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BREEAM Offices 2006

DESIGN & PROCUREMENT PRE-ASSESSMENT ESTIMATOR

This pre-assessment estimator allows a quick evaluation of the likely rating to be achieved under a formal **BREEAM Offices 2006** assessment (effective from 1st March 2006). The checklist is a simplified version of the full method, for this reason the final rating may vary.

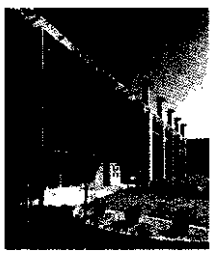
IMPROVEMENTS TO THE ESTIMATOR IN 2006

- Updated in line with BREEAM Offices 2006 Manual

NOTE: The estimators only provide an estimate of a BREEAM rating. Predicted ratings are likely to change after a formal assessment by a licensed BREEAM assessor.

RD - 9 JUN 2009

breeam offices



2006

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USING THE DESIGN & PROCUREMENT ASSESSMENT ESTIMATOR

This checklist should be used when carrying out approximate assessments on new build or refurbishment schemes at the design stage.

The checklist calculates scores for the 'Design & Procurement' parts of BREEAM Offices. This enables an approximate BREEAM rating to be produced.

To generate an estimated rating for a Management & Operation assessment, please complete the separate checklist, 'MANAGEMENT & OPERATION Assessment Estimator'. Note: It is not possible to carry out a Management and Operation Assessment unless the building has been occupied and in operation for a minimum of a 12 months.

COMPLETION OF THE CHECKLIST

Step 1	Complete the checklist by entering the number of points (shown in the 'Points' column shaded light grey) into the unshaded 'Points Achieved' column where the criteria are achieved. NOTE: Evidence of compliance will be required in the formal assessment.
Step 2	At the end of each section, total the 'Points Achieved' column and enter in the box titled, 'Total points achieved to carry forward'.
Step 3	Complete for all sections.
Step 4	Sum the total points achieved to carry forward and enter in to the box titled 'Total Points achieved'.
Step 5	The total should then be assessed against the 'Probable BREEAM Rating' table – the score achieved will generate a rating of Fail, Pass, Good, Very Good or Excellent. Make a note of this rating.
NOTE:	In some cases, there are multiple performance levels for the same criteria, simply award the appropriate points score corresponding to the predicted level of achievement. NOTE: These points scores are not cumulative.
	Seek guidance from a licensed assessor early in the design process to ensure that the predicted rating is achieved during the design stages.

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Credit Reference	MANAGEMENT	Points	Points Achieved
M01	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 Building Regulations, BSRIA/CIBSE guidelines and (where applicable), best practice and where there are complex systems then a specialist agent or manager is appointed.	1.67	1.67
	Evidence should also be provided to show that seasonal commissioning will be carried out during the first year of occupation of the building.	1.67	1.67
	NOTE: These point scores ARE cumulative.		
M04	Where the project complies with either the Considerate Constructors scheme or an alternative independently assessed scheme and where a firm commitment is made to achieve certification under that scheme to the following standards:		
	• Better than industry standard	1.67	1.67
	OR		
	• Best practice	3.33	\
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.		
M05	Where evidence provided demonstrates that		
	• 2 or more of items a-g, listed below are achieved.	1.67	\
	OR		
	• 4 or more of items a-g, listed below are achieved.	3.33	3.33
	OR		
	• 6 or more of items a-g, listed below are achieved.	5	\
	a) Monitor and report CO_2 or energy arising from site activities. b) Monitor and report on water consumption from site activities. c) Monitor and report transport to and from site to enable CO_2 emissions arising from transport to be calculated. d) Monitor construction waste on site. e) Sort and recycle construction waste on site. f) Adopt best practice policies in respect to air (dust) pollution. g) Adopt best practice policies in respect to water (ground and surface) pollution.		
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.		
	Where temporary timber is used on site during construction, this is from a sustainably responsible source OR is re-used or recycled.	1.67	1.67

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M12	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.	1.67	1.67
	Total points achieved to carry forward		11.68

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Credit Reference	HEALTH & WELLBEING	Points	Points Achieved
HW01	Where at least 80% of net lettable office floor area is adequately daylit.	1.154	1.154
HW02	Where evidence provided demonstrates that all desks are within a 7m radius of a window.	1.154	1.154
HW03	Where evidence provided demonstrates that an occupant controlled glare control system (e.g. internal or external blinds) is fitted.	1.154	1.154
HW04	Where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	1.154	\
HW05	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.	1.154	1.154
HW06	Where evidence provided demonstrates that lighting, in all occupied areas, is zoned to allow separate control.	1.154	1.154
HW08	Where evidence provided demonstrates that external façade windows to all occupied areas are openable.	1.154	\
HW09	Where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.	1.154	1.154
HW11	Where either: • In the case of mechanically ventilated and air conditioned buildings, fresh air is provided at 12l/s/person. **OR** • In the case of naturally ventilated buildings, trickle vents are provided on the majority of windows, where the window openable area is the equivalent to 5% of the gross internal area of the building and the plan depth is no more than 15m otherwise extra ventilation is required.	1.154	1.154
HW14	Where thermal comfort levels are assessed at design stage, this is used to evaluate appropriate servicing options, and appropriate thermal comfort levels are achieved	1.154	1.154
HW15	Where evidence provided demonstrates that local control is available for temperature	1.154	1.154

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	adjustment in each area to reflect differing load requirements.		
HW16	Where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised.	1.154	1.154
HW17	Where the building design can be shown to achieve ambient internal noise levels as specified below: • 35-40dB L_{AeqT} in single occupancy, cellular offices • 40-45 dB L_{AeqT} in medium sized, multi-occupancy open plan offices– ≤ 4 work stations ≤ 40m² • 45-50 dB L_{AeqT} in large multi-occupancy, open plan offices > 4 work stations > 40m²	1.154	1.154
	Total points achieved to carry forward		12.694

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Credit Reference	ENERGY	Points	Points Achieved
E01	Where the building demonstrates a percentage improvement above the requirement for CO_2 emissions as set out in the Building Regulations. • +1% • +2% • +4% • +6% • +8% • +10% • +12% • +14% • +18% • +22% • +30% • +40% • +50% • +60% • ≥70% **NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.**	0.76 1.52 2.27 3.03 3.79 4.55 5.30 6.06 6.89 7.57 8.33 9.09 9.85 10.61 11.35	4.55
E02	Where electricity sub metering is provided for substantive energy uses within the building covering lighting and small power, and each of the following where present: • Computer Room • Humidification Plant • Cooling Plant • Fans (major) • If a building has other major energy consuming items, they should be covered as appropriate e.g. catering facilities.	0.76	
E03	Where evidence provided demonstrates sub-metering of energy use by tenancy/areas is installed within the building.	0.76	0.76
E04	Where energy efficient external luminaires are specified and all light fittings controlled for the presence of daylight.	0.76	0.76
	Total points achieved to carry forward		6.07

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Credit Reference	TRANSPORT	Points	Points Achieved
T01	Where good access is available to and from public transport networks for • commuting	0.76	0.76
	AND/OR • Business travel.	0.76	0.76
	NOTE: These point scores ARE cumulative.		
T02	Total Net CO_2 emissions arising from transport to and from the building will be predicted based on location. Credits given are based on the scale below: • RURAL location with TYPICAL public transport connections	0.76	
	• EDGE OF TOWN location with TYPICAL public transport connections	1.52	
	• SMALL TOWN location with TYPICAL public transport connections	3.03	
	• CITY / TOWN CENTRE location with TYPICAL public transport connections	4.55	4.55
	• CENTRAL URBAN CONURBATION location with TYPICAL public transport connections	6.06	
	• CLOSE TO MAJOR TRANSPORT NODE location with TYPICAL public transport connections	7.57	
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.		
T05	Where evidence is provided to demonstrate that there is adequate provision of covered, secure and well lit cycle racks and showers. Compliant cycle storage facilities must be provided for a percentage of building occupants in accordance with the following figures: · 10% of building occupants up to 500 **PLUS** · 7% for building occupants in the range of 501 – 1000 **PLUS** · 5% for building occupants over 1000	0.76	0.76
	Where in addition to the above, information is provided to demonstrate that there is adequate provision of changing facilities and lockers for clothes or a dedicated drying space for wet clothes.	1.52	
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.		
T08	Where evidence is provided to demonstrate that a travel plan has been developed and tailored to the specific needs of the users of the assessed development.	0.76	0.76
	Total points achieved to carry forward		7.59

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Credit Reference	WATER	Points	Points Achieved
W01	Credits are awarded based on the improvement over standard specification of water fittings. A standard specification would include 6 litre flush toilets, urinals with no controls, a shower that uses 12-15 litres per minute, standard taps with no flow restrictors. In a formal BREEAM assessment the predicted water consumption will be calculated using the BREEAM water calculator, as a guide the following can be used as a rough estimate of likely number of credits:		
	• where some of the fittings use less water than a standard fitting	0.83	0.83
	OR		
	• where all of the fittings are low water or, where only some of the fittings are low water, rainwater or grey water systems are specified.	1.67	\
	OR		
	• where the water fittings are all low water and rainwater or greywater fittings have been specified.	2.5	\
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement		
W02	Where evidence is provided to demonstrate that a water meter with a pulsed output will be installed on the mains supply to each building.	0.83	0.83
W03	Where evidence is provided to demonstrate that a leak detection system is specified or installed.	0.83	\
W04	Where proximity detection shut off is provided to water supply for all urinals and WC's.	0.83	0.83
	Total points achieved to carry forward		2.49

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Credit Reference	MATERIALS	Points	Points Achieved
MW01	Where evidence provided demonstrates that the major building elements specified have an 'A rating', as defined in the *Green Guide to Specification*. In a formal BREEAM assessment the number of credits will be calculated using the BREEAM materials calculator, but as a guide the following can be used as a rough estimate of the likely number of credits achieved. The following elements are considered; • Where at least 80% of upper floor slab specifications achieve an 'A' overall rating. • Where at least 80% of external wall specifications achieve an 'A' overall rating. • Where at least 80% of roof specifications achieve an 'A' overall rating. • Where at least 80% of windows specifications achieve an 'A' overall rating. **NOTE: These point scores ARE cumulative.**	0.83 0.83 0.83 0.83	0.83 0.83 \ \
MW03	Where carpets and other floor finishes are specified by the future occupant or, in tenant areas of speculative buildings, where carpets or floor finishes are installed in a limited show area only	0.83	\
MW05	Where at least 50% of the new building's total façade comprises re-used façade and at least 80% by mass of the reused façade comprises in-situ re-used material	0.83	\
MW06	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.	0.83	\
MW07	Where significant use of crushed aggregate, crushed masonry or alternative aggregates (manufactured from recycled materials) are specified for 'high grade' aggregate uses (such as the building structure, ground slabs, roads, etc.).	0.83	0.83
MW08	Where materials used in structural and non-structural elements are responsibly sourced. For timber products this requires third party certification to show that the timber has come from a sustainably managed source and for non-timber products that the materials have EMS certification at either the process stage or the process and extraction phases.	2.5	2.5
MW12	Where the presence of a central dedicated storage space for recyclable materials either within the building or on site skips are provided with good access for collections ($2m^2$ per $1000m^2$ of floor area, up to $10m^2$ max).	0.83	\
	Total points achieved to carry forward		4.99

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Credit Reference	LAND USE & ECOLOGY	Points	Points Achieved
LE01	Where the site has been previously built upon or used for industrial purposes within the last 50 years.	1.5	1.5
LE02	Where evidence is provided to demonstrate 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.	1.5	\
LE03	Where evidence is provided to demonstrate 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.	1.5	1.5
LE04	Credits are awarded based upon the degree of negative impact the new development has on the site's existing ecology. In a formal BREEAM assessment the ecological impact of the development is calculated based on the area of habitat and number of floral species displaced, using BREEAM's ecological value calculator. As a guide, the following can be used to estimate the likely number of credits: No credits can be awarded where the new development will displace a significant majority of the existing site's ecological habitat types and areas.		
	Where a majority of the existing site's ecological habitat types and areas are not displaced as a result of the new development.	1.5	\
	Where either the development displaces none of the existing site's ecological habitat types and areas. Or, where there is no, or very limited existing site ecology; for example the new development is a refurbishment, or it is on contaminated land or Brownfield land that has been derelict/unoccupied for less than one year.	3	3
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.		
LE05	Where evidence is provided to demonstrate that the design team (or client) has i) appointed a professional to advise and report on enhancing and protecting the ecological value of the site; AND ii) implemented the professional's recommendations for general enhancement and protection for site ecology.	1.5	\
	OR Where, **in addition to the above**, evidence is provided to demonstrate a positive increase in the ecological value of the site of up to (but not including) 6 species.	3	\
	OR 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.	4.5	\
	NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.		

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LE06	Where evidence is provided to demonstrate that the client has committed to achieving the mandatory requirements listed below and: • At least two of the additional requirements. **OR** • At least four of the additional requirements. **NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.** **Mandatory Requirements** A suitably qualified ecologist must confirm in writing that: • All relevant UK and EU legislation relating to protection and enhancement of ecology has been, or will be, complied with during the design and construction process. • An appropriate management plan is produced covering at least the first 5 years after project completion. This should include details of the scope of the management plan. • Key responsibilities, and with whom these responsibilities lie, e.g. owner, landlord, occupier, FM, other. **Additional Requirements** • A 'Biodiversity Champion' has been nominated • The relevant site work-force has been trained on how to protect site ecology during the project. • Record and monitor actions taken to protect biodiversity throughout key stages of construction • The client requires that a new ecologically valuable habitat, appropriate to the local area, be created. • The client requires the contractor to programme site works to minimise disturbance to wildlife. • The client requires actions to be taken to protect/enhance biodiversity • A Biodiversity Champion must have sufficient authority and time on site to influence activities and ensure that they have minimal detrimental impact on biodiversity • Local biodiversity expertise should be sought at, or before, the design stage • Where a site is deemed to have no ecological value The refurbishment of a listed building may be exempt from the credit requirements if they conflict with the need to maintain the building's listed features	1.5 3	1.5
	Total points achieved to carry forward		7.5

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Credit Reference	POLLUTION	Points	Points Achieved
P01	Where evidence provided demonstrates the use of refrigerants with a global warming potential (GWP) of less that 5 or where there are no refrigerants specified for use in building services.	1	1
P02	Where evidence provided demonstrates that refrigerant leaks can be detected or where there are no refrigerants specified for use in the building or development.	1	1
	Where there are refrigerants, evidence should be provided to demonstrate that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves.	1	\
	NOTE: These point scores ARE cumulative.		
P04	Where evidence provided demonstrates that the specification of insulating materials avoids the use of substances with a global warming potential (GWP) of 5 or more in either manufacture or composition	1	1
P06	Where evidence provided demonstrates that the maximum dry NO_x emissions from delivered space heating energy are:		
	• ≤100 mg/kWh (at 0% excess O_2).	1	\
	• ≤70 mg/kWh (at 0% excess O_2).	2	2
	• ≤40 mg/kWh (at 0% excess O_2).	3	\
	NOTE: These point scores are not cumulative, simply award the appropriate points ecore corresponding to the predicted level of achievement.		
P07	Where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding.	2	2
	OR Where evidence provided demonstrates that the assessed development is located in a zone defined as having a medium 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.	1	\
	NOTE: These point scores are not cumulative, simply award the appropriate pointe score corresponding to the predicted level of achievement.		
	Where evidence provided demonstrates that Sustainable Urban Drainage techniques are specified to minimise the risk of localised flooding, resulting from a loss of flood storage on site through development.	1	1
P08	Where evidence provided demonstrates that on site treatment such as oil separators/interceptors or filtration have been specified for areas at risk from pollution, i.e. vehicle manoeuvring areas, car parks, waste disposal facilities, delivery facilities or	1	\

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	plant areas.		
P11	Where evidence provided demonstrates that : A feasibility study considering renewable and low emission energy has been carried out and the results implemented. **AND / OR** The first credit has been achieved and 10% of total energy demand for the building/development is supplied from local renewable or low emission energy, sources. **OR** Where evidence provided demonstrates that the first credit has been achieved and 15% of total energy demand for the building/development is supplied from local renewable, or low emission energy, sources. **NOTE: These point scores are not cumulative, simply award the appropriate points score corresponding to the predicted level of achievement.**	1 2 3	1 \ \
P12	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
	Total points achieved to carry forward		10

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SCORING

TOTAL POINTS ACHIEVED 63.014

Rating	Minimum Score Required
	Design Stage & Post Construction Review
PASS	25
GOOD	40
VERY GOOD	55
EXCELLENT	70

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