TRANSPORT SECTION

T1	Provision of Public Transport	4

Compliance Requirements:
Up to 5 credits can be awarded based on the proximity of the development to a public transport node with a good service frequency. This is determined using the Bespoke BREEAM public transport table.

Credit Validation:
It has been confirmed in a document [1] that the 274, 46 and 390 bus routes are in close proximity to site.
Bus Route 274 Angel Islington Tube – Lancaster Gate Distance to bus stop is 250m.
Bus Route 46 Farringdon St to Warwick Ave Distance to bus stop is 444m.
Bus Route 390 Archway to Bayswater Distance to bus stop is 582m.

The 274 bus has a frequency of:

Weekdays
7.30am – 10.00am buses run every 8-10 mins
3.00pm - 5.30pm buses run every 8-10 mins
Saturdays
7.30am – 10.00am buses run every 15 mins
3.00pm - 5.30pm buses run every 8-10 mins
Sunday
7.30am – 8.00am buses run every 15mins
8.00am – 10.00 am buses run every 20 mins
3.00pm - 5.30pm buses run every 20 mins

Therefore four credits can be awarded as the frequency of the bus is less than 10 minutes during building occupied hours.

Credit References:
1. Document titled '2.8 Transport links' produced by Haverstock Associate Architects received in an email from Mary Kong of Haverstock Associate Architects to the assessor dated 07/07/08

T2	Transport CO_2	5

Compliance Requirements:
Up to 5 credits are available on the basis of net CO_2 emissions resulting from commuting. (The building location, Net Lettable Area and number of car parking spaces are used to calculate estimated CO_2 emissions in kg/person/year.)

Credit Validation:
It has been confirmed in an email [1] that there will be 72 children and 42 adults using the building. There is also one disable car parking space on site and no car parking spaces provided off site. The site is located in a London borough classed as the 'rest of inner London'.
It was also confirmed in an email [2] that the total building area is 850m^2.
This information was put into the calculator tool [3] which predicted the transport CO_2 emissions of 352.84 kg/person/year.

Five credits have been awarded.

Credit References:
1. Email from Mary Kong of Haverstock Associate Architects to the assessor dated 31/07/08.
2. Email from Matthew Wood of Haverstock Associate Architects to the assessor dated 16/11/06.
3. See Appendix B for the Calculation tool.

T3	Proximity to Key Amenities	1
Compliance Requirements: *One credit is awarded where the site is within 500m of a post box and a grocery shop.*		
Credit Validation: It has been confirmed in a drawing [1] that there is a post box and a grocery shop (Tesco Express) within 500m walking distance of the site. This credit has been awarded.		
Credit References: 1. Drawing titled 'Proximity to Amenities' dated 01/08/08 produced by Haverstock Associate Architects.		

T4	Proximity to Other Amenities	1
Compliance Requirements: *One credit is available where the site is within 1,000m of at least 5 of the following amenities:* *a) Postal facility* *b) Grocery shop* *c) Bank/Cash point* *d) Pharmacy* *e) Doctors surgery/medical centre* *f) Community centre* *g) Leisure centre* *h) Open access public place* *i) Place of worship* *j) Public house*		
Credit Validation: It has been confirmed in a drawing [1] that there is a Bank (HSBC), a Place of Worship (Rochester Square Spiritual Temple) a Doctors Surgery (The Camden Road Surgery), Pharmacy (Jays Pharmacy) and a Leisure Centre (Talacre Community Support Centre) within 1000m walking distance of the site. This credit has been awarded		
Credit References: 1. Drawing titled 'Proximity to Amenities' dated 01/08/08 produced by Haverstock Associate Architects.		

T5	Cyclist Facilities	0
Compliance Requirements: ***First credit:*** *Where evidence provided demonstrates that there is adequate provision of covered, secure and well lit cycle racks storage for staff and visitors. Compliant cycle storage facilities must be provided for a percentage of the building occupants as follows:* *- 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* *AND 10% of building visitors* ***Second credit:*** *Where in addition to the above, evidence provided demonstrates adequate provision of washing and changing facilities available for staff use.* *Note: In order to achieve this credit, the first credit must also be achieved AND at least 2 of the following are provided:* *- compliant showers* *- compliant changing facilities and lockers for clothes* *- compliant drying space for wet clothes*		
Credit Validation: This credit will not be pursued as the cycle racks will not be covered.		

T6	Pedestrian & Cyclist Safety	0
Compliance Requirements: *One credit is awarded where evidence provided demonstrates that the site layout has been designed to minimise risks to pedestrians and cyclists.*		
Credit Validation: This credit has not been pursued		

T8	Travel Plan	0
Compliance Requirements: *One credit is awarded 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.* *The travel plan should be developed at feasibility and design stages, and cover the following (as a minimum):* *- Current local environment for walkers and cyclists* *- Public transport serving the site* *- Current facilities for cyclists*		
Credit Validation: This credit has not been pursued.		

WATER SECTION

W1	Water Consumption	0

Compliance Requirements:

2 credits are awarded where evidence provided demonstrates that WCs are designed to minimise the consumption of potable water.

1 credit is awarded where evidence provided demonstrates that other sanitary facilities are designed to minimise the consumption of potable water.

First Credit:

All WCs have a dual flush cistern with a 6/4 litre flush

Instructions on the appropriate operation of the flushing device provided on the cistern, or nearby for a group of cisterns.

Second Credit:

All WCs have a dual flush cistern with 4/2litre flushing capacity. Or where all WCs have a vacuum flush system or they are waterless.

Third Credit

This credit is not dependant upon the first or second credit being achieved.

Where 2 of the following have been specified to gain the greatest reduction in water consumption:

a. *All taps are either timed turn off push taps; electronic sensor taps; spray taps or aerating taps.*
b. *All showers, where specified have a flow rate equal to or less than 9 litres/min at 1.5 bar pressure.*
c. *All urinals have IR proximity detection with controls on each individual urinal, or are waterless.*

Credit Validation:

This credit will not be pursued.

W2	Water Meter	1

Compliance Requirements:

One credit is awarded where evidence provided demonstrates that a water meter with a pulsed output will be installed on the mains supply to each building.

Credit Validation:

It has been confirmed in an email [1] that a pulsed water meter has been installed on the mains water supply to the building.

This credit has been awarded

Credit References:

1. Email from Sam Flanagan of CBG Consultants Ltd to the assessor dated 25/07/08.

W3	Major Leak Detection	0

Compliance Requirements:

One credit is awarded where evidence provided demonstrates that a leak detection system is specified or installed and is capable of identifying major leaks both within the building and between the building and the site boundary, and covers all mains water supplies to the building. The system must be:

- *Audible when activated;*
- *Activated when a continuous flow of water passes through the water meter at a flow rate above a pre-set minimum for a pre-set period of time;*
- *Able to identify different leakage rates, e.g. continuous, high and/or low level leaks, over set time periods;*
- *Programmable to suit the owner/occupiers' requirements; and*
- *Where applicable, designed to avoid false alarms caused by normal operation of large water consuming plant such as chillers.*

Credit Validation:

This credit will not be pursued

W4	Sanitary Supply Shut Off	0

Compliance Requirements:

One credit is awarded where evidence provided demonstrates that proximity detection shut off is provided to the water supply to all urinals and WCs.

Credit Validation:

This credit will not be pursued

W5	Water Recycling	0

Compliance Requirements:

One credit is awarded where evidence provided demonstrates the specification of systems that collect, store and where necessary, treat rainwater or greywater for WC and urinal flushing purposes.

Credit Validation:

This credit will not be pursued

W6	Irrigation Systems	1

Compliance Requirements:

One credit can be awarded where information provided demonstrates that low-water irrigation systems are specified/installed, or where planting and landscaping is irrigated via rainwater or reclaimed water.

Credit Validation:

It has been confirmed in a document [1] that plants in planters are going to be watered by occupants using rainwater collected from the roof which is stored in rainwater butts in the external play areas and courtyard.
The green roof is a sedum roof which does not require any irrigation systems.

This credit has been awarded.

Credit References:

1. Document titled 'Agar Children's Centre 858-484 Clarifications for Breeam' dated 29/09/08 produced by Haverstock Associate Architects

MATERIALS AND WASTE SECTION

MW1	Materials Specification – Major Building Elements	7

Compliance Requirements:

Up to 7 credits can be awarded where the major building elements specified have an 'A' rating, as defined in the Green Guide to Specification. The following elements are considered: external walls, windows, roof, upper floor slabs, internal walls, floor finishes/coverings.

Credit Validation:

The following specifications were confirmed in an email [1] along with the areas which have been input into the calculation tool [2] and [3].

	Specification	*Area (m^2)*	*Rating*
Upper Floor Slab (all floors except ground floor)	Timber floor joists (75x225 @ 600 centres) with 100mm of insulation (Isowool 1000) in between.	98.2	A
Windows	Technal aluminium window system	226	B
External Walls	(EW1) - Listed from exterior to interior -102.5mm of masonry (engineering bricks with scattered with glazed bricks), cavity, Breather membrane, plywood sheathing, timber suds, insulation, Plasterboard lining	316.2	A
	Danpalon 8mm Multi-Cell panel fixed to Danpalon vertical C channel, battens, plywood sheathing, timber suds, insulation, Vapour barrier, Plasterboard lining	77.6	A
	powder coated metal, treated timber shim, Breather membrane, plywood, timber studs, Vapour barrier, Plasterboard lining	4.8	A
	Cedar cladding. timber battens, Breather membrane, plywood sheathing, timber suds, insulation. Vapour barrier, Plasterboard lining	141.98	A
Roof	Bauder vegetation blanket with fleece, Bauder flat-board insulation, plywood, timber spacers, Timber roof joists, Plasterboard lining.	788.4	A
	- Powder coated metal, timber shim, plywood, Timber roof joists, Rockwool insulation, Plasterboard lining	9.5	A
Internal Walls	brick leaf with glazed bricks, plywood, studs, Isowool, plasterboard	82	C
	sound block plasterboard, timber studs, Isowool, block plasterboard	315.7	A
	Cedar cladding fixed to timber battens, plywood sheathing, timber suds, sound block plasterboard.	27.2	A
Floor Finishes/coverings	Timber	205.5	A
	Lino	15.0	A
	Rubber - NoraPlan Grip flooring roll by Freudenberg Building Systems with fabricated underlay.	377.8	A [2]
	Carpet - Interface 'Fluctuation' 500x500 carpet tiles with 3mm latex smoothing compound.	45.1	A [2]
	Entrance Matting - 8.5mm Raincheck barrier carpet by Jaymart Rubber & Plastics with3mm latex smoothing compound underlay.	18.6	-

The calculation tool states that 7 credits can be awarded.

Credit References:

1. Email from Kathryn Nickson of Haverstock Associate Architects to the assessor dated 05/06/08.
2. Document titled 'Environmental Profile Certified Products – Commercial' dated 27/03/09 produced by the BRE.
3. See Appendix B for the Calculation tool.

MW2	Hard Landscaping & Boundary Protection	1
Compliance Requirements: *One credit is awarded where at least 80% of the combined area of external hard landscaping and boundary protection specifications achieve an 'A' rating, as defined by the Green Guide to Specification.*		
Credit Validation: It has been confirmed in a drawing [1] that 87% of the Boundary Protection and 87% of the Hard Landscaping are existing and therefore A rated. This credit has been awarded.		
Credit References: 1. Drawing titled 'Hard Landscaping' produced by Haverstock Associate Architects received in an email from Mary Kong of Haverstock Associate Architects to the assessor dated 04/08/08		

MW5	Reuse of Building Façade	0
Compliance Requirements: *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.*		
Credit Validation: This is a new build; therefore this credit cannot be achieved.		

MW6	Reuse of Building Structure	0
Compliance Requirements: *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.*		
Credit Validation: This is a new build; therefore this credit cannot be achieved.		

MW7	Recycled Aggregates	0
Compliance Requirements: *One credit is awarded where evidence provided demonstrates significant (25% by weight) 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.).*		
Credit Validation: This credit has not been pursued.		

MW8	Responsible Sourcing of Materials	1

Compliance Requirements:

Up to three credits can be awarded where materials used in the key building elements are responsibly sourced.

The following building elements are considered:

a. roof
b. frame
c. walls (external)
d. floors (ground, upper)
e. foundations/substructure
f. doors
g. windows

For each element the proportion of the following materials (by volume) that form part of the element should be determined:

a. metals (steel, aluminium etc)
b. concrete (including blocks, tiles etc)
c. brick
d. stone
e. glass
f. composites
g. timber
h. plastics

Refer to Appendix for further guidance.

Credit Validation:

It has been confirmed by the architect [1] that the build up of the building elements are as follows.

	Metals	Concrete	Brick	Glass	Timber	Other
Building Elements						
Roof					83%	17%
Frame					100%	
External Wall			40%		60%	
Floors (ground, upper)		80%				20%
Foundations		100%				
Doors	2%			2%	90%	6%
Windows	20%			80%		

It has been confirmed with delivery notes [2] that the permanent building timber was supplied from a PEFC source. It was further clarified in an email [3] that this covered all of the permanent timber used in the building.

This information was input into the Calculator tool which awarded nine points which equates to one credit.

One credit has been awarded.

Credit References:

1. Email from Mary Kong of Haverstock Associates LLP to the assessor dated 08/04/09.
2. Timber Delivery notes received in an email from Mary Kong of Haverstock Associates LLP to the assessor dated 10/02/09.
3. Email from Mary Kong of Haverstock Associates LLP to the assessor dated 11/02/09.

MW10	Designing for Robustness	1

Compliance Requirements:
One credit is awarded where protection is given to the vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements.

Credit Validation:
The vulnerable areas of the building will be the main entrances and thoroughfares, the car parking/delivery area at the front of the building. As there are only small kitchens/tea points and no commercial sized kitchens which would require trolley service there will not be durability features associated with this.
It has been confirmed [1] that there will be kick plates installed on all internal door, there will be a durable entrance mat and rubber flooring in the tea points playrooms and toilet area (also shown on a drawing [2]. These areas are thought to have high pedestrian traffic.
The external delivery area can be seen on a drawing [3]. It was confirmed that [4] the area of the building where vehicles are accessible is to the North of the building. This part of the building is clad with engineering bricks which are durable and robust. The gates are constructed with timber and steel structure. There is also a removable bollard at the main entrance gate which could stop vehicles getting onto the site altogether, this is thought to be robust and fit for purpose.

This credit has been awarded.

Credit References:
1. Email from Mary Kong of Haverstock Associates LLP to the assessor dated 07/07/08.
2. Drawing titled 'Ground: Floor Finishes Plan' rev C dated 6th May 2008 produced by Haverstock Associates LLP.
3. Drawing titled 'Pedestrian and Cyclist Safety' rev A dated 31st July 2008 produced by Haverstock Associates LLP.
4. Email from Mary Kong of Haverstock Associates LLP to the assessor dated 19/12/08.

MW12	Storage of Recyclable Waste	1

Compliance Requirements:
One credit is awarded where evidence provided demonstrates that a central, dedicated storage space is provided for materials that can be recycled. This can be either within the building itself, or on site using skips, (provided there is good access for collections and it is within easy reach of the building).

Credit Validation:
It has been confirmed on a drawing [1] that an area of $7m^2$ has been allocated for recycling waste. This is located in the loading bay and therefore has good vehicle access, this area is also well within 20m from a staircase to all floors.

This credit has been awarded.

Credit References:
1. Drawing titled 'Storage of Recyclable waste for BREEAM' produced by Haverstock Associate Architects received in an email from Mary Kong of Haverstock Associate Architects to the assessor dated 31/07/08.

LAND USE AND ECOLOGY SECTION

LE1	Reuse of Land	1

Compliance Requirements:
One credit is awarded where evidence provided demonstrates that the footprint of the proposed development largely falls within the boundary of land previously developed.

Credit Validation:
It has been confirmed in a drawing that 995m^2 of the building footprint is on land which has been previously developed and 258m^2 is on land which has not been previously developed. (79%)

This credit has been awarded.

Credit References:
1. Drawing titled 'Reuse of Land for BREEAM' produced by Haverstock Associate Architects received in an email from Mary Kong of Haverstock Associate Architects to the assessor dated 31/07/08.

LE2	Contaminated Land	1

Compliance Requirements:
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.

Credit Validation:
It has been confirmed by the design team that the land is significantly contaminated. This has been backed up by a number of reports.
The site investigation report [2] confirmed that soil sample test show an elevated level of arsenic, lead and benzo -a-pyrene which would have significant harm to the users of the building. As a result of this it was recommended that a 1m deep layer of soil was removed across the site and replaced with new soil. This is classed as significant contamination and remediation is needed.
It is confirmed in the report that it has been produced in line with CLEA guidance.

It has been confirmed [1] that the land was remediated before the development was constructed in line with the remediation report [3]

This credit has been awarded.

Credit References:
1. Email from Mary Kong of Haverstock Associate Architects to the assessor dated 31/07/08.
2. Document titled 'A factual report of site investigation undertaken for Agar Nursery' dated 6,7 and 8th March 2006 produced by Chelmer Site Investigations
3. Document titled 'Cover Layer Report' dated October 2006 produced by Mayer Environmental.

LE3	Ecological Value of Land & Protection of Ecological Features	1

Compliance Requirements:
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..

Credit Validation:
It has been confirmed by the completion of checklist A4 by the architect [1] that the land is of low ecological value.

This credit has been awarded

Credit References:
1. Email from Mary Kong of Haverstock Associate Architects to the assessor dated 29/09/08.

LE4	Mitigating Ecological Impacts	0

Compliance Requirements:

First Credit:

One credit is awarded where evidence provided demonstrates the change in ecological value of the site, as a result of development, is between less than zero and equal to, or less than, minus nine species, i.e. a small negative change.

Second Credit:

One credit is awarded where evidence provided demonstrates there is no negative change in the ecological value of the site as a result of development, i.e. equal to, or greater than, zero species.

Credit Validation:

This credit cannot be awarded as a suitably qualified ecologist was not appointed.

LE5	Enhancing Site Ecology	0

Compliance Requirements:

First Credit:

One credit is awarded where evidence provided demonstrates that the design team (or client) has il) 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.

Second credit

Where evidence provided demonstrates there is a positive increase in the ecological value of the site of up to (but not including) 6 species.

Third credit

Where evidence provided demonstrates there is a positive increase in the ecological value of the site of 6 species or greater.

Refer to Appendix for further guidance.

Credit Validation:

This credit cannot be awarded as a suitably qualified ecologist was not appointed.

LE6	Long Term Impact on Biodiversity	0

Compliance Requirements:

First Credit:

One credit is awarded where evidence provided demonstrates that the client has committed to achieving the mandatory requirements and at least two of the additional requirements as listed in the credit Compliance Requirements.

Second Credit:

One credit is awarded where evidence provided demonstrates that the client has committed to achieving the mandatory requirements and at least four of the additional requirements as listed in the credit Compliance Requirements.

Refer to Appendix for further guidance.

Credit Validation:

This credit cannot be awarded as a suitably qualified ecologist was not appointed.

POLLUTION SECTION

P1	Refrigerant GWP - Building Services	1

Compliance Requirements:

One credit is awarded 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.

Refrigerant	*GWP*
R134a(HFC-134a)	*1,300*
R407C (HCFC-407C)	*1,600*
R290 (HC290 propane)	*3*
R600 (HC600 butane)	*3*
Ammonia	*0*

*HFCs **do not** comply. HCs, ammonia and the specification of no refrigeration **do** comply.*

Note: This credit can be awarded by default, where the total refrigerant charge in a single system (including installations of multiple split units) or plant room is less than 5kg or where a solid refrigerant is used.

Credit Validation:

It has been confirmed in an email [1] that there is no refrigerant in use, installed and proposed in the M+E services in the development.

This credit has been awarded

Credit References:

1. Email from Sam Flanagan of CBG Consultants Ltd to the assessor dated 25/07/08.

P2	Preventing Refrigerant Leaks	2

Compliance Requirements:

2 credits are awarded as follows:

Credits	
1	*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	*Where evidence provided demonstrates that the provision of automatic refrigerant pump down is made to a heat exchanger (or dedicated storage tanks) with isolation valves or where there are no refrigerants specified for the development.*

The first credit is achieved when EITHER systems using refrigerants are contained in a moderately air tight enclosure and a refrigerant leak detection system is installed covering high-risk parts of the plant, OR when an automatic permanent refrigerant leak detection system is specified, which is not based on the principle of detecting or measuring the concentration of refrigerant in air.

Credit Validation:

It has been confirmed in an email [1] that there is no refrigerant in use, installed and proposed in the M+E services in the development. These credits can be awarded by default.

This credit has been awarded

Credit References:

1. Email from Sam Flanagan of CBG Consultants Ltd to the assessor dated 25/07/08.

P4	Insulant GWP	1

Compliance Requirements:

One credit is awarded 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.

The criteria apply to insulation products used in the building fabric (e.g. walls, roof, floor, window frames, cavity closures etc) and in the building services (e.g. refrigerant pipework, ductwork, hot and cold water pipes, water tanks etc) and internal sound proofing.

Credit Validation:

It has been confirmed in the specification [1] that all thermal insulation will have a GWP of less than 5 and an ODP of Zero.

The manufacturers details of a number of insulations used in the building have been received as follows;

Insulation	GWP	ODP	Reference
Isowool 1000	0	0	[2]
Rockwool	0	0	[2]
Bauder PIR flat board [3]	4.9	0	[2] [3]
Isowool acoustic insulation	0	0	[2]
Warmcell insulation	0	0	[2]
Recticel	<5	0	[4] [5]

The insulation materials in the table are the only ones used in the development.

This credit has been awarded.

Credit References:

1. Mechanical Specifications dated 05/01/07 were received by the assessor on 20/02/08 from Haverstock Associate Architects.
2. Drawing titled 'Wall Roof and Floor types' Rev C dated 21/01/08 produced by Haverstock Associate Architects.
3. Bauder Website 'http://www.bauder.co.uk/single-ply-systems/thermoplan-fpo-system/environmental-credentials' last accessed by the assessor 26/05/09.
4. Recticel Website http://www.recticelinsulation.com/UK/EN/Material+Characteristics/ last accessed by the assessor 26/05/09.
5. Document titled 'Construction specification – P10' produced by Haverstock Associate Architects dated 04/04/09

P6	NOx Emissions of Heating Source	3

Compliance Requirements:

Up to three credits available, depending on the dry NOx emissions from delivered space heating energy:

1 credit where dry NOx emissions are ≤100 mg/kWh (at 0% excess O_2);
2 credits where dry NOx emissions are ≤70 mg/kWh (at 0% excess O_2);
3 credits where dry NOx emissions are ≤40 mg/kWh (at 0% excess O_2).

Credit Validation:

It has been confirmed in the Mechanical Specifications [1] that a Hoval Topgas 45 has been specified for the development.

Manufacturers details [2] confirm that the emissions are 30.2mg/kWh at 0% O_2.

Three credits have been awarded.

Credit References:

6. Mechanical Specifications dated 05/01/07 were received by the assessor on 20/02/08 from Haverstock Associate Architects.
7. Manufacturer's details titled 'Hoval Topgas Condensing Boilers 30-60 kW' Date May 2007 produced by Hoval Ltd.

P7	Flood Risk / Water Run-Off	2

Compliance Requirements:

2 credits are awarded as follows:

Credits	
2	*Where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. OR*
1	*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 further credit is awarded 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.

Credit Validation:

The Environment Agency flood maps [1] (accessed by the assessor) show that the development is located in an area of low annual probability of flooding (less than 0.1% a year or 1 in 1000 year occurrence).

Two credits have been awarded for site being in an area of low flood risk.

Credit References:

1. Website: http://maps.environment-agency.gov.uk last accessed by the assessor 13th May 2009, copy saved in project folder.

P8	Minimising Watercourse Pollution	0

Compliance Requirements:

One credit where 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 or plant areas.

Credit Validation:

This credit will not be pursued

P11	Renewable & Low Emission Energy	0

Compliance Requirements:

3 credits can be awarded as follows:

1. *Where a feasibility study considering renewable and low emission energy has been carried out and the results implemented.*
2. *Where the first credit is achieved and 10% of total energy demand for the building/development is supplied from local renewable or low emission energy sources.*
3. *Where the first credit is achieved and 15% of total energy demand for the building/development is supplied from local renewable or low emission energy sources.*

Credit Validation:

This credit will not be pursued.

P12	Reduction of Night Time Light Pollution	1

Compliance Requirements:
One credit is awarded 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 (www.ile.org.uk/documents/RLP%202005.pdf).

Credit Validation:
It has been confirmed in a document [1] that all the external lighting design is in accordance with ILE guidance for obtrusive light at night time.
Photo cell and a time switch are provided for switch lights off between 23:00 and 07:00.

This credit has been awarded.

Credit References:
1. Document titled '152a9 Electrical BREEAM Criteria' dated 18/09/08 produced by CBG Consultants Ltd.

P13	Noise Attenuation	11

Compliance Requirements:
One credit is awarded where evidence provided demonstrates that 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.

Where there are no noise sensitive buildings within the sites locality (i.e. further than 800m from the development being assessed) then the credit can be awarded.

Credit Validation:
It has been confirmed that a noise impact assessment [1] has been carried out for the development in compliance with BS 4142:1997 [2]. This measures existing background noise levels and noise resulting from the development.
It is predicted that noise levels from the site will not be greater than 37dB, this is 9dB lower than the existing background noise levels. Therefore no additional noise attenuation measures are required to be specified.

This credit has been awarded.

Credit References:
1. Document titled 'Preliminary comments on effect of acoustics to feasibility of development' dated 2nd March 2006 produced by Hoare Lea.
2. Email from Barry Jobling of Hoare Lea to Mary Kong of Haverstock Associate Architects dated 29/09/08.
3. Letter from Matthew Cand of Hoare Lea to the London Borough of Camden dated 23/03/07.

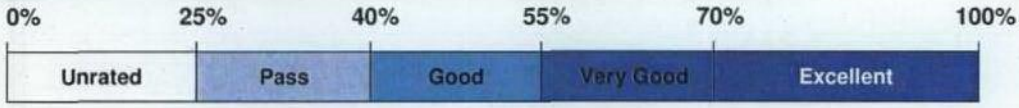
Appendix A The Rating System for BREEAM

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. An overall BREEAM rating of Pass, Good, Very Good or Excellent is given, depending on the overall number of credits achieved.

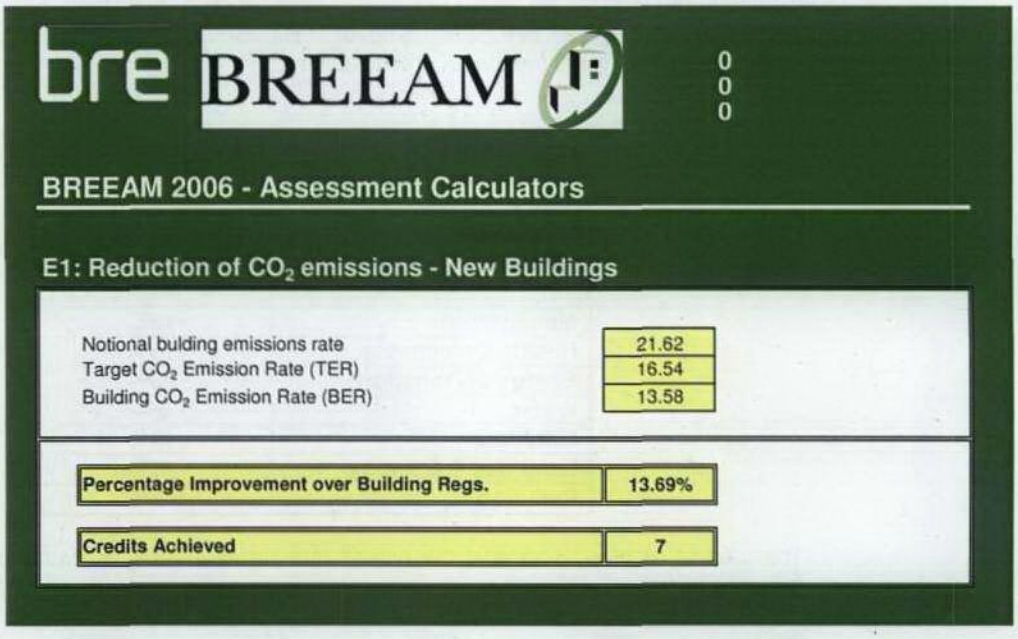
The overall rating is derived from the percentage of credits achieved under each heading, multiplied by the Environmental Weighting Factor:

CATEGORY	Weighting factor
Management	15%
Health & Wellbeing	15%
Energy & Transport	25%
Water	5%
Materials	10%
Land Use & Ecology	15%
Pollution	15%

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



Appendix B Calculation Tools



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BREEAM 2006 - Assessment Calculators

E1: Reduction of CO_2 emissions - New Buildings

Notional bulding emissions rate	21.62
Target CO_2 Emission Rate (TER)	16.54
Building CO_2 Emission Rate (BER)	13.58

Percentage Improvement over Building Regs.	**13.69%**
Credits Achieved	**7**

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Bespoke BREEAM 2006

T2: Staff Transport - CO_2 emissions calculator: Bespoke Building Type 2

Please select the appropriate stage of assessment from the drop down menu

Bespoke BREEAM Assessment: type 2

Please select the type of area that best describes the proximity of the assessed building from the drop down menu

London borough * Refer to the assessment manual for a detailed description of each location.

Please select the UK region in which the assessed building is located (see map on right)

Rest of inner London

Is the number of occupants known?

No

Please enter the Staff Occuppied Area m2 850

Please enter the total number of car parking spaces 0

Predicted transport CO_2 emissions 352.84 [kg/person/yr]

Number of Credits Achieved 5.00

Note: there is a maximum of five credits available for building type 2

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BREEAM 2006

MW1: Materials Specification - Major Building Elements

Green Guide to Specification

	Description of Elements	Area (m²)	Area that is 'A' rated (m²)	Mid 'A' factor	Potential Ecopoints	Achieved Ecopoints 'A' material
External Walls	timber rainscreen cladding on a timber frame; warmcell insulation and plasterboard lining, and cavity masonry walls scattered with glazed bricks, timber stud and plasterboard lining.	540.58	540.58	0.885	478.41	478.41
Roof	Mainy Bauder Sedum roof on timber construction, addition roof is Pwoder coated metal sheet on timber joists with a plasterboard lining.	797.90	797.90	1.08	861.73	861.73
Upper floor Slab	Timber floor joists with insulation in between	98.20	98.20	1.36	133.55	133.55
Windows	Aluminium framed	226.00	0.00	0.71	160.46	0.00
Internal Walls	Plasterboard panels onTimber stud, also some engineering bricks scattered with glazed bricks.	424.90	342.90	0.42	178.46	144.02
				SUM	1812.62	1617.72

Assessed/Target	0.89
Credits using the Green Guide	5

	Description of Elements	Area (m²)	Area that is 'A' rated (m²)	Mid 'A' factor	Potential Ecopoints	Achieved Ecopoints 'A' material
Floor Finishes / Covering	A mixture of Timber, Lino, Rubber, and Carpet	658.40	639.80	0.717	472.07	458.74

Assessed/Target	0.97
Credits using the Green Guide	2.00

Total Credit for MW1	7.00

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Bespoke BREEAM 2006

MW8: Responsible Sourcing of Materials

Elements Present	7
Credits	Points Required
1	5.00
2	10.00
3	15.00

ELEMENT		MATERIAL TYPES	Total Volume Percentage	Percentage or Volume of Materials compliant with each Tier				% of assessd compliant with Tiers 1-4 (min. 80%)	Points scored
				Tier 1 (3 points)	Tier 2 (2 points)	Tier 3 (1.5 points)	Tier 4 (1 point)		
ROOF		Percentage							
Present	Mat 1	Timber	83.00	83.00				83.00	3.00
	Mat 2	Sedum	17.00						
	Mat 3								
	Mat 4								
	Total % of element (relevant materials) assessed		100.00						
FRAME		Percentage							
Present	Mat 1	Timber	100.00	100.00				100.00	3.00
	Mat 2								
	Mat 3								
	Mat 4								
	Total % of element (relevant materials) assessed		100.00						
EXTERNAL WALLS		Percentage							
Present	Mat 1	Brick	40.00					60.00	0.00
	Mat 2	Timber	60.00	60.00				no points, < 80% complies	
	Mat 3								
	Mat 4								
	Total % of element (relevant materials) assessed		100.00						
GROUND & UPPER FLOOR		Percentage							
Present	Mat 1	Concrete	80.00					0.00	0.00
	Mat 2	Other	20.00					no points, < 80% complies	
	Mat 3								
	Mat 4								
	Total % of element (relevant materials) assessed		100.00						
FOUNDATIONS / SUBSTRUCTURE		Percentage							
Present	Mat 1	Concrete	100.00					0.00	0.00
	Mat 2							no points, < 80% complies	
	Mat 3								
	Mat 4								
	Total % of element (relevant materials) assessed		100.00						
DOORS		Percentage							
Present	Mat 1	Timber	90.00	90.00				90.00	3.00
	Mat 2	Metal	2.00						
	Mat 3	Glass	2.00						
	Mat 4	Other	6.00						
	Total % of element (relevant materials) assessed		100.00						
WINDOWS		Percentage							
Present	Mat 1	glass	80.00					0.00	0.00
	Mat 2	metal	20.00					no points, < 80% complies	
	Mat 3								
	Mat 4								
	Total % of element (relevant materials) assessed		100.00						

Total Points Achieved	9.00
Credits Achieved	1

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Agar Grove C
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BREEAM

Bespoke BREEAM 2006

21/09/06

Ref	Title	Whole Building / Site	Reception	Offices	Meeting Room	Consultation Rooms	Staff Room	Kitchen	Creche	Sensory Room	Parental Training Room	Sleeping Rooms	Playrooms	Laundry	Max credits available
		Enter the area (m^2) of each function into the cells below each function name													
		522.5	30	73.5	0	15	27	40	47	16.5	48.5	14	205.5	5.5	
Management															
M1	Commissioning	1	1	1	1	1	1	1	1	1	1	1	1	1	2
M4	Considerate Constructors	0	0	0	0	0	0	0	0	0	0	0	0	0	2
M5	Construction Site Impacts	1	1	1	1	1	1	1	1	1	1	1	1	1	4
M8	Consultation	2	2	2	2	2	2	2	2	2	2	2	2	2	2
M12	Building User Guide	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Credits Available		11	11	11	11	11	11	11	11	11	11	11	11	
	Credits Achieved		5	5	5	5	5	5	5	5	5	5	5	5	
	% Function Score		45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	45.5%	
	% Total Score		2.6%	6.4%	0.0%	1.3%	2.3%	3.5%	4.1%	1.4%	4.2%	1.2%	17.9%	0.5%	
	Section Score	45%													
Health and Wellbeing															
HW1	Daylighting	N/A	1	0	0	0	0	0	0	0	0	N/A	1	N/A	1
HW2	View Out	N/A	N/A	1	N/A	N/A	N/A	N/A	N/A	N/A	1	N/A	N/A	N/A	1
HW3	Glare Control	N/A	N/A	1	1	1	1	N/A	0	1	1	N/A	N/A	N/A	1
HW4	High Frequency Lighting	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW5	Internal & External Lighting Levels	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW6	Lighting Zones	N/A	1	1	1	1	1	1	1	1	1	1	1	N/A	1
HW8	Potential for Natural Ventilation	0	0	0	0	0	0	0	0	0	0	0	0	0	1
HW9	Internal Air Pollution	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW10	Indoor Air Quality	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW11	Ventilation Rates	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW14	Thermal Comfort	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW15	Thermal Zoning	0	0	0	0	0	0	0	0	0	0	0	0	0	1
HW16	Microbial Contamination	1	1	1	1	1	1	1	1	1	1	1	1	1	1
HW17	Acoustic Performance - Internal Noise Levels	N/A	N/A	0	0	0	0	0	0	0	0	0	0	N/A	1
	Acoustic Performance - Reverberation Times	N/A	N/A	N/A	N/A	0	N/A	N/A	N/A	0	0	N/A	N/A	N/A	1
HW23	Outdoor Space	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	Credits Available		12	15	14	15	14	13	14	15	16	12	13	10	
	Credits Achieved		10	11	10	10	10	9	9	10	11	9	10	8	
	% Function Score		83.3%	73.3%	71.4%	66.7%	71.4%	69.2%	64.3%	66.7%	68.8%	75.0%	76.9%	80.0%	
	% Total Score		4.8%	10.3%	0.0%	1.9%	3.7%	5.3%	5.8%	2.1%	6.4%	2.0%	30.3%	0.8%	
	Section Score	73%													

Energy

E1	Reduction of CO_2 Emissions	7	7	7	7	7	7	7	7	7	7	7	7	15
E2	Sub Metering of Substantial Energy Uses	1	1	1	1	1	1	1	1	1	1	1	1	1
E3	Sub Metering of Areas / Tenancy	1	1	1	1	1	1	1	1	1	1	1	1	1
E4	External Lighting	0	0	0	0	0	0	0	0	0	0	0	0	1

Credits Available	18	18	18	18	18	18	18	18	18	18	18	18
Credits Achieved	9	9	9	9	9	9	9	9	9	9	9	9
% Function Score	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%	50.0%
% Total Score	2.9%	7.0%	0.0%	1.4%	2.6%	3.8%	4.5%	1.6%	4.6%	1.3%	19.7%	0.5%

Section Score 50%

Transport Credits

T1	Provision of Public Transport	4	4	4	4	4	4	4	4	4	4	4	4	5
T2	Transport CO_2	5	5	5	5	5	5	5	5	5	5	5	5	5
T3	Proximity to Key Amenities	1	1	1	1	1	1	1	1	1	1	1	1	1
T4	Proximity to Other Amenities	1	1	1	1	1	1	1	1	1	1	1	1	1
T5	Cyclist Facilities	0	0	0	0	0	0	0	0	0	0	0	0	2
T6	Pedestrian & Cyclist Safety	0	0	0	0	0	0	0	0	0	0	0	0	1
T8	Travel Plan	0	0	0	0	0	0	0	0	0	0	0	0	1

Credits Available	16	16	16	16	16	16	16	16	16	16	16	16
Credits Achieved	11	11	11	11	11	11	11	11	11	11	11	11
% Function Score	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%
% Total Score	3.9%	9.7%	0.0%	2.0%	3.6%	5.3%	6.2%	2.2%	6.4%	1.8%	27.0%	0.7%

Section Score 69%

Combined Energy & Transport section scores

Credits Available	34	34	34	34	34	34	34	34	34	34	34	34
Credits Achieved	20	20	20	20	20	20	20	20	20	20	20	20
% Function Score	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%	58.8%
% Total Score	3.4%	8.3%	0.0%	1.7%	3.0%	4.5%	5.3%	1.9%	5.5%	1.6%	23.1%	0.6%

Section Score 59%

Water Credits

W1	Water Consumption	0	0	0	0	0	0	0	0	0	0	0	0	3
W2	Water Meter	1	1	1	1	1	1	1	1	1	1	1	1	1
W3	Major Leak Detection	0	0	0	0	0	0	0	0	0	0	0	0	1
W4	Sanitary Supply Shut Off	0	0	0	0	0	0	0	0	0	0	0	0	1
W5	Water Recycling	0	0	0	0	0	0	0	0	0	0	0	0	1
W6	Irrigation Systems	1	1	1	1	1	1	1	1	1	1	1	1	1

Credits Available	8	8	8	8	8	8	8	8	8	8	8	8
Credits Achieved	2	2	2	2	2	2	2	2	2	2	2	2
% Function Score	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
% Total Score	1.4%	3.5%	0.0%	0.7%	1.3%	1.9%	2.2%	0.8%	2.3%	0.7%	9.8%	0.3%

Section Score 25%

Materials & Waste Credits

MW1	Materials Specification - Major Building Elements	7	7	7	7	7	7	7	7	7	7	7	7	7	7
MW2	Hard Landscaping & Boundary Protection	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MW5	Reuse of Building Façade	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MW6	Reuse of Building Structure	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MW7	Recycled Aggregates	0	0	0	0	0	0	0	0	0	0	0	0	0	1
MW8	Responsible Sourcing of Materials	1	1	1	1	1	1	1	1	1	1	1	1	1	3
MW10	Designing for Robustness	1	1	1	1	1	1	1	1	1	1	1	1	1	1
MW12	Storage of Recyclable Waste	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Credits Available	16	16	16	16	16	16	16	16	16	16	16	16	
Credits Achieved	11	11	11	11	11	11	11	11	11	11	11	11	
% Function Score	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	
% Total Score	3.9%	9.7%	0.0%	2.0%	3.6%	5.3%	6.2%	2.2%	6.4%	1.8%	27.0%	0.7%	

Section Score 69%

Land Use and Ecology Credits

LE1	Reuse of Land	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LE2	Contaminated Land	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LE3	Ecological Value of Land & Protection of Ecological	1	1	1	1	1	1	1	1	1	1	1	1	1	1
LE4	Mitigating Ecological Impact	0	0	0	0	0	0	0	0	0	0	0	0	0	2
LE5	Enhancing Site Ecology	0	0	0	0	0	0	0	0	0	0	0	0	0	3
LE6	Long Term Impact on Biodiversity	0	0	0	0	0	0	0	0	0	0	0	0	0	2

Credits Available	10	10	10	10	10	10	10	10	10	10	10	10	
Credits Achieved	3	3	3	3	3	3	3	3	3	3	3	3	
% Function Score	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	30.0%	
% Total Score	1.7%	4.2%	0.0%	0.9%	1.6%	2.3%	2.7%	0.9%	2.8%	0.8%	11.8%	0.3%	

Section Score 30%

Pollution Credits

P1	Refrigerant GWP - Building Services	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P2	Preventing Refrigerant Leaks	2	2	2	2	2	2	2	2	2	2	2	2	2	2
P4	Insulant GWP	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P6	Nox Emissions of Heating Source	3	3	3	3	3	3	3	3	3	3	3	3	3	3
P7	Flood Risk / Water Run Off	2	2	2	2	2	2	2	2	2	2	2	2	2	3
P8	Minimising Watercourse Pollution	0	0	0	0	0	0	0	0	0	0	0	0	0	1
P11	Renewable & Low Emission Energy	0	0	0	0	0	0	0	0	0	0	0	0	0	3
P12	Reduction of Night Time Light Pollution	1	1	1	1	1	1	1	1	1	1	1	1	1	1
P13	Noise Attenuation	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Credits Available	16	16	16	16	16	16	16	16	16	16	16	16	
Credits Achieved	11	11	11	11	11	11	11	11	11	11	11	11	
% Function Score	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	68.8%	
% Total Score	3.9%	9.7%	0.0%	2.0%	3.6%	5.3%	6.2%	2.2%	6.4%	1.8%	27.0%	0.7%	

Section Score 69%

breeam

The Code for Sustainable Buildings

This is to certify that

Agar Children's Centre, Wrotham Road, off Agar Grove, London NW1 9SU

has achieved a score of 55.47%, and a BREEAM rating of

VERY GOOD

Pass

Excellent

This Design and Procurement assessment was carried out under the 2006 version of BREEAM Bespoke

Signed on behalf of BRE Global Ltd

5th June 2009
Date

Fabia Pennington
Licensed Assessor

AECOM
On behalf of

London Borough of Camden, Children, Schools and Families
Developer / Client

Haverstock Associate LLP
Architect

D.W. Bevan Limited
Contractor

CBG Consultants Limited
Services Engineer

Certificate Reference: FABM-BES-VF03-48

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