Further Information/Action
None required

3. 6 MATERIALS

MW1	Materials specification – major building materials	7 of 7 credits achieved

Aim

To recognise and encourage the use of construction materials with a low environmental impact over the full life cycle of the building.

Credit Criteria

Up to seven credits where evidence provided demonstrates that the major building elements specified have an 'A rating', as defined in the Green Guide to Specification.

Credit Validation

Walker Bushe Architects have provided evidence as to the areas of external walls, roof, upper floor slab, windows, internal walls and floor finishes/coverings. This has enabled the areas to be calculated and entered into the MW1 Materials Specs calculator. As the majority of these elements have been re-used in-situ, the calculator has determined that all seven credits can be awarded.

Credit References

1. Materials specification data sheet provided by Walker Bushe Architects

2. Drawings 500/FF01 to 500/FF04

Further Information/Action

No further information required

MW2	Hard landscaping and boundary protection	1 of 1 credit achieved

Aim

To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking account of the full life cycle of materials used.

Credit Criteria

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 rating, as defined by the Green Guide to Specification.

Credit Validation

The client has provided drawings to illustrate that there is no external hard landscaping or specific boundary protection on the development.

Therefore this credit is awarded.

Credit References

1. Drawings 500/S001 to 500/S005

2. Drawings 500/GA01 to 500/GA05

Further Information/Action

None required

MW5	Re-use of building facade	1 of 1 credit achieved

Aim

To recognise and encourage the reuse of existing façades from buildings that occupy the site.

Credit Criteria

One credit where 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 an internal refurbishment project. The client has provided drawings illustrating the existing layout and new layout which confirm that the entire building façade remains unaffected.

Therefore this credit is awarded.

Credit References

1. Drawings 500/S001 to 500/S005

2. Drawings 500/GA01 to 500/GA05

Further Information/Action

None required

MW6	Re-use of building structure	1 of 1 credit achieved

Aim

To recognise and encourage the reuse of existing structures that previously occupied the site.

Credit Criteria

One credit 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 an internal refurbishment project. The client has provided drawings illustrating the existing layout and new layout which confirm that all the primary structure is being reused without significant strengthening or alteration works.

Therefore this credit is awarded.

Credit References

1. Drawings 500/S001 to 500/S005

2. Drawings 500/GA01 to 500/GA05

Further Information/Action

None required

MW7	Recycled aggregates	1 of 1 credit achieved

Aim

To recognise and encourage the use of recycled aggregates in construction thereby reducing the demand for virgin material.

Credit Criteria

One credit where evidence provided demonstrates that 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.).*

Credit Validation

Walker Bushe Architects have confirmed by email that no significant source of new aggregate was used during the refurbishment of the school. Only very minor *masonry structural works were carried out.*

Therefore this credit is awarded.

Credit References

1. *Email from Walker Bushe Architects, 22nd August, 2007*

Further Information/Action

No further information required

MW8	Responsible sourcing of materials	0 of 3 credits achieved

Aim

To recognise and encourage the specification of responsibly sourced materials for key building elements.

Credit Criteria

Up to three credits where evidence provided demonstrates that materials used in key elements are responsibly sourced.

Credit Validation

Walker Bushe Architects have confirmed that the roof, external walls, foundation/substructure and windows are existing and have not been changed during the refurbishment, i.e. have been re-used insitu.

New interior doors and flooring have been specified but no certification evidence has been provided for these elements.

Walker Bushe Architects have explained why there were unable to use doors with certification sources and why it was not possible to obtain a certification certificate could not be obtained;

- Doors – the new interiors doors do not have a certification source. In order to have certificated doors, we would have to use CPL doors, however these were not used as they are difficult to work with, most of the new doors have vision panels, therefore the construction of these vision panels would have been difficult on the CPL (certificated doors) and more expensive.

- Flooring – Both the 22mm floor grade chipboard and C16 grade timber breams to strengthen the floors were from Castle Timber, due to legal requirements, where a contractor has to ask for "change of custody" materials before purchase, which was not done, they cannot put in written the timber certification. However they were able to tell me verbally that the chipboard was a "change of custody" material and that most of the C16 grade timbers would have been.

Therefore this credit is withheld.

Credit References

1. Email from Walker Bushe Architects, 29th August 2007

Further Information/Action

No further information required

MW10	Designing for robustness	1 of 1 credit achieved

Aim

To recognise and encourage the protection of exposed parts of the building and landscaping to avoid the need for frequent replacement.

Credit Criteria

One credit where evidence provided demonstrates that protection is given to vulnerable parts of the building such as areas exposed to high pedestrian traffic, vehicular and trolley movements.

Credit Validation

Marked up drawings of the building have been provided giving details and location of vulnerable areas in the building as described in the compliance requirements. The durability measures specified in these areas has been described on the drawings

and include the following;

- Kick plates for all doors
- Robust handrails to corridors
- Stainless steel lifts
- Hard-wearing carpets where specified
- Hard-wearing laminate flooring where specified
- All exterior walls are existing masonry

Therefore this credit is awarded

Credit References

1. Site photos of lift, doors and handrails
2. Gerflor Contract Flooring technical specification sheet
3. CityPoint carpet technical specification sheet
4. GypWall Classic wallboard technical specification sheet
5. Drawings 500/GA01 to 500/GA05 marked up giving details and location of vulnerable areas in the building

Further Information/Action

No further information required

MW12	Storage of recyclable waste	2 of 2 credits achieved

Aim

To recognise and encourage recycling of consumables in order to reduce the demand for virgin material and the amount of waste going to landfill or incineration.

Credit Criteria

One credit where 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).

One further credit is awarded where, in addition, policies/procedures have been established at the design/construction stages which:

a. Include procedures for collection and recycling of consumables;

b. Are endorsed at governor level; c. *Are or will be operational at a local level.*
Credit Validation The storage area for recycling has been identified on the drawings, located in the basement of the building and would be accessed through the main entrance and the lift. It is the assessor's opinion that the area is placed within easy reach of the school building and in a location with good vehicular access to facilitate collections. A copy of the recycling policies has been provided, detailing what will be in place when the building is operational. The client has met with Camden's recycling officer to discuss requirements and have agreed that due to space restrictions, recycling bins and bags will be provided around the building to collect the recycling. The recycling policy covers paper, printer cartridges, toner cartridges and plastics.
Credit References 1. Drawing 500/GA01: floors/walls/GA's basement floor plan (level 01) 2. Email from Southbank International School, 2nd August, 2007 3. Letter from Southbank International School, 24th August 2007
Further Information/Action None required.

3. 7 LANDUSE AND ECOLOGY

LE1	Re-use of land	1 of 1 credit achieved
Aim To encourage the reuse of land that has been previously occupied by building developments and discourage the use of previously undeveloped land for building.		
Credit Criteria One credit where evidence provided demonstrates that the footprint of the proposed development largely falls within the boundary of land previously developed.		
Credit Validation This is an internal refurbishment project. The development is completely within the boundary of previously developed land.		

Credit References
1. Drawings 500/S001 to 500/S005
2. Drawings 500/GA01 to 500/GA05
Further Information/Action
None required

LE2	Contaminated land	1 of 1 credit achieved

Aim

To encourage positive action to use contaminated land that otherwise would not have been developed.

Credit Criteria

One credit 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

BRE guidance states that where the level of refurbishment results in no ground works or additional bearing on the foundations this credit can be awarded by default.

The client has confirmed that no ground works have taken place and that no additional bearing on the foundations will occur as part of the internal refurbishment.

Credit References

1. Drawings 500/S001 to 500/S005

2. Drawings 500/GA01 to 500/GA05

Further Information/Action

None required

LE3	Ecological value of land and protection of ecological features	1 of 1 credit achieved

Aim

To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.

Credit Criteria

One credit 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

The site is completely taken up with the existing building and has no ecological value at all. This has been confirmed using the BREEAM checklist A4. All questions in section 1 of the checklist have been answered as no and one or more questions in section 2 have been answered as yes. Therefore according to the guidelines, this credit can be awarded.
Credit References 1. Site map 2. BREEAM Checklist A4
Further Information/Action No further information required

LE4	Mitigating ecological impact	2 of 2 credits achieved
Aim To minimise the impact of a building development project on existing site ecology.		
Credit Criteria One credit where evidence provided demonstrates that the change in ecological value of the site, as a result of development, is less than zero and equal to, or greater than, minus nine species, i.e. a small negative change. Two credits where evidence provided demonstrates that 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 The Ecology Calculator 1 has been used to assess the change in ecological value of the site. Since there no changes to the area outside of the building which comprises only hard-landscaping, there is no change in ecological value to the site. Therefore two credits can be awarded.		
Credit References 1. Ecology Calculator 1		
Further Information/Action No further information required		

LE5	Enhancing site ecology	0 of 3 credits achieved

Aim

To maintain and enhance the ecological value of the site.

Credit Criteria

One credit where evidence provided demonstrates that the design team (or client) has appointed a professional to advise on enhancing and protecting the ecological value of the site; and implemented the recommendations for general enhancement of site ecology.

Two credits where evidence provided demonstrates a positive increase in the ecological value of the site of up to (but not including) 6 species.

Three credits where evidence provided demonstrates a positive increase in the ecological value of the site of 6 or more species.

Credit Validation

The client has confirmed that they will not be appointing a professional to advise and report on enhancing and protecting the ecological value of the site.

Therefore no credits can be awarded.

Credit References

1. Email from Walker Bushe Architects, 22nd August, 2007; Subject – Re: 070816da4003email102-InformationRequiredforBREEAMCredits

Further Information/Action

No further information required

LE6	Long-term impact on biodiversity	0 of 2 credits achieved

Aim

To minimise the long term impact of the development on the site's and surrounding area's biodiversity.

Credit Criteria

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

Two credits where evidence provided demonstrates that the client has committed to achieving the mandatory requirements listed in the Compliance Requirements and at least four of the additional requirements.

Credit Validation

The client has not committed to achieving any of the mandatory requirements listed in the guidance.

Therefore no credits can be awarded.

Credit References

1. Email from Walker Bushe Architects, 22nd August, 2007; Subject – Re: 070816da4003email102-InformationRequiredforBREEAMCredits

Further Information/Action

No further information required

LE7	Consultation with students and staff	0 of 1 credit achieved

Aim

To encourage the design team to include pupils and staff in the design of the school grounds.

Credit Criteria

One credit where evidence is provided to demonstrate the design team consults with staff and pupils, to determine (i) their educational and social requirements for the school grounds, (ii) their ideas for the school ground's design and (iii) where the design team agrees to keep students and staff informed of how their ideas are built into the design.

Credit Validation The client has stated that they are not working towards this credit and have therefore not supplied any evidence in support of it. The credit is withheld.
Credit References None
Further Information/Action None required

LE8	Local wildlife partnerships	0 of 1 credit achieved

Aim

To encourage the design team to form a partnership with a local group that has wildlife expertise, in order to benefit from their local knowledge and on-going support.

Credit Criteria

One credit where evidence is provided to demonstrate the design team sets up a partnership with a local group that has wildlife expertise (e.g. the local wildlife trust).

Credit Validation

The client has stated that they are not working towards this credit and have therefore not supplied any evidence in support of it. The credit is withheld.

Credit References

None

Further Information/Action

None required

3. 8 POLLUTION

P1	Refrigferant GWP – Building Services	0 of 1 credit achieved

Aim

To reduce the contribution to potential climate change from refrigerants with a high global warming potential.

Credit Criteria

One credit 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.

Credit Validation

The client has stated that they are not working towards this credit and have therefore not supplied any evidence in support of it. The credit is withheld.

Credit References

None
Further Information/Action None required

P2	Preventing refrigerant leaks	0 of 1 credit achieved
Aim To reduce the emissions of refrigerants to the atmosphere arising from leakages in cooling plant.		
Credit Criteria One credit where evidence provided demonstrates that refrigerant leaks can be detected **AND** 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.		
Credit Validation Walker Bushe Architects have confirmed that there is a R410A air-conditioning refrigerant with a global warming potential of 1900, and there is no plan to put in a refrigerant leak detection system. Therefore this credit is withheld.		
Credit References 1. Email from Walker Bushe Architects, 29th August, 2007		
Further Information/Action No further information required		

P4	Insulant GWP	1 of 1 credit achieved

Aim

To reduce the potential for global warming from substances used in the manufacture or composition of insulating materials.

Credit Criteria

One credit 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.

Credit Validation

The project team has provided the technical data sheets for Isover Glass Mineral Wool Insulation that is specified in all internal walls. The manufacturer's specifications state that Isover products have a Global Warming Potential of less than 5.

The flors are insulated using Rocksilk Universal Slab and an email has been provided from the manufacturers stating that their products contain no gases which have been identified as having a Global Warming Potential and therefore achieve a GWP score of zero.

Therefore this credit is awarded.

Credit References

1. Technical data sheets for 'Isover Glass Mineral Wool Insulation'

2. Email from Knauf Insulation to Walker Bushe Architects, 28th August, 2007

Further Information/Action

No further information required

P6	NO_x emissions of heating source	0 of 3 credits achieved

Aim

To encourage the use of heating that minimises NOx emissions, and therefore reduces pollution of the local environment.

Credit Criteria

One credit where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are:

=100 mg/kWh delivered heating energy. Two credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are: =70 mg/kWh delivered heating energy. Three credits where evidence provided demonstrates that the maximum dry NOx emissions from delivered space heating energy are: =40 mg/kWh delivered heating energy. AND where emissions from delivered water heating energy are 100 mg/kWh or less.	
Credit Validation The client has stated that they are not working towards this credit and have therefore not supplied any evidence in support of it. The credit is withheld.	
Credit References None	
Further Information/Action None required	

P7	Minimising flood risk	2 of 3 credits achieved
Aim To encourage the development of buildings in areas with reduced risk of flooding and ensure that storm water run-off from the development does not increase the flood risk on site or elsewhere.		
Credit Criteria Two credits can be awarded where evidence provided demonstrates that the assessed development is located in a zone defined as having a low annual probability of flooding. OR One credit 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. One additional credit can be 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 client has provided a flood map from the Environment Agency website that indicates that for the developments location, the flood risk is 1 in 1000 years which corresponds to a low flood risk rating according to Environment Agency definitions.

Te only hard surfaces are the roofs which are all connected to spouting/downpipes.

No SUDS are proposed as part of this development.

Therefore two credits can be awarded.

Credit References

1. Environment Agency Flood Map

Further Information/Action

No further information required

P8	**Minimising water course pollution**	**0 of 1 credit achieved**

Aim

To reduce the potential for pollution to natural watercourses from surface water run-off from buildings and hard surfaces.

Credit Criteria

One credit 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.

Credit Validation

Walker Bushe Architects have confirmed that an air-conditioning unit will be installed on the roof. The data specifications state that the unit requires refrigerant oil but no oil/petrol interceptors or filtration systems have been specified to reduce the risk of contamination or spillage.

Therefore this credit is withheld.

Credit References

1. Email from Walker Bushe Architects, 29th August, 2007

2. Technical Data Sheet: Daikin RXS-D Pair Application, Inverter Controlled Unit
Further Information/Action No further information required

P11	Renewable and low emission energy	0 of 3 credits achieved
Aim To reduce atmospheric pollution by encouraging locally generated renewable or low emission energy to supply a significant proportion of the building's energy demand.		
Credit Criteria One credit where evidence provided demonstrates that a feasibility study considering renewable and low emission energy has been carried out and the results implemented. Two credits where evidence provided demonstrates that 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. Three credits 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.		
Credit Validation The client has stated that they are not working towards this credit and have therefore not supplied any evidence in support of it. The credit is withheld.		
Credit References None		
Further Information/Action None required		

P12	Reduction of night time light pollution	1 of 1 credit achieved

Aim

To ensure that night-time lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary, light pollution, energy consumption and nuisance to neighbouring properties.

Credit Criteria

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.

Credit Validation

The client has confirmed that no new lighting is to be installed as part of the refurbishment.

Therefore as per the amended guidelines, this credit can be awarded by default.

Credit References

1. Letter from walker Bushe Architects, 24th August, 2007

Further Information/Action

No further information required

4. APPENDIX A: CALCULATIONS

BREEAM Schools 2006 - Assessment Tool

Assessment Results Summary

BREEAM Rating: 17 Conway Street	Good

Core & Design & Procurement Credit Allocation Table

Overall Credit Allocation	Env Weighting	Available	Achieved	Percentage section credits achieved	Overall Weighted Percentage
Management	15%	20	4	20.00%	3.00%
Health & Wellbeing	15%	18	10	55.56%	8.33%
Energy		19	3	15.79%	
Transport		6	4	66.67%	
Energy & Transport	25%	25	7	28.00%	7.00%
Water	5%	7	5	71.43%	3.57%
Materials	10%	17	14	82.35%	8.24%
Land Use & Ecology	15%	12	5	41.67%	6.25%
Pollution	15%	14	4	28.57%	4.29%
				Totals	40.68%

BREEAM Rating	% Benchmark
Unclassified	<25
Pass	=25 - <40
Good	=40 - <55
Very Good	=55 - <70
Excellent	=70

W1: Water Consumption Calculator

	litres per use	Proportion (by % or No.of fittings)	uses/day/person	m3/yr
WC's				
9 litre flush WCs	9		1.3	0.00
7.5 litre flush WCs	7.5		1.3	0.00
6 litre flush WCs	6	13	1.3	1.97
4.5 litre flush WCs	4.5		1.3	0.00
6/4 litre Dual FlushW /Cs	4.26		1.3	0.00
4/2 litre Dual flush W/Cs	2.26		1.3	0.00
waterless WCs	0		1.3	0.00
Urinals				
No controls	9		2	0.00
Pressure control device	5	1	2	1.27
I.R. proximity control	4		2	0.00
Waterless urinal	0		2	0.00
Wash Hand Basins with taps				
regular taps	1	7	2.5	0.22
flow regulator	0.5		2.5	0.00
auto shuto ff	0.5		2.5	0.00
aerating taps	0.5	13	2.5	0.21
Showers				
=15ltrs/min	112.5		0.1	0.00
<15&=9ltrs/min	60		0.1	0.00
<9&=6 ltrs/min	37.5		0.1	0.00
<6&>=4.5ltrs/min	26.5	1	0.1	0.67
<4.5 ltrs/min	22.5		0.1	0.00

CONSUMPTION PER PERSON	4.34	m3/person/year
CREDITS ACHIEVED	2	

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	Existing masonry walls	376.27	376.27	0.885	333.00	333.00
Roof	Existing bitumen roof to all roof and roof felt to the dormers	255.00	255.00	1.08	275.40	275.40
Upper floor Slab	N/A	0.00	0.00	1.36	0.00	0.00
Windows	Existing steel-framed windows	136.73	136.73	0.71	97.08	97.08
Internal Walls	Existing plaster walls, existing masonry walls, new metal stud partitions with double layered 12.5mm plaster board	913.10	913.10	0.42	383.50	383.50
				SUM	1088.98	1088.98

Assessed/Target 1.00

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	Carpet 1, Carpet Tile 500x500 'City Point' Acropolis 22	993.00	923.00	0.717	711.98	661.79

Assessed/Target 0.93

Credits using the Green Guide 2.00

TotalC redit for MW1 7.00

Ecology Calculator 1

Instructions: This calculator is to be used by the assessor to calculate the change in ecological value for LE4: Mitigating ecological impact. The area (m2) of each plot type is entered into the relevant sections below for both before and after development for the site.

Plot type	Area BEFORE development (m^2)	*Area AFTER development (m^2)*
Building	930	930
Hard landscaped Area	31	31
TOTAL SITE AREA:	961	961
ECOLOGICAL VALUE (AREA WEIGHTED NO. PLANT SPECIES)	0.00	0.00

TOTAL CHANGE IN PLANT SPECIES DIVERSITY: 0.00

LE4 Credits Achieved 2

SCHEDULE OF REVISIONS

Issue	Date	Remarks	Prepared by	Checked by
A	18/09/07		David Altabev Tom Randall	Tom Randall

Distribution:

Claire Paterson	Walker Bushe Architects
Richard Walker	Walker Bushe Architects