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BREEAM Industrial 2008

Pottery Lane, Manchester – Pre Assessment Report

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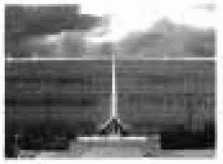


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Introduction

Ambient Energy & Environment has been commissioned to carry out a BREEAM (Building Research Establishment Environmental Assessment Method) Industrial 2008 Pre-Assessment.

BREEAM Industrial seeks to minimise the adverse effects of new buildings on the environment at global and local scales, whilst promoting healthy indoor conditions for the occupants. The environmental implications of a new building are assessed at the design stage and compared with good practice by independent assessors.

The development is required to achieve a 'Very Good' Rating under the BREEAM 2008 industrial scheme.

The Pre-Assessment

This report outlines the approach for a pre-assessment under the BREEAM Industrial 2008 Scheme. To achieve this rating in a formal assessment, the design team should liaise with the BREEAM assessor to commence an official assessment.

Summarised guidance is provided within the report to achieve the score calculated by the assessor. In an official assessment the final rating is based on robust evidence provided by the design team which is evaluated by the assessor.

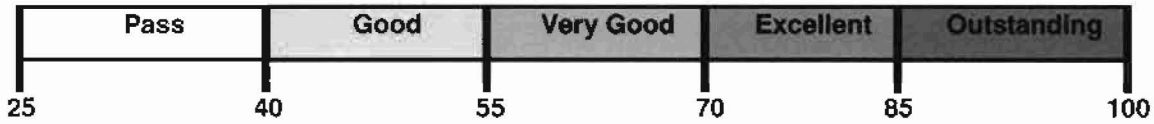
The Rating System for BREEAM Industrial

Buildings are awarded a rating under BREEAM. The rating depends on how many environmental credits are achieved under each section and their relative environmental importance. The ratings that are awarded are Pass, Good, Very Good, Excellent or Outstanding.

The overall rating is derived from the percentage of credits achieved under each heading, multiplied by the Environmental Weighting Factor

Category	Number of credits available	Weighting factor
Management	10	15
Health and wellbeing	13	15
Energy	24	19
Transport	11	8
Water consumption	6	6
Materials	11	12.5
Waste	7	7.5
Land use & Ecology	10	15
Pollution	9	15

The total of all these scores is the overall rating and a rating is awarded according to the following scale:

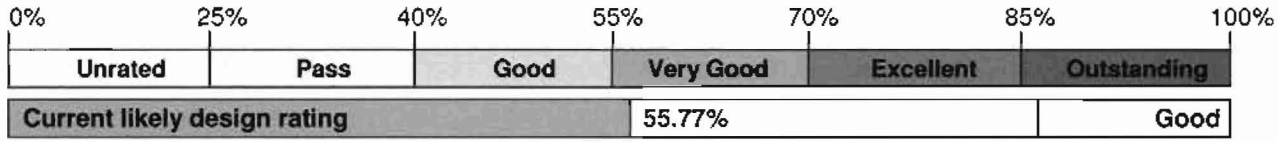


Building Performance

This pre-assessment is an initial indication of the likely performance of the building. Following the Pre-Assessment a potential rating has been calculated. The final rating achieved in a certified BREEAM assessment will be dependent on the provision of satisfactory evidence for each credit.

The current likely design rating
The rating represents the rating that the building would achieve, based on the current design, if satisfactory evidence was supplied for each credit.

The current likely design rating is 55.77%, 'Good'.



Credit Summary BREEAM 2006		Credit no.	Credits Available	Current Likley Score
Management	Commissioning	Man 1	2	2
Credit Value	Considerate Constructors	Man 2	2	2
1.20%	Construction Site Impacts	Man 3	4	3
	Building User Guide	Man 4	1	1
	Security	Man 8	1	1
Section Credit Total			10	9
Weighted Section Total			12.0%	10.80%
Health & Wellbeing	Daylighting	Hea 1	1	1
Credit Value	High Frequency Lighting	Hea 4	1	1
2.14%	Internal & External Lighting Levels	Hea 5	1	1
	Volatile Organic Compounds	Hea 9	1	0
	Microbial Contamination	Hea 12	1	1
	Office Space	Hea 14	2	1
Section Credit Total			7	5
Weighted Section Total			15.0%	10.71%
Energy	Energy CO_2 Emissions	Ene 1	15	4
Credit Value	Sub-metering of Substantial Energy Uses	Ene 2	1	1
0.79%	Sub-metering of Areas &Tenancy	Ene 3	1	1
	External Lighting	Ene 4	1	1
	Low / Zero Carbon Technologies	Ene 5	3	0
	Building Fabric Performance	Ene 6	1	1
	Lifts	Ene 8	2	1
Section Credit Total			24	9
Weighted Section Total			19.0%	7.13%
Transport	Provision of Public Transport	Tra 1	3	3
Credit Value	Proximity to Amenities	Tra 2	1	0
0.73%	Cyclist Facilities	Tra 3	2	2
	Pedestrian & Cyclist Safety	Tra 4	1	0
	Travel Plan	Tra 5	1	1
	Maximum Car Parking Capacity	Tra 6	2	0
	Deliveries & Manoeuvring	Tra 8	1	1
Section Credit Total			11	7
Weighted Section Total			8.0%	5.09%
Water	Water Consumption	Wat 1	3	1
Credit Value	Water Meter	Wat 2	1	1
1.00%	Major Leak Detection	Wat 3	1	0
	Sanitary Supply Shut Off	Wat 4	1	0
Section Credit Total			6	2
Weighted Section Total			6.0%	2.00%
Materials	Materials Specification	Mat 1	2	2
	Hardlandscaping & Boundary Protection	Mat 2	1	1
Credit Value	Re-use of Building Façade	Mat 3	1	0
1.14%	Re-use of Building Structure	Mat 4	1	0
	Responsible Sourcing of Materials	Mat 5	3	0
	Insulation	Mat 6	2	1
	Designing for Robustness	Mat 7	1	1
Section Credit Total			11	5
Weighted Section			12.5%	5.68%
Waste	Construction Site Waste Management	Wst 1	4	2
Credit Value	Recycled Aggregates	Wst 2	1	1
1.07%	Recyclable Waste Storage	Wst 3	1	1
	Compactor / Baler	Wst4	1	1
Section Credit Total			7	5
Weighted Section Total			7.5%	5.36%
Land use	Re-Use of Land	LE1	1	0
& Ecology	Contaminated land	LE2	1	0
Credit Value	Ecological Value & Protection of Features	LE3	1	1
1.00%	Mitigating Ecological Impact	LE4	2	1
	Enhancing Site Ecology	LE5	3	1
	Long Term Impact on Biodiversity	LE6	2	1
Section Credit Total			10	4
Weighted Section Total			10.0%	4.00%
Pollution	Refrigerant GWP - Building Services	Pol 1	1	0
Credit Value	Preventing Refrigerant Leaks	Pol 2	1	0
1.00%	NOx Emissions from Heat Source	Pol 4	2	1
	Flood Risk	Pol 5	3	2
	Minimising Watercourse Pollution	Pol 6	1	1
	Reduction of Night Time Light Pollution	Pol 7	1	1
	Noise Attenuation	Pol 8	1	0
Section Credit Total			10	5
Weighted Section Total			10.0%	5.00%
Exemplary Credits			10.0%	0.00%
		TOTALS:	**100%**	**55.77%**

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Compulsory credits for achieving a rating of 'Very Good'.

Under the BREEAM Industrial 2008 scheme, there are certain credits which are mandatory requirements for certain ratings to be awarded. The following list is a brief description of the credits which **must** be achieved in order for a rating of '**Very Good**' to be achieved. For the purposes of this Pre-Assessment, these credits have been assumed to be achieved. Further information about the exact requirements of the credits can be found in the Design Team Actions section of this report.

Credit No.	Summary of Required Action	No. of Credits Required
Man 1	Confirm that all commissioning shall be carried out in line with BSRIA and CIBSE guidelines and that it shall be monitored and overseen by an appropriate member of the design team.	1
Hea 4	Ensure all fluorescent lighting is to be fitted with high frequency ballasts.	1
Hea 12	Confirm that all water and HVAC systems will comply with ACoP L8 and CIBSE TM13 guidelines.	1
Ene 2	Confirm that sub-meters shall be fitted for all significant energy uses in the building.	1
Wat 1	Ensure that all sanitary fittings shall be of an efficient specification.	1
Wat 2	Install a water meter with a pulsed output.	1
LE4	It must be confirmed that the development shall not have a significant impact on the site ecology.	1

Credit Details

The following credit summary lists all applicable BREEAM Industrial 2008 credits and the predicted outcome given the information provided to and collated by the assessor (drawings, internet data base information and technical reports already completed to date for the specified development).

Credit Reference	Credit Requirements	Credits available	Details and Comments
Management			
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). **The 1st credit is mandatory for all ratings. The 2nd credit is also mandatory if an Outstanding rating is to be pursued.**	2	It was assumed both credits would be achieved. The credit requirements could be included in specific specification clauses.
Man 2	**Considerate Constructors** 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. **1 credit is mandatory if an Excellent rating is to be pursued. 2 credits are mandatory if an outstanding rating is to be pursued.**	2	It was assumed that both credits would be achieved, equating to a commitment to go beyond 'best practice' and achieve a score of at least 32 points out of 40 under formal assessment. The credit requirements could be included in the employer's requirement clauses.

Man 3	**Construction Site Impacts** One credit where evidence provided demonstrates that 2 or more of items a-g (listed below) are achieved. Two credits where evidence provided demonstrates that 4 or more of items a-g (listed below) are achieved. Three credits where evidence provided demonstrates that 6 or more of items a-g are achieved: a. Monitor, report and set targets for CO2 or energy arising from site activities b. Monitor, report and set targets for CO2 or energy arising from transport to and from site c. Monitor, report and set targets for water consumption arising from site activities d. Implement best practice policies in respect of air (dust) pollution arising from the site e. Implement best practice policies in respect of water (ground and surface) pollution occurring on the site f. Main contractor has an environmental materials policy, used for sourcing of construction materials to be utilised on site g. Main contractor operates an Environmental Management System. One additional credit where evidence provided demonstrates that at least 80% of site timber is responsibly sourced and 100% is legally sourced.	**4**	It was assumed that the contractor would achieve 3 of the 4 credits, namely: Point a) would be achieved. Point b) would not be achieved. Point c) would be achieved. Point d) would be achieved. Point e) would be achieved. Point f) would not be achieved. Point g) would not be achieved. The additional credit would be achieved. The credit requirements could be included in the employer's requirement clauses.
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. **This credit is mandatory if an Excellent or Outstanding rating is to be pursued.**	**1**	It was assumed that the credit would be achieved. The credit requirements could be included in the employer's requirement clauses.

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	It was confirmed by the architect that the credit would be achieved as Secured by Design is a planning requirement for the scheme.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Health & Wellbeing			
Hea 1	**Daylighting** One credit where evidence provided demonstrates that at least 80% of floor area in each occupied space is adequately day lit.	1	It was assumed that the credit would be achieved.
Hea 4	**High Frequency Lighting** One credit where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps. **This credit is mandatory for all ratings.**	1	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.
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	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.
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	It was assumed that the credit would not be achieved. The credit requirements could be included in specific specification clauses.
Hea 12	**Microbial Contamination** One credit where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised. **This credit is mandatory for all ratings**	1	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.

Hea 14	**Office Space (less than 500m^2)** First credit: Three of the following measures must be achieved for at least 80% of the development's office space floor area: a) View out; b) Glare control; c) Lighting controls & zones; d) Potential for natural ventilation; e) Indoor air quality; f) Thermal comfort: g) Thermal zoning; h) Acoustic Performance. Second credit: Six of the eight measures listed above must be achieved.	**2**	It was assumed that the first credit would be achieved, (5 points in all) namely: Point a) would not be achieved Point b) would be achieved Point c) would be achieved Point d) would be achieved Point e) would not be achieved Point f) would be achieved Point g) would be achieved Point h) would not be achieved An additional credit could be achieved if one of the other points above is procured.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Energy			
Ene 1	**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 CO2 emissions. **6 credits are mandatory if an Excellent rating is to be pursued. 10 credits are mandatory if an Outstanding rating is to be pursued.**	**15**	It was confirmed by the M&E engineer with a copy of the EPC certificate that a score of 45 is achievable, this equates to 4 credits.
Ene 2	**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 credit is mandatory if a Very Good, Excellent or Outstanding rating is to be pursued.**	**1**	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.
Ene 3	**Sub-metering of Areas/Tenancy** Provision of accessible sub-meters covering the energy supply to all tenanted, or in the case of single occupancy buildings, relevant function areas or departments within the building/unit.	**1**	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.

Ene 4	**External Lighting** One credit where energy-efficient external lighting is specified and all light fittings are controlled for the presence of daylight.	**1**	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.
Ene 5	**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 CO2 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 CO2 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 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) **1 credit is mandatory where an Excellent or Outstanding rating is to be pursued.**	**3**	It was assumed that none of the credits would be achieved. The first credit could be achieved if a feasibility study was carried out on a range of suitable low/zero emission technologies and the results implemented into the design specification.
Ene 6	**Building Fabric Performance & Avoidance of Air Infiltration** Where all of the measures below have been specified/installed to minimise heat loss and air infiltration through the building fabric from treated/conditioned spaces: Personnel door(s); Draught lobbies; Delivery loading / unloading areas are partitioned; Vents are draught sealed; goods doors insulated to 0.6 W/m2K; Plastic strip curtains / air curtains / pneumatic dock seals are specified. Rapid rise goods doors.	**1**	It was confirmed by the architect that the credit would be achieved.

Ene 8	**Lifts** One credit where analysis of transport demand and patterns for the building has been carried out to determine the optimum number and size of lifts and *counterbalancing ratio* on the basis of anticipated passenger demand **AND** The energy consumption for at least two types of lift or lift strategy 'fit for purpose' has been estimated and the system with the lowest energy consumption specified. One credit where three of the following energy saving features are specified: a. The lifts operate in a stand-by mode during off-peak and idle periods. b. Where lift motors use a drive controller capable of variable-speed, variable-voltage, variable-frequency control of the drive motor. c. The lift has a regenerative unit so that energy generated by the lift is returned back to the grid or used elsewhere on site. d. The lift car uses energy efficient lighting/display lighting (>60 Lumens/watt or fittings that consume less than 5W e.g. LEDS).	**2**	It was assumed that the first credit would be achieved. The credit requirements could be included in specific specification clauses.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Transport			
Tra 1	**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	It was confirmed by the assessor that all three credits would be achieved.
Tra 2	**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	It was confirmed by the assessor that the credit could not be achieved.

Tra 3	**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	It was assumed that both credits would be achieved.
Tra 4	**Pedestrian And Cycle Safety** 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	It was assumed that the credit would not be achieved.
Tra 5	**Travel Plan** 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	It was assumed that the credit would be achieved.
Tra 6	**Maximum Car Park Capacity** First credit: No more than one parking space is provided for every three building users. Second credit: No more than one parking space is provided for every four building users	2	It was confirmed by the assessor that neither of the credits could be achieved.
Tra 8	**Deliveries and Manoeuvring** Where evidence provided demonstrates that vehicle access areas have been designed to ensure adequate space for manoeuvring delivery vehicles and provide space for storage of refuse / pallets	1	It was assumed that the credit would be achieved.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Transport			
Wat 1	**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 **1 credit is mandatory if a Good, Very Good or Excellent rating is to be pursued. 2 credits are mandatory if an Outstanding rating is to be pursued.**	3	It was assumed that the first credit would be achieved by specifying the following: • 6/3 litre dual flush WC's • 3 litre flush urinals • 4 litre/minute taps (e.g. aerating) • 7 litre/minute showers The credit requirements could be included in specific specification clauses.
Wat 2	**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. **This credit is mandatory if a Good, Very Good, Excellent or Outstanding rating is to be pursued**	1	It was assumed that the credit would be achieved. The credit requirements could be included in specific specification clauses.
Wat 3	**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	It was assumed that the credit would not be achieved.
Wat 4	**Sanitary Supply Shut Off** One credit where evidence provided demonstrates that proximity detection shut-off is provided to the water supply to all toilet areas.	1	It was assumed that the credit would not be achieved.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Materials			
Mat 1	**Materials Specification (major building elements)** Up to two credits are available, determined by the Green Guide to Specification ratings for the major building/finishing elements.	2	It was confirmed by the assessor that both credits would be achieved.
Mat 2	**Hard Landscaping 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	It was assumed that the credit would be achieved.
Mat 3	**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	It was confirmed by the assessor that the credit could not be achieved.
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	It was confirmed by the assessor that the credit could not be achieved.
Mat 5	**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: 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	It was assumed that none of the credits would be achieved.

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. One credit where evidence provided demonstrates that thermal insulation products used in the building have been responsibly sourced.	2	It was assumed that the first credit would be achieved. The second credit could be achieved if it could be confirmed that the insulants specified were responsibly sourced (satisfactory EMS certification).
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	1	It was assumed that the credit would be achieved.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Waste			
Wst 1	**Construction Site Waste Management** Up to three credits are available where evidence provided demonstrates that the amount of non-hazardous construction waste (m3/100m2 or tonnes100m2) generated on site by the development is the same as or better than good or best practice levels. 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	It was assumed that two of the credits would be achieved; one credit for the generation of site waste in accordance with good practice levels (13.0 - 16.6m^3 OR 6.6 - 8.5 tonnes of waste per 100m^2 of GIA) and one credit where a significant majority (at least 75% by weight or 65% by volume) of non-hazardous site waste is diverted from landfill.
Wst 2	**Recycled Aggregates** One credit where evidence provided demonstrates the significant use of recycled aggregates in 'high-grade' building aggregate uses.	1	It was assumed that the credit would be achieved.
Wst 3	**Recyclable Waste Storage** One credit where a central, dedicated space is provided for the storage of the building's recyclable waste streams.	1	It was assumed that the credit would be achieved.

Wst 4	**Compactor/Baler** 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	It was confirmed by the architect that the credit would be achieved.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Landuse & Ecology			
LE1	**Re-Use Of Land** 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	It was assumed that the credit would not be achieved.
LE2	**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	It was confirmed by the assessor that the credit could not be achieved.
LE3	**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	It was assumed that the credit would be achieved.

LE4	**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. Two credits where evidence provided demonstrates that there is no negative change in the site's existing ecological value as a result of development. **1 credit is mandatory if Very Good, Excellent or Outstanding rating is to be pursued**	**2**	It was assumed that the first credit would be achieved. Although not technically required, an ecologist could be appointed to achieve the first and second credits.
LE5	**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**	It was assumed that the first credit would be achieved. To achieve the credits, a suitably qualified ecologist would need to be appointed by the design team.
LE6	**Long Term Impact On Biodiversity** One credit where the client has committed to achieving the mandatory requirements listed below and at least two of the additional requirements. Two credits where the client has committed to achieving the mandatory requirements listed below and at least four of the additional requirements	**2**	It was assumed that the first credit would be achieved. To achieve the credits, a suitably qualified ecologist would need to be appointed by the design team.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Pollution			
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	It was confirmed by the assessor that the credit would not be achieved with the inclusion of comfort cooling serving all of the office areas.
Pol 2	**Preventing Refrigerant Leaks** One credit where evidence provided demonstrates that refrigerant leaks can be detected and that there is provision of automatic refrigerant pump. Or where there are no refrigerants specified for the development	1	It was assumed that the credit would not be achieved.
Pol 4	**NOx Emissions From Heating Source** One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy in the office areas are ≤70 mg/kWh (at 0% excess O2). One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy in the office areas are ≤70 mg/kWh (at 0% excess O2).	2	Based on information provided by the architect, it was confirmed by the assessor that the credit for office areas would not be achieved as electric based comfort cooling will serve these areas. It was assumed that the credit for the heating of the operational areas (by gas fired heaters) would be achieved.
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	It was confirmed by the assessor that the Environment Agency online database places the site in a 'low' risk flood zone. This alone does not allow any credits to be awarded. It was confirmed by the client that a Flood Risk Assessment for the development (which would meet the credit criteria) was currently being completed and that it would confirm that the site was located in a 'low' flood risk zone. It was assumed that two of the credits would be achieved.

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	It was assumed that credit would be achieved.
Pol 7	**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	It was assumed that credit would be achieved.
Pol 8	**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	It was assumed that credit would not be achieved.

Credit Reference	Credit Requirements	Credits available	Details and Comments
Innovation			
Man 2	**Considerate Constructors** Where post construction, a Considerate Constructors Scheme certificate can be provided demonstrating that the site achieved CCS Code of Considerate Practice with a score of at least 36. OR Where post construction, the site has complied in full with the alternative, independently assessed scheme, and the alternative scheme addresses all the mandatory and optional items in Checklist A2.	1	It was assumed that credit would not be achieved.
Hea 1	**Daylighting** At least 80% of the floor area (for the building spaces/room identified above in the standard requirements) has an average daylight factor of 3% in multi-storey buildings and 4% in single-storey buildings	1	It was assumed that credit would not be achieved.
Ene 1	**Reduction of CO2 emissions** One additional innovation credit can be awarded where evidence provided demonstrates the building is designed to be a carbon neutral building as defined by the NCM (i.e. in terms of building services energy demand), as follows: a. A new building achieves a CO2 index less than 0 on the benchmark scale. b. A refurbished building achieves a CO2 index equal to or less than 0 on the benchmark scale. Two additional innovation credits can be awarded where evidence provided demonstrates the building is designed to be a True zero carbon building (in terms of building services and operational energy demand).	2	It was assumed that neither of the credits would be achieved.
Ene 5	**Low or Zero Carbon Technologies** A local LZC energy technology has been installed in line with the recommendations of a compliant feasibility study and this method of supply results in a 20% reduction in the building's CO2 emissions	1	It was assumed that the credit would not be achieved.

Wat 2	**Water Meter** Where sub meters are fitted to allow individual water-consuming plant or building areas to be monitored such as cooling towers, car washes, catering areas, etc. If the building does not have any major water consuming plant this exemplar credit is not available. Each sub meter has a pulsed output to enable connection to a Building Management System (BMS) for the monitoring of water consumption. In addition to the above, for sites with multiple departments e.g. large health centres or acute hospitals, separate pulsed sub meters are fitted on the supply to the following areas where present: a. Staff and public areas b. Clinical areas and wards c. Letting areas: On the water supply to each tenant unit d. Laundries e. Main production kitchen f. Hydrotherapy pools g. Laboratories h. CSSD/HSDU, pathology, pharmacy, mortuary and any other major process water user.	1	It was assumed that the credit would not be achieved.
Mat 1	**Materials Specification** One exemplary BREEAM credit can be awarded as follows: a. Where assessing four or more applicable building elements, the building achieves at least two points additional to the total points required to achieve maximum credits under the standard BREEAM requirements. b. Where assessing fewer than four applicable building elements, the building achieves at least one point additional to the total points required to achieve maximum credits under the standard BREEAM requirements.	1	It was assumed that the credit would not be achieved.

Mat 5	**Responsible Sourcing of Materials** Where, in addition to the standard BREEAM requirements, 95% of the applicable materials, comprised within the applicable building elements, have been responsibly sourced.	1	It was assumed that the credit would not be achieved.
Wst 1	**Construction Site Waste Management** Where non-hazardous construction waste generated by the building's development meets or exceeds the resource efficiency benchmark required to achieve three credits (as outlined in the guidance). Where at least 90% by weight (80% by volume) of non-hazardous construction waste and 95% of demolition waste by weight (85% by volume) (if applicable) generated by the build 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. Where all key waste groups are identified for diversion from landfill at pre-construction stage SWMP.	1	It was assumed that the credit would not be achieved.

Appendix 1 – Handouts & Checklists

Ambient Checklist	BREEAM
Man 1 Commissioning	

Pre-commissioning, commissioning and monitoring in should be accordance with the following (where applicable) Commissioning Codes/Guides as stated in Credit M1.

CIBSE Commissioning Codes - 2003

CIBSE Commissioning Code A : Air Distribution Systems
CIBSE Commissioning Code B : Boilers
CIBSE Commissioning Code C : Automatic Controls
CIBSE Commissioning Code L : Lighting
CIBSE Commissioning Code M : Management
CIBSE Commissioning Code R : Refrigeration
CIBSE Commissioning Code W : Water

BSRIA Commissioning Guides – July 2000

TM1/88.1	Commissioning HVAC Systems
AG2/89.2	Commissioning of Water Systems in Buildings
AG3/89.3	Commissioning of Air Systems in Buildings
AG1/91	Commissioning of VAV Systems in Buildings
AG20/95	Commissioning of Pipework Systems in Buildings
AG1/2001.1	Pre-Commission Cleaning of Pipework Systems
AG 5/2002	Commissioning Management

Ambient Checklist	BREEAM
Man 3 Construction Site Impacts Checklist	

a. Commitment to monitor, report and set targets for CO_2 production or energy use arising from site activities

1. Confirmation is required that monthly measurements of energy use will be recorded and displayed on site.
2. Appropriate target levels of energy consumption must be set and displayed (targets could be annual, monthly, or project targets).
3. As a minimum monitoring must 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.
4. The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data.

Note:

1. Targets for energy consumption during the construction process can 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).
2. BREEAM does not require targets to be met but is encouraging the process of setting , monitoring and reporting against targets.

b. Commitment to monitor, report and set targets for water consumption arising from site activities

1. Compliance is demonstrated by the design / site management team confirming, in writing, that monthly measurements of water consumption will be recorded and displayed on site.
2. Appropriate target levels of water consumption must be set and displayed (targets could be annual, monthly or project targets).
3. As a minimum monitoring must 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.
4. The design/site management team is to nominate an individual who will be responsible for the monitoring and collection of data.

Note:

1. Targets for water consumption during the construction process can 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).
2. BREEAM does not require targets to be met but is encouraging the process of setting, monitoring and reporting against targets.

c. Commitments to adopt best practice policies in respect to air (dust) pollution

1. Confirmation is required of the site's procedures to minimise air / dust pollution. This can include
    a. 'dust sheets',
    b. regular proposals to damp down the site in dry weather,
    c. covers to skips etc.
2. The site team must indicate how this information is disseminated to site operatives

Note;

1. DTI/BRE publications 'Control of Dust from Construction and Demolition Activities' and Pollution Control Guide Parts 1-5 provide good practice guidelines on construction related pollution (refer to References)

d. Commitment to adopt best practice policies in respect to water (ground and surface) pollution

1. Confirmation is required of the site's procedures to minimise water pollution following best practice guidelines outlined in the following documents.
    a. PPG 1 – General guide to the prevention of pollution. Environment Agency
    b. PPG 5 – Works in, near or liable to affect watercourses. Environment Agency
    c. PPG 6 – Working at demolition and construction sites. Environment Agency
2. The site team must also indicate how this information is disseminated to site operatives.

e. The main contractor operates an Environmental Materials Policy

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:

- 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

Post construction: indicative examples have been provided to demonstrate the policy in action.

f. The main contractor operates an Environmental Management System

The main contractor operates an Environmental Management System covering their main operations. The EMS must be either:

- 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.

g. Commitment to source timber used during construction from sustainably managed sources

1. 80% of timber used during construction, including formwork, site hoardings and other temporary site timber used for the purpose of facilitating construction, is to be procured from sustainably managed sources, independently certified by one of the top two levels as set out in the Responsible Sourcing of Materials credit, MW8, in the Materials section.
2. Re-used timber from off site can be counted as equivalent but reusable formwork only complies if it meets the above criteria.
3. This credit can be awarded where all the timber used is reclaimed timber.

Ambient Checklist

Hea 9 Volatile Organic Compounds Checklist

BREEAM

The following table outlines the Standards that all internal finishing products are required to be tested against in order to comply with the credit Hea 9 "Volatile Organic Compounds".

Product	European Standard	Emission Level Required
Wood Panels • Particleboard, • Fibreboard including MDF, • OSB, • Cement-bonded particleboard • Plywood • Solid wood panel and acoustic board	BS EN 13986:2002	Formaldehyde E11 Verify that regulated wood preservatives are absent and of the minimum content.
Timber Structures • Glued laminated timber	BS EN 14080:2005	Formaldehyde E11
Wood flooring • e.g. parquet flooring	BS EN 14342:2005	Formaldehyde E11 Verify that regulated wood preservatives are absent and of the minimum content.
Resilient, textile and laminated floor coverings • Vinyl/linoleum • Cork and rubber • Carpet • Laminated wood flooring	BS EN 14041:2004	Formaldehyde E11 Verify that regulated preservatives are absent and of the minimum content.
Suspended ceiling tiles	BS EN 13964:2004	Formaldehyde E11 No asbestos.
Wall-coverings • Finished wallpapers • Wall vinyls and plastic wallcoverings • Wallpapers for subsequent decoration. • Heavy duty wall-coverings • Textile wall-coverings **Adhesive for hanging flexible wall-coverings**	BS EN 233:1999 BS EN 234:1989 BS EN 259:2001 BS EN 266:1992 BS 3046:1981	Formaldehyde5 and Vinyl chloride monomer (VCM)5 release should be low and within the BS EN standard for the material. Verify that the migration of heavy metals5 and other toxic substances are within the BSEN standard for the material. No harmful substances and preservatives used should be of minimum toxicity.

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Ambient Checklist	BREEAM
Hea 9 Volatile Organic Compounds Checklist	

Decorative paints and varnishes	BS EN 13300:2001 referred to the requirements of Decorative Paint Directive 2004/42/CE	VOC (organic solvent) content6, requirement for Phase 2. Fungal and algal resistant.
Testing requirement: 1. BS EN 717-1:2004 2. BS EN 13999-2:2007 - Volatile Organic Compounds (VOCs) 3. BS EN 13999-3:2007 - Volatile aldehydes 4. BS EN 13999-4:2007 - Volatile diisocyanates 5. BS EN 12149:1997 6. BS EN ISO 11890-2:2006		

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Ambient Checklist

HW16 Microbial Contamination

BREEAM

Cooling Towers and Evaporative Condensers

To ensure cooling towers/evaporative condensers are properly designed and maintained to avoid risk of legionellosis. Confirm that systems are designed and operated in accordance with HSE Approved Code of Practice (ACoP) and Guidance, L8, "Legionnaires disease; The control of legionella bacteria in water systems", 2000 or to CIBSE TM13 "Minimising the risk of Legionnaires disease", 2002.
OR
There are no cooling towers / evaporative condensers.

Company: Signed:

Date:

Water Systems Legionellosis

To reduce risk of microbial contamination of hot and cold water systems. Confirm that hot and cold water systems have been designed or actions taken to minimise risks of legionellosis. The design team should confirm that the proposed design / plant procurement meets the requirements of ACoP L8 and CIBSE TM13.

Company: Signed:

Humidification

To reduce risk of microbial contamination of humidification systems. Confirm that humidification is a steam based system.
OR
There is no humidification

Company: Signed:

Date:

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Land Use & Ecology Credits Ecologists Schedule of Services	BREEAM

Guidance to relate ecology reports to BREEAM

Before completing this form please read the following:
1. This guidance document is to be used for BREEAM 2008 assessments, where an ecologist has been appointed and produced an ecology report as part of a proposed development.

2. As an ecologist may have been appointed to carry out ecological site surveys and produced an ecology report without being aware that a BREEAM assessment has been, or is to be conducted, the purpose of this document is to help assist assessors relate the contents of such a report to the land use and ecology requirements of BREEAM.

3. The assessor is to request that the appointed ecologist complete all sections of this guidance and return it to the BREEAM assessor along with all relevant documentation required to demonstrate compliance with the BREEAM requirements.

4. The assessor is to use this completed document in conjunction with the latest version of the relevant BREEAM technical guidance manual and information provided by the developer / client to carry out the assessment of the land use and ecology BREEAM credits.

- There are 6 sections (sections A - F) in this document.
- Section A requires contact details for the ecologist and developer / client.
- Section B1 determines whether the appointed ecologist is '*suitably qualified*' (under BREEAM); and if not, section B2 determines whether the report has been verified by an ecologist who is '*suitably qualified*'.
- Section C determines whether the findings of the report have been based on data collected from site surveys conducted at appropriate times of the year to determine whether different species are evident.
- **If 'no' is recorded for either Section B or C then the contents of the ecology report cannot be used to determine compliance with the BREEAM requirements.**
- Section D provides the BREEAM assessor with the necessary information to complete the assessment of the ecology credits in BREEAM.
- Section E provides details of the documentation / information required by BREEAM as evidence of compliance.
- Section F requires the signature of the appointed ecologist who has completed this document.

Please note: it is only the appointed qualified and licensed BREEAM assessor who can award or withhold a credit for all BREEAM assessments.

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Land Use & Ecology Credits Ecologists Schedule of Services	BREEAM

Checklist Contents

Section A: Contact Details

Ecologist's Details

Developer / Client Details

Section B1: Ecologist's Qualifications

Section B2: Report Verification

Details on verifying an ecology report for a BREEAM assessment:

Section C: Site Survey

Section D: Site Survey Details

LE3 Ecological value of land and protection of ecological features

LE4 Mitigating ecological impact

LE5 Enhancing site ecology

LE6 Long term impact on biodiversity

Section E: Schedule of Evidence

Section F: Statement of Verification

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Land Use & Ecology Credits Ecologists Schedule of Services	BREEAM

Section A: Contact Details

Ecologist's Details

Company name:

Company address:

Contact name:

Contact telephone number:

Ecology report reference:

Developer / Client Details

Company name:

Company address:

Contact name:

Contact telephone number:

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Land Use & Ecology Credits Ecologists Schedule of Services	BREEAM

Section B1: Ecologist's Qualifications

1. Do you hold a degree (or equivalent qualification, e.g. N/SVQ level 5) in ecology or related subject?

☐ Yes ☐ No

If yes, please provide details.....
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.....

2. Are you a practising ecologist with a minimum of 3 years relevant experience within the last 5 years? *Relevant experience must clearly demonstrate a practical understanding of factors affecting ecology in relation to construction and the built environment and will include acting in an advisory capacity to provide recommendations for ecological protection, enhancement and mitigation measures, e.g. ecological impact assessments.*

☐ Yes ☐ No

If yes, please provide details.....
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3. Are you bound by a professional code of conduct and subject to peer review*? *i.e. a **full member** of one of the following organisations will be deemed suitable: Chartered Institution of Water and Environmental Management (CIWEM); Institute of Ecology and Environmental Management (IEEM); Institute of Environmental Management and Assessment (IEMA); Landscape Institute (LI).*

☐Yes ☐ No

If yes, please provide details.....
.....

* *Peer review is defined as the process employed by a professional body to demonstrate that potential or current **full members** maintain a standard of knowledge and experience required to ensure compliance with a code of conduct and professional ethics.*
If 'no' has been answered for any question in Section B1 then the BREEAM requirement for a '*suitably qualified ecologist*' has not been met. The ecology report CANNOT be used

to assess the BREEAM Ecology credits unless it is verified by an individual who is '*suitably qualified*' (see section B2 below).

Section B2: Report Verification

Details on verifying an ecology report for a BREEAM assessment:
1. The individual verifying the report must provide written confirmation that they comply with the definition of a '*suitably qualified ecologist*' (as detailed in Section B1 above).
2. The verifier of the report must confirm in writing they have read and reviewed the report and found it to:

- represent sound industry practice
- report and recommend correctly, truthfully, and objectively
- be appropriate given the local site conditions and scope of works proposed
- avoid invalid, biased, and exaggerated statements.

Written confirmation from the third party verifier on all the points detailed under 1 and 2 above (for section B2) must be included in an appendix to this guidance (see section E).

If the appointed ecologist does not meet the requirements of a '*suitably qualified ecologist*' and the report has not been verified by an individual who does meet these requirements, then the report CANNOT be used as evidence of compliance with the ecology credits in the BREEAM.

Section C: Site Survey
1. Have the findings of the ecology report been based on data collected from a site survey(s)?
The site visit(s) and survey(s) must be conducted at appropriate times of the year when it is possible to determine the presence, or evidence of the presence, of different plant and animal species.

☐Yes ☐ No

If yes, please provide details to justify this (e.g. date(s) and scope of site survey(s))
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If 'no' has been answered to question 1 of Section C then the ecology report CANNOT be used to determine compliance with the requirements of the relevant BREEAM credits.
Note to suitably qualified ecologist and BREEAM assessor: the contents of the ecology report must be representative of the site's existing ecology prior to the commencement of initial site preparation works, i.e. before RIBA stage K, Operations On Site, and after RIBA stage B, Feasibility.

Section C: Site Survey

1. Have the findings of the ecology report been based on data collected from a site survey(s)?
The site visit(s) and survey(s) must be conducted at appropriate times of the year when it is possible to determine the presence, or evidence of the presence, of different plant and animal species.

☐Yes ☐ No

If yes, please provide details to justify this (e.g. date(s) and scope of site survey(s))

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If 'no' has been answered to question 1 of Section C then the ecology report CANNOT be used to determine compliance with the requirements of the relevant BREEAM credits.

Note to suitably qualified ecologist and BREEAM assessor: the contents of the ecology report must be representative of the site's existing ecology prior to the commencement of initial site preparation works, i.e. before RIBA stage K, Operations On Site, and after RIBA stage B, Feasibility.

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Section D: Site Survey Details

LE3 Ecological value of land and protection of ecological features

1. Is the land within the '*construction zone*' deemed by the *suitably qualified ecologist* to be of low ecological value?

The construction zone is defined as any land on the site which is being developed (and therefore disturbed) for buildings, hard standing, landscaping, site access, plus a 3m boundary in either direction around these areas. It also includes any areas used for temporary site storage and buildings.

☐Yes ☐ No

If yes, please provide a brief statement explaining how it has been deemed to be of low ecological value.....
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2. Are there any features / areas of ecological value that fall within the site, but outside the *construction zone*?

If you have deemed this area to be of low ecological value then there will be no features of ecological value to protect. However, if there is a feature(s) or area(s) of low ecological value you wish to advise be retained and enhanced, e.g. a species-poor hedgerow to a species-rich hedgerow, then full details of the protection and enhancement advice should be entered under LE5 Enhancing site ecology.

☐Yes ☐ No

If yes, please provide a brief statement outlining the advice / recommendations given for protecting **all** existing features and areas of ecological value.....
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Land Use & Ecology Credits Ecologists Schedule of Services	BREEAM

LE4 Mitigating ecological impact

3. Are you able to provide the following information for before and after construction?
- habitat types
- An estimate of the number of floral species present per habitat type (based on appropriate censusing techniques and confirmed planting regimes)?

☐Yes ☐ No

a. If yes a brief description of the landscapes and habitats surrounding the development site.

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b. The total site area (in m2). *This will be the same before and after development.*

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c. Please fill in the table below with site details before development[1]

Habitat Type*	Area of Type (m^2)	No. of plant species per type

d. Please fill in the table below with site details after development[1]

Habitat Type*	Area of Type (m^2)	No. of plant species per type

* Habitat types will include natural areas, e.g. various grasslands and woodlands as well as areas of the built environment, e.g. buildings, hard landscaping. The area of each habitat type when added together must always equal the total area of the development site.

1 *Note to assessor (and ecologist where requested to carry our calculations); the information contained in tables c. and d. above can be used to calculate both LE4 Mitigating ecological impact and LE5 Enhancing site ecology credits.*

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4. Has the client / developer requested you to carry out the calculation for LE4 Mitigating ecological impact and /or LE5 Enhancing site ecology (where relevant)?
The calculations must be carried out in line with the methodology provided in the current version of the relevant BREEAM scheme's technical guidance manual.

☐Yes ☐ No

If yes, please provide all stages of calculations and state what the total change in ecological value is:

a. Calculation of *ecological value* before development:
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b. Calculation of *ecological value* after development:
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c. Change in *ecological value* (c = b – a):
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LE5 Enhancing site ecology

5. Has the client / developer required you to provide advice and make recommendations for enhancing site ecology?
Note: these are to include, and go beyond, compliance requirements for all current EU and UK legislation relating to protected species and habitats.

☐Yes ☐ No

If yes, please provide a brief statement outlining the advice / recommendations given on enhancing and protecting the ecological value of the site:

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LE6 Long term impact on biodiversity

6. Were you appointed prior to commencement of development work activities on site?

☐ Yes ☐No ☐ Don't know

7. Has the client / developer given you the responsibility to confirm whether all current EU and UK legislation relating to protection and enhancement of ecology has been (or will be) complied with during the design and construction process?

☐Yes ☐ No

If yes, please provide details on all current EU and UK legislation that relates to the site:

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8. Has the developer / client appointed you to produce an appropriate landscape/site ecology management plan covering at least the first 5 years after project completion?

☐ Yes ☐ No

EITHER:

a. If yes, and the management plan has already been produced does it include the following:
- management of any protected features on site
- management of any new, existing, or enhanced habitats
- a reference to the current or future site level Biodiversity Action Plan?

☐Yes ☐ No

OR
b. If yes, but the management plan is still to be produced (due to it being too early in the design/construction phase), have you provided the following information to the developer / client:
- scope of management plan
- key responsibilities, and with whom these responsibilities lie, e.g. owner, landlord, occupier?

☐Yes ☐ No

If you have answered 'yes' to either question 8a or 8b please provide a brief explanation outlining the details

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9. Has the client / developer required you, as part of your responsibilities, to provide recommendations and advice to minimise detrimental impacts on site biodiversity?

☐Yes ☐ No ☐ N/A

If yes, or not applicable, please briefly explain your reasoning:

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10. Do your responsibilities to the client / developer include providing advice and recommendations for the protection of ecological features?

☐ Yes ☐ No ☐ N/A

If yes, or not applicable, please briefly explain your reasoning:

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11. Do your responsibilities to the client / developer include providing advice on the creation of a new ecologically valuable habitat, which is appropriate to the local area and is either nationally, regionally, or locally important, or supports nationally, regionally, or locally important biodiversity?

☐Yes ☐ No ☐ N/A

If yes, or not applicable, please briefly explain your reasoning:

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12. Do your responsibilities to the client / developer include providing advice and recommendations on when site works are to be avoided so as to minimise the disturbance to wildlife?

☐Yes ☐ No ☐ N/A

If yes, or not applicable, please briefly explain your reasoning

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Land Use & Ecology Credits Ecologists Schedule of Services	BREEAM

Section E: Schedule of Evidence

Copies of the following documentation are required to support the above statements and act as evidence of compliance with the BREEAM ecology requirements:

- The *suitably qualified ecologists* site/project specific report
- Written confirmation from the verifier of the ecology report (where necessary)
- Any supplementary documentation e.g. maps, plans, drawings, letters / emails of correspondence, etc.

Please include these details along with the appropriate reference to each document in the table below:

Document	Reference

Section F: Statement of Verification

I confirm the information provided on this document is truthful and accurate at the time of completion.

Name of ecologist: .....

Signature of ecologist: .....

Date: .....

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