirming either: • Absence of refrigerant in the development OR • Type(s) of refrigerant to be used AND manufacturer's information confirming GWP of each refrigerant.	Services
P2 Preventing Refrigerant Leaks One credit where evidence provided demonstrates that refrigerant leaks can be detected 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. Or where there are no refrigerants specified for the development.	2	2	0	1 2&3 4,5&6	A copy of the specification clause or design plan confirming: • Absence of refrigerants in the development. A copy of the specification clause or letter from the M&E engineer confirming: • Type of leak detection system(s). • Scope of the system(s) • Where relevant, containment strategy for such equipment. A copy of the specification clause or letter from the M&E engineer confirming: • Type, scope and operation of automatic refrigerant recovery equipment • Details of the plant room enclosure where the refrigeration plant is installed • Alarm threshold for triggering automatic pump down.	Services Services Services

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible	
P4 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).	3	1	1	1	A copy of the specification clause confirming: · Type of heating system(s) installed. For each system specified, a letter, email or literature from the manufacturer(s) confirming dry NOx emissions rate in mg/kWh. If more than one system is providing heat, design team calculations confirming the average NOx emission rate	Services	
P5 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	3	0	3	First and Second Credits		Structural Engineer	
				1	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.		Structural Engineer
				2	A copy of the Flood Risk Assessment.		
				3	Site plans/sections confirming: • The design flood level for the site • The design ground level(s) for all developed areas of the site • Safe access and escape routes		Structural Engineer
				Additional SUDs Credit			

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
attenuation measures are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site due to development.				1&2	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; and additional allowance for climate change designed into the system	Structural Engineer
P6 Minimising watercourse pollution				1&2	Marked-up proposed 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.	Services
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	3&4	A letter from the design team confirming: • All water pollution prevention systems designed in accordance with PPG3 and the SUDS manual (where appropriate) • Outlining indicative examples of compliance with PPG3 and the SUDS manual • A copy of the drainage plan will be produced and handed over to the building occupier.	Services
P7 Reduction of night time light pollution					A marked-up copy of the site plan showing: • Areas of the building and site that will be externally lit • Any 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 (if relevant).	Lighting Consultant
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	1,2&3		

Criteria	Available Credits	Likely Credits	Additional Credits	Compliance Requirement	Evidence Required at D&P stage assessment	Design Team Member Responsible
					In the case of the external lighting design, the M&E engineer or lighting designer must provide indicative examples of where and how the strategy complies with the requirements.	
P8 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	1	0	1	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.	Acoustic Consultant
				2&3	A copy of the acoustician's report. The acoustician's qualifications and professional status. OR A copy of the specification clause requiring: • A noise assessment in compliance with BS 4142:1997 by a suitably qualified acoustician. OR A formal letter from the client or design team confirming that they will appoint an acoustician to carry out a noise assessment in compliance with BS 4142:1997	Acoustic Consultant
				4	Acoustician's report with recommendations for noise attenuation measures. AND A marked-up design plan highlighting the specification of the acoustician's attenuation measures OR A formal letter from the client or design team confirming that: • If relevant, attenuation measures recommended by an appointed suitably qualified acoustician will be installed.	Acoustic Consultant
Total to carry forward	12	7	4			

6 APPENDIX A – MAN2 CONSIDERATE CONSTRUCTORS

For each of the eight sections (below) the *Considerate Constructors Scheme* awards a score on a scale of 0 to 5 (with half points). The score achieved or required must be entered into boxes 1-8 below i.e. EITHER 0; 0.5; 1; 1.5; 2.0; 2.5; 3.0; 3.5; 4.0; 4.5; OR 5.0.

- When a firm commitment is made to achieve certification under the Considerate Constructors Scheme without reference to particular scores, a score of 3 should be entered in each of the boxes 1-8 below. This gives a total score of 24 in box 9 below and subsequently one credit can be awarded.
- When a firm commitment is made to require the constructor to achieve certification AND a score greater than 3 is required in one or more sections, the scores required should be added in boxes 1 to 8 below and totalled accordingly.

Considerate Section	Score achieved	<input type="text"/>	1
Environmentally Aware Section	Score achieved	<input type="text"/>	2
Site Cleanliness Section	Score achieved	<input type="text"/>	3
Good Neighbour Section	Score achieved	<input type="text"/>	4
Respectful Section	Score achieved	<input type="text"/>	5
Safe Section	Score achieved	<input type="text"/>	6
Responsible Section	Score achieved	<input type="text"/>	7
Accountable Section	Score achieved	<input type="text"/>	8
TOTAL Considerate Constructors Score	(sum of 1-8)	<input type="text"/>	9

Total CC score achieved is less than 24	0 credits
Total CC score is between 24 to 31.5 incl.	1 credit
Total CC score is between 32 and 35.5 incl.	2 credits
Total CC score is greater than ≥36	2 + Innovation credit

Assessor to award credits based on committed CCS Score and above table 10

Signed: _____ Date: _____

Name [PRINT]: _____ Organisation: _____

Further information about the Considerate Constructors Scheme can be found on the CCS website:
<http://www.ccscheme.org.uk/>

7 APPENDIX B – MAN3 CONSTRUCTION SITE IMPACTS

a. Monitor, report and set targets for CO ₂ production of energy use arising from site activities		
Compliance requirement	Tick	Evidence/Reference
Monthly measurements of energy use will be/has been recorded and displayed on site.		
Appropriate target levels* of energy consumption will be/were set and displayed (targets could be annual, monthly, or project targets).		
As a minimum, monitoring will/did include checking the meters and displaying some form of graphical analysis in the site office to show consumption over the project duration and how actual consumption compares to the targets set.		
The design/site management team will/did nominate an individual who will be responsible for the monitoring and collection of data.		
Notes: <ul style="list-style-type: none"> Targets for energy consumption during the construction process should be set using DTI's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets (see references section of main credit for further details). BREEAM does not require targets to be met but is encouraging the process of setting, monitoring and reporting against targets. 		
b. Monitor and report CO ₂ or energy arising from commercial transport to and from the site		
Compliance requirement	Tick	Evidence/Reference
A site monitoring system will be/was in place to monitor and record deliveries*. This system will/did record: <ul style="list-style-type: none"> The number of deliveries The mode of transport The km/miles travelled for all deliveries 		
If the design team or contractor confirms that the project is aiming to achieve the "Construction Site Transport" 'measures for traffic movements and distances' (published April 2003, see references) then this aspect has been achieved automatically. The information obtained for this item can also be used to satisfy the DTI's Environmental KPI on transport.		

The design/site management team will/did nominate an individual responsible for the monitoring and collection of data.		
Notes: <ul style="list-style-type: none"> Where the delivery is specifically for the site, a figure of total distance travelled should be used, i.e. a round trip (from the point of origin, to the site and back to the point of origin). Where the delivery to the site is part of a multiple delivery route, the recorded figure for distance travelled should be the distance travelled to the site (from the previous delivery), plus the distance to the next delivery or return. This information can then be used to estimate a total figure for kg of CO₂ for the project. BREEAM does not require this information to be converted to CO₂ but the information must be made available to the senior project and site management staff/suppliers to establish benchmarks and aid future decision-making towards improving site and transport efficiency. If the project team wishes to convert this information into CO₂ emissions there are tables provided at the end of this checklist which can be used to do this. 		
c. Monitor, report and set targets for water consumption arising from site activities		
Compliance requirement	Tick	Evidence/Reference
Monthly measurements of water consumption will be/were recorded and displayed on site.		
Appropriate target* levels of water consumption will be/were set and displayed (targets could be annual, monthly or project targets).		
As a minimum, monitoring will/did include checking the meters and displaying some form of graphical analysis in the site office to show consumption over the project duration and how actual consumption compares to targets set.		
The design/site management team will/did nominate an individual responsible for the monitoring and collection of data.		
Notes: <ul style="list-style-type: none"> Targets for water consumption during the construction process should be set using DTI's Environmental KPI benchmarks. These documents do not specify targets but facilitate projects in setting appropriate targets (see References and Further Information for details). BREEAM does not require targets to be met but is encouraging the process of setting, monitoring and reporting targets. 		

f. A main contractor with an environmental materials policy

Compliance requirement	Tick	Evidence/Reference
<p>The main contractor operates an environmental materials policy, used for sourcing of construction materials to be utilised on site. The policy should cover/promote the following:</p> <ul style="list-style-type: none"> • Use of local materials (where possible) • Use of responsibly sourced materials • Re use of materials • Use of materials with a high recycled content • Waste minimisation and recycling • Use of non-toxic materials & refrigerants with a high global warming potential • Use of materials with a low embodied impact • Use of durable materials 		
<p>Post construction: indicative examples have been provided to demonstrate the policy in action.</p>		

g. A main contractor that operates an Environmental Management System'

Compliance requirement	Tick	Evidence/Reference
<p>The main contractor operates an Environmental Management System covering their main operations. The EMS must be either:</p> <ul style="list-style-type: none"> • Third party certified, to ISO14001/EMAS or equivalent standard. OR • The structure of the EMS is in compliance with British Standard 8555 2003 and has reached phase four of the implementation stage, 'implementation and operation of the environmental management system', and completed phase audits one to four, as defined in BS8555. 		

h. 80% of site timber is reclaimed, re-used or responsibly sourced		
Compliance requirement	Tick	Evidence/Reference
80% of timber used during construction, including formwork, site hoardings and other temporary site timber used for the purpose of facilitating construction, will be/was procured from sustainably managed sources, independently certified by one of the top two levels as set out in the Responsible Sourcing of Materials Issues (BREEAM credit Mat 5) in the Materials section of this document.		
Additionally 100% of all site timber will be/was legally sourced.		
Notes: <ul style="list-style-type: none"> • Re-used timber from off site can be counted as equivalent but re-usable formwork only complies if it meets the above criteria. • This credit can be awarded where all the timber used is reclaimed timber. 		

8 APPENDIX C – MAT5 RESPONSIBLY SOURCED MATERIALS

Table 1 - Checklist of requirements for Tiers 1-4

Tier	Requirements	Examples of compliant schemes	Checklist of documentation required
1	Third party certification scheme with CoC and rigorous stakeholder consultation (at both standard setting and during implementation) Scheme must have developed standards which meet the requirements outlined in Table 3 below.	FSC CSA SFI with CoC PEFC Reused materials	Design One of the following indicating that the material will comply with the relevant certification scheme <ul style="list-style-type: none"> Letter of intent from supplier OR Purchase order from the supplier including CoC number (if the material has been ordered) OR Chain of Custody (CoC) certificate (if timber has already been supplied) Post Construction <ul style="list-style-type: none"> CoC certificate for all appropriate elements AND Delivery notes for all appropriate elements
2	Third party certification scheme with CoC and stakeholder consultation. Scheme must have developed standards which meet the requirements outlined in Table 3 below.	Currently no schemes in this tier	As above.

Tier	Requirements	Examples of compliant schemes	Checklist of documentation required
3	Certification Scheme for timber Environmental Management System at extraction & process stages - see Table 2 below for description of stages.	ISO 14001 EMAS Evidence of BS8555 (for SME's) MTCC Verified* SGS TFT	Design <u>Timber</u> One of the following indicating that the material will comply with the relevant certification scheme <ul style="list-style-type: none"> Letter of intent from supplier OR Purchase order from the supplier including CoC number (if the material has been ordered) OR Chain of Custody (CoC) certificate (if timber has already been supplied) <u>Non timber materials</u> One of the following indicating that the material will comply with the relevant EMS standards (see credit for further information). <ul style="list-style-type: none"> EMS (or equivalent) certificate from the manufacturers at the process and extraction stages OR Signed letter from the manufacturers at the process and extraction stages confirming EMS (or equivalent) certification details OR Letter of intent from the developer to use a manufacturer at the process and extraction stages, who has an EMS (or equivalent), if supplier is not yet appointed.

Tier	Requirements	Examples of compliant schemes	Checklist of documentation required
3			Post Construction <ul style="list-style-type: none"> Delivery notes for all appropriate elements <u>Timber</u> <ul style="list-style-type: none"> CoC certificate for all appropriate elements <u>Non timber materials</u> One of the following indicating that the material will comply with the relevant EMS standards (see credit for further information). <ul style="list-style-type: none"> EMS certificate (or equivalent) from the manufacturers at the process and extraction stages OR Signed letter from the manufacturers at the process and extraction stages confirming EMS (or equivalent) certification details In addition: <ul style="list-style-type: none"> Delivery notes for all appropriate elements

Tier	Requirements	Examples of compliant schemes	Checklist of documentation required
4	Environmental Management System at process stages for other materials - see Table 2 below for description of stages	EMAS ISO 14001	<p>Design</p> <p>One of the following indicating that the material will comply with the relevant EMS standards (see credit for further information).</p> <ul style="list-style-type: none"> EMS (or equivalent) certificate from the manufacturers at the process stage OR Signed letter from the manufacturers at the process stage confirming EMS (or equivalent) certification details OR Letter of intent from the developer to use a manufacturer at the process stage, who has an EMS (or equivalent), if supplier is not yet appointed. <p>Post Construction</p> <p>One of the following indicating that the material will comply with the relevant EMS standards (see credit for further information).</p> <ul style="list-style-type: none"> EMS certificate (or equivalent) from the manufacturers at the process stage OR Signed letter from the manufacturers at the process stage confirming EMS (or equivalent) certification details

Where ANY non certified timber is used (even if only a small quantity) the following must also be provided in ALL cases:

- Written confirmation from the timber supplier(s) (or at the design stage of assessment, the developer where a supplier is not yet appointed) confirming that all timber species and sources used in the development are not listed on any of the CITES appendices for endangered and threatened species (see credit for further information).
- Written confirmation from the timber supplier(s) (or at the design stage of assessment the developer where a supplier is not yet appointed) confirming that all timber is to be legally sourced (see credit for further information).

Table 2 - Diagrammatic explanation of how the required EMS relates to the process and extraction phases

Stage of production process	Extraction	Process	Manufacture
Materials	Stone Aggregate (sand, limestone etc.) Hematite Bauxite Clay Raw materials - other	Bricks Cement or alternative Glass Metals Other materials (plastic etc) Pre-cast concrete	Concrete / blocks Composites
Points available			

EVIDENCE REQUIRED FOR MAT5 – RESPONSIBLE SOURCING OF MATERIALS

Req.	Design Stage	Post Construction Stage
1	Design plan and/or specification confirming: <ul style="list-style-type: none"> the location of elements and materials specified Details of the materials specified. 	As built drawings or as built specifications confirming that the building has been constructed in accordance with the design stage drawings/specifications. Copies of purchase orders or receipts or certificate/letter of conformity for all applicable materials, including those recycled or reused
2&3	<p>A copy of the output from the Responsible Sourcing of Materials Calculator Tool.</p> <p>For materials certified through the EMS route, a letter of intent from the design team confirming:</p> <ul style="list-style-type: none"> The relevant materials shall be sourced from suppliers who can provide an EMS certificate (or equivalent) for the process and/or extraction stages of their product. <p>Certified timber requires a letter of intent from the design team confirming:</p> <ul style="list-style-type: none"> The timber shall be sourced from suppliers capable of providing certification to the level required for the particular tier claimed. 	<p>A copy of the output from the Responsible Sourcing of Materials Calculator Tool (if different from Design Stage calculation). For materials certified through the EMS route, any one of the following must be provided as appropriate:</p> <ul style="list-style-type: none"> Copy of the ISO 14001 certificate. Copy of the EMAS certificate. For <i>Small</i> companies, (see <i>Relevant Definitions</i>) confirmation that the company EMS is structured in compliance with BS 8555 2003 (or equivalent) and the EMS has completed phase audits one to four as outlined in BS 8555. This evidence can be found from company documentation demonstrating the process and typical outputs from phase four audits such as an EMS manual/paperwork and guidance to staff. Where independent certification exists to demonstrate these phases, it can be used as evidence. <p>A copy of the certification document or Chain of Custody (CoC) certificate(s).</p>
4	<p>Written confirmation from the developer confirming that:</p> <ul style="list-style-type: none"> All timber will come from a 'legal source' and one not on the CITES list*. <p>* Or in the case of Appendix III of the CITES list, it has not been sourced from the country seeking to protect this species as listed in Appendix III.</p>	<p>Where any non-certified timber is used, written confirmation from the supplier(s) confirming that:</p> <ul style="list-style-type: none"> All timber comes from a legal source. All timber species and sources used in the development are not listed on any of the CITES appendices for endangered or threatened species (Appendix I, II, or III*). <p>* Or in the case of Appendix III of the CITES list, it has not been sourced from the country seeking to protect this species as listed in Appendix III.</p>

9 APPENDIX D – MAN4 BUILDING USER GUIDE

The building user guide must contain the following information as a minimum.

1. Building Services Information
 - a. General User - Information on heating, cooling and ventilation in the building and how these can be adjusted, e.g. thermostat location and use, implications of covering heating outlets with files, bags etc., and use of lifts and security systems.
 - b. FM – As above plus, a non technical summary of the operation and maintenance of the building systems (including BMS if installed) and an overview of controls.
2. Emergency Information
 - a. General User - Include information on the location of fire exits, muster points, alarm systems and fire fighting systems.
 - b. FM – As above plus, details of location and nature of emergency and fire fighting systems, nearest emergency services, location of first aid equipment.
3. Energy & Environmental Strategy

This should give owners and occupiers information on energy efficient features and strategies relating to the building, and also provide an overview of the reasons for their use, e.g. economic and environmental savings. Information could include;

 - a. General User – Information on the operation of innovative features such as automatic blinds, lighting systems etc., and guidance on the impacts of strategies covering window opening and the use of blinds, lighting and heating controls.
 - b. FM - As above plus, information on air-tightness and solar gain (e.g. the impact of leaving windows/doors open in an air-conditioned office, or use of blinds in winter with respect to solar gain); energy targets and benchmarks for the building type, information on monitoring such as the metering and sub-metering strategy, and how to read, record and present meter readings.
4. Water Use
 - a. General User – details of water saving features and their use and benefits, e.g. aerating taps, low flush toilets, leak detection, metering etc.
 - b. FM – As above plus, details of main components (including controls) and operation. Recommendations for system maintenance and its importance, e.g. risk of legionella.
5. Transport Facilities
 - a. General User – details of car-parking and cycling provision; local public transport information, maps and timetables; information on alternative methods of transport to the workplace, e.g. car sharing schemes; local 'green' transport facilities.
 - b. FM - As above plus, information on conditions of access, maintenance and appropriate use of car parking and cycling facilities, e.g. number of spaces provided. The above information does not need to be included in the user guide if there is a separate dedicated travel information space, accessible to the staff, and in compliance with BREEAM credit T10. However the guide must reference the travel information space, the information provided and its location."
6. Materials & Waste Policy
 - a. General User – Information on the location of recyclable materials storage areas and how to use them appropriately.
 - b. FM – As above plus, information on recycling, including recyclable building/office/fit out components, waste storage and disposal requirements; examples of Waste Management Strategies and any cleaning/maintenance requirements for particular materials and finishes.

7. Re-fit/Re-arrangement Considerations

- a. General User – an explanation of the impact of re-positioning of furniture, i.e. may cover grilles/outlets, implications of layout change, e.g. installation of screens.
- b. FM - As above plus, environmental recommendations for consideration in any refit. Relevant issues covered in BREEAM should be highlighted, e.g. the use of natural ventilation, use of Green Guide 'A' rated materials, re-use of other materials etc., the potential impact of increasing occupancy and any provision made in the original design to accommodate future changes.

8. Reporting Provision

- a. General User – Contact details of FM/manager, maintenance team, and/or help desk facility; and details of any building user group if relevant.
- b. FM – As above plus, contact details of suppliers/installers of equipment and services and their areas of responsibility for reporting any subsequent problems.

9. Training

Details of the proposed content and suggested suppliers of any training and/or demonstrations in the use of the building's services, features and facilities that will be needed. This could include;

- a. General User - Training in the use of any innovative/energy saving features.
- b. FM – As above plus, training in emergency procedures and setting up, adjusting, and fine tuning, the systems in the building.

10. Links & References

This should include links to other information including websites, publications and organisations. In particular, the 'Carbon Trust' program should be referenced and links provided to its website and good practice guidance.

11. General

Where further technical detail may be required by the FM Team or manager there should be references to the appropriate sections in the Operation and Maintenance Manual.

Note;

Where the assessment is shell only it may not be possible to include all information outlined above. However these sections must still be listed within the guide, with space to include the relevant information once the development has been fully fitted out.

NOTE:

The Building Regulations Part L requires the provision of a '**Building Log-Book**' to the owner and/or occupier of the building. In addition on completion, the Construction Design and Management Regulations require the Health and Safety file to be passed onto the building user.

BREEAM requires an **additional 'Building User Guide'** that contains the necessary details about the everyday operation of the development in a form that is easy for the intended users to understand.

10 APPENDIX E – LE6 LONG TERM IMPACT ON BIODIVERSITY

Mandatory Requirements

1. A *suitably qualified ecologist* (SQE) has been appointed prior to commencement of activities on site.
2. The *suitably qualified ecologist* (SQE) confirms that all relevant UK and EU legislation relating to protection and enhancement of ecology has been complied with during the design and construction process.
3. A landscape and habitat management plan, appropriate to the site, is produced covering at least the first five years after project completion. This is to be handed over to the building occupants and includes:
 - Management of any protected features on site
 - Management of any new, existing or enhanced habitats
 - A reference to the current or future site level or local Biodiversity Action Plan.

Additional Requirements

1. The contractor nominates a 'Biodiversity Champion' with the authority to influence site activities and ensure that detrimental impacts on site biodiversity are minimised in line with the recommendations of a suitably qualified ecologist.
2. The contractor trains the site workforce on how to protect site ecology during the project.

Specific training should be carried out for the entire site workforce to ensure they are aware of how to avoid damaging site ecology. Training should be based on the findings and recommendations for protection of ecological features highlighted within a report prepared by a suitably qualified ecologist.
3. The contractor records actions taken to protect biodiversity and monitor their effectiveness throughout key stages of construction. The requirement commits the contractor to make such records available where publicly requested.
4. Where a new ecologically valuable habitat, appropriate to the local area, is created. This includes habitat that supports nationally, regionally or locally important biodiversity, and/or which is nationally, regionally or locally important itself; including any habitat listed in the UK Biodiversity Action Plan (UK BAP), Local Biodiversity Action Plan (LBAP), those protected within statutory sites (e.g. SSSIs), or those within non-statutory sites identified in local plans.
5. Where flora and/or fauna habitats exist on site, the contractor programmes site works to minimise disturbance to wildlife. For example, site preparation, ground works, and landscaping have been, or will be, scheduled at an appropriate time of year to minimise disturbance to wildlife. Timing of works may have a significant impact on, for example, breeding birds, flowering plants, seed germination, amphibians etc. Actions such as phased clearance of vegetation may help to mitigate ecological impacts. This additional requirement will be achieved where a clear plan has been produced detailing how activities will be timed to avoid any impact on site biodiversity in line with the recommendations of a suitably qualified ecologist.