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Pre-assessment Estimator  
MANAGEMENT & OPERATION



## 2006

## BREEAM Offices 2006

### MANAGEMENT & OPERATION 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 1<sup>st</sup> 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 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.

## USING THE MANAGEMENT & OPERATION PRE-ASSESSMENT ESTIMATOR

This checklist should be used when carrying out approximate assessments on

- Existing occupied buildings

The checklist calculates scores for both the 'Core building performance' and the 'Management & Operation' parts of BREEAM Offices. This enables both an approximate BREEAM rating and an Environmental Performance Index to be produced. . 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.

In order to generate an estimated rating for a Design & Procurement assessment, please complete the separate checklist, 'DESIGN & PROCUREMENT Assessment Estimator'.

In order to generate an estimated Environmental Performance Index score for a Core assessment, please complete the separate checklist, 'CORE CREDITS ONLY Assessment Estimator'. CORE credits assess the building performance.

## COMPLETION OF THE CHECKLIST

<b>Step 1</b>	Complete the checklist by entering the number of points (shown in the point's column) into the light grey shaded box corresponding to the credit. It should be noted that credits forming part of the assessment will fall into either the Building Performance column or the Management & Operation column.
<b>Step 2</b>	At the end of each section, total the columns and enter in the boxes titled, 'Total points achieved to carry forward' – at this stage ensure that the totals from each column (Building Performance and Management & Operation) are kept separate.
<b>Step 3</b>	Complete for all sections.
<b>Step 4</b>	Sum the totals from each column and enter in to the boxes titled 'Sum of points achieved in each column – Box A corresponds with the total score under the category of Building Performance and Box B corresponds with that of Management & Operation.
<b>Step 5</b>	Assess the score generated in Box A with the table titled 'Probable Environmental Performance Index Score' – the score achieved should gain an estimated rating of 1-10. Make a note of this score.
<b>Step 6</b>	Add the score obtained in Box A to that obtained in Box B. the total should then be assessed against the table titled 'Probable BREEAM Rating' – the score achieved will generate a rating of Fail, Pass, Good, Very Good or Excellent. Make a note of this rating.
<b>NOTE:</b>	In some cases, there are multiple performance levels, simply award the points score corresponding to the predicted level of achievement.

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Credit Reference	MANAGEMENT	Points	Core	Management & Operation
M18	<p>Where there is evidence of the existence of an openly available and established company policy on the environment. This should include the following as a minimum requirement.</p> <ul style="list-style-type: none"> <li>• Health and wellbeing (internal and external) impacts</li> <li>• Energy and resultant CO<sub>2</sub> emissions</li> <li>• Transport impacts</li> <li>• Water use</li> <li>• Resource use including consumables</li> <li>• Waste management</li> <li>• Procurement</li> <li>• Biodiversity</li> <li>• Pollution</li> <li>• Internal management procedures</li> <li>• Management of suppliers and contractors</li> <li>• Action Plan</li> <li>• Responsibilities and nominated people</li> <li>• Strategic and short term targets</li> <li>• A commitment to reviews on an annual basis</li> <li>• A commitment to report the results of review and performance annually both internally to staff and externally.</li> </ul>	3.75		
M19	Where evidence provided demonstrates the existence and implementation of a formal environmental purchasing policy which has endorsement from senior directors.	3.75		
M22	Where evidence is provided to demonstrate that an Environmental Management System (EMS) is in place.	3.75		
M23	Where up to date building operation and maintenance (O&M) manuals are available on site.	3.75		
<b>Total points achieved to carry forward</b>				

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Credit Reference	HEALTH & WELLBEING	Points	Core	Management & Operation
HW01	Where at least 80% of net lettable office floor area is adequately daylit	0.938		
HW02	Where evidence provided demonstrates that all desks are within a 7m radius of a window.	0.938		
HW03	Where evidence provided demonstrates that an occupant controlled glare control system (e.g. internal or external blinds) is fitted.	0.938		
HW04	Where evidence provided demonstrates that high frequency ballasts are installed on all fluorescent and compact fluorescent lamps.	0.938		
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.	0.938		
HW06	Where evidence provided demonstrates that lighting, in all occupied areas, is zoned to allow separate control.	0.938		
HW08	Where evidence provided demonstrates that external façade windows to all occupied areas are openable	0.938		
HW09	Where air intakes serving occupied areas avoid major sources of external pollution and recirculation of exhaust air.	0.938		
HW10	Where evidence provided demonstrates CO <sub>2</sub> levels are monitored and can be regulated in areas with unpredictable occupancy patterns.	0.938		
HW11	Where either: <ul style="list-style-type: none"> <li>• In the case of <u>mechanically ventilated</u> and <u>air conditioned</u> buildings, fresh air is provided at 12l/s/person.</li> <li><b>OR</b></li> <li>• In the case of <u>naturally ventilated</u> 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.</li> </ul>	0.938		
HW12	Where a smoking ban is in effect within the building.	0.938		

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<b>HW15</b>	Where evidence provided demonstrates that local control is available for temperature adjustment in each area to reflect differing load requirements.	0.938		
<b>HW16</b>	Where evidence provided demonstrates that the risk of waterborne and airborne legionella contamination has been minimised	0.938		
<b>HW20</b>	Where maintenance schedules include high performance cleaning of carpets and soft furnishings with steam or liquid nitrogen cleaning at least once a year using high efficiency filters or a centralised systems.	0.938		
<b>HW21</b>	Where evidence provided demonstrates that procedures are in place for taking occupant satisfaction feedback into account, for addressing issues that has been highlighted and for putting improvement targets, relating to occupant satisfaction, in place.	0.938		
<b>HW22</b>	Where procedures operate for the collection and recording of occupant satisfaction feedback.	0.938		
<b>Total points achieved to carry forward</b>				

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Credit Reference	ENERGY	Points	Management & Operation	
			Core	
E01	Percentage difference from notional building based on 2002 Building Regulations. <ul style="list-style-type: none"> <li>-20%</li> <li>0</li> <li>20%</li> <li>35%</li> <li>45%</li> <li>50%</li> <li>60%</li> <li>70%</li> <li>85%</li> <li>100%</li> </ul>	0.64		
		1.28		
		1.92		
		2.56		
		3.21		
		3.85		
		4.49		
		5.13		
		5.77		
		6.41		
E02	Where electricity sub metering is provided for substantive energy uses within the building covering <u>lighting</u> and <u>small power</u> , and each of the following where present: <ul style="list-style-type: none"> <li>Computer Room</li> <li>Humidification Plant</li> <li>Cooling Plant</li> <li>Fans (major)</li> <li>If a building has other major energy consuming items, they should be covered as appropriate e.g. catering facilities.</li> </ul>	0.64		
E03	Where evidence provided demonstrates sub-metering of energy use by tenancy/areas is installed within the building.	0.64		
E04	Where energy efficient external luminaires are specified and all light fittings controlled for the presence of daylight.	0.64		
E06	Where preventative maintenance procedures for mechanical and electrical services have been installed in the building. This can be done where there are established periodic scheduled maintenance procedures in place covering the following: <ul style="list-style-type: none"> <li>calibration and operation of heating and cooling systems including boiler/burner systems.</li> <li>ventilation and humidification systems.</li> <li>lighting systems.</li> <li>domestic hot water systems.</li> </ul>	0.64		
		0.64		
		0.64		
		0.64		
E07	Where there is an established energy policy endorsed at Board level and freely available to staff. This policy should be prepared in accordance with Good Practice Guide 376 (GPG 376).	0.64		

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	Where an energy audit is carried out on the building at least once every three years and where recommendations have been acted on	0.64		
<b>E08</b>	Where energy/CO <sub>2</sub> monitoring is carried out and where historical records are kept.	0.64		
	Where energy/CO <sub>2</sub> targeting is carried out using historical data	0.64		
	Where evidence demonstrates movement towards energy/CO <sub>2</sub> targets over time.	0.64		
<b>E09</b>	Where information on energy use and savings is regularly disseminated to office occupants and where building managers are trained in energy saving techniques.	0.64		
<b>Total points achieved to carry forward</b>				

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Credit Reference	TRANSPORT	Points	Core	Management & Operation
T01	Where good access is available to and from public transport networks for <ul style="list-style-type: none"> <li>commuting</li> </ul> <b>AND/OR</b> <ul style="list-style-type: none"> <li>business travel.</li> </ul>	0.64		
		0.64		
T02	Where total commuting CO <sub>2</sub> emissions are estimated to be <ul style="list-style-type: none"> <li>&lt;1300 kg/person/year</li> <li>&lt;1200 kg/person/year</li> <li>&lt;1100 kg/person/year</li> <li>&lt;1000 kg/person/year</li> <li>&lt;900 kg/person/year</li> <li>&lt;800 kg/person/year</li> <li>&lt;700 kg/person/year</li> <li>&lt;600 kg/person/year</li> <li>&lt;500 kg/person/year</li> <li>&lt;400 kg/person/year</li> </ul>	0.64		
		1.28		
		1.92		
		2.56		
		3.21		
		3.85		
		4.49		
		5.13		
		5.77		
		6.4		
T05	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.	0.64		
T07	Where there is provision of cycling facilities <ul style="list-style-type: none"> <li>for 10% of staff (≤500 staff)</li> <li>for 7% of staff (≤1000 staff)</li> <li>for 5% of staff (&gt;1000 staff)</li> </ul> e.g. 1300 staff require $(0.1 \times 500) + (0.07 \times 500) + (0.05 \times 300) = 100$ cycle spaces Facilities are to include sheds / lockable storage and showers  <b>Additional points</b> can be achieved where there is also the provision of changing facilities including lockers and a drying space. Requirements are reduced by 50% near major transport nodes or remote rural areas.	0.64		
		1.28		
T08	Where evidence is provided to demonstrate that a travel survey has been carried out to determine the travel patterns of the building users who work at, and commute to, the building. An audit must also be carried out to determine the travel patterns associated with business travel, visitors and deliveries	0.64		
<b>Total points achieved to carry forward</b>				

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Credit Reference	WATER	Points	Management & Operation	
			Core	
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:  <ul style="list-style-type: none"> <li>where some of the fittings use less water than a standard fitting</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>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.</li> </ul> <b>OR</b> <ul style="list-style-type: none"> <li>where the water fittings are all low water and rainwater or greywater fittings have been specified.</li> </ul>	0.56		
		1.11		
		1.67		
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.	0.56		
W03	Where evidence is provided to demonstrate that a leak detection system is specified or installed.	0.56		
W04	Where proximity detection shut off is provided to water supply for all urinals and WC's.	0.56		
W08	Where evidence is provided to demonstrate that there are established and operational maintenance procedures covering all sanitary fittings.	0.56		
W09	Where evidence is provided to demonstrate Water consumption is monitored and recorded at least once every quarter.  <b>In addition</b> to the above, evidence should be provided to show that monitoring demonstrates reductions in water consumption. To demonstrate achievement there must be historical data on water consumption for at least the previous two years, i.e. one full year of monitoring and a second years monitoring to demonstrate legitimate reductions.	0.56		
		1.11		
<b>Total points achieved to carry forward</b>				

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Credit Reference	MATERIALS		Points	Building Performance	Management & Operation
MW09	Where information on the presence of hazardous materials is available for staff and contractors.		3.33		
MW12	Where the presence of central dedicated storage space for recycling materials either within the building or on site skips are provided with good access for collections (2m <sup>2</sup> per 1000m <sup>2</sup> of floor area, up to 10m <sup>2</sup> max).		3.33		
MW19	Where corporate policies endorsed at board level and operational procedures are in place for the collection and recycling of office consumables. The policy should cover at least paper, printer cartridges, toner cartridges, and plastics.		3.33		
<b>Total points achieved to carry forward</b>					

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POLLUTION		Points	Building Performance Management & Operation
Credit Reference			
P01	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.	1.36	
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.	1.36	
	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.	1.36	
P06	Where evidence provided demonstrates that the maximum dry NO <sub>x</sub> emissions from delivered space heating energy are: <ul style="list-style-type: none"> <li>• ≤100 mg/kWh (at 0% excess O<sub>2</sub>).</li> <li>• ≤70 mg/kWh (at 0% excess O<sub>2</sub>).</li> <li>• &gt;40mg/kWh (at 0% excess O<sub>2</sub>).</li> </ul>	1.36	
		2.73	
		4.09	
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 plant areas.	1.36	
P11	Where evidence provided demonstrates that :  A feasibility study considering renewable and low emission energy has been carried out and the results implemented. <b>AND/OR</b> 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. <b>OR</b> 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.	1.36	
		2.73	
		4.09	
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.	1.36	
<b>Total points achieved to carry forward</b>			

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<b>SCORING</b>		
	Building Performance	Management & Operation
<b>SUM OF POINTS ACHIEVED IN EACH COLUMN</b>		
	A	B

<b>Table 1 Probable Environmental Performance Index Score (EPI)</b>	
Using the scale below and the score from box A, determine the probable Environmental Performance Index Score.	

<b>CHECKLIST SCORE</b>	<b>EPI</b>
<b>0 ○ 110</b>	<b>1</b>
<b>90 ○ 140</b>	<b>2</b>
<b>120 ○ 170</b>	<b>3</b>
<b>150 ○ 200</b>	<b>4</b>
<b>180 ○ 230</b>	<b>5</b>
<b>210 ○ 260</b>	<b>6</b>
<b>240 ○ 290</b>	<b>7</b>
<b>270 ○ 325</b>	<b>8</b>
<b>305 ○ 360</b>	<b>9</b>
<b>340 +</b>	<b>10</b>

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