Camden Lock Village

CfSH & BREEAM Pre-Assessment

Grontmij

Issue	Date	Reason for Issue	Prepared		Checked		Approved	
01	21/08/12	For Information	JTS		EV		NB	
02	28/08/12	For Planning	JTS		EV		NB	

CfSH & BREEAM - Pre Assessment Report
8127/JTS/120821
Issue 2

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Executive Summary

1. Executive Summary

Camden Lock Village is a mixed use development consisting of four individual sites with a total GEA of 49,360m^2 which includes office, residential, retail/market and education accommodation.

The development aims to achieve a BREEAM rating of Excellent for the educational establishment and Very Good for the retail and office. The aim is to achieve Code for Sustainable Homes Level 4 for the residential accommodation.

2. Introduction

The purpose of this report is to identify how the Camden Lock development aims to achieve the requisite credits to achieve the desired target levels under the Code for Sustainable Homes (CfSH) and Building Research Establishment Environment Assessment Method (BREEAM). The key issues related to the targeting of the desired levels will be identified.

It is Camden Councils policy and the clients aspiration that Code Level 4 for the residential, Very Good for the office and retail buildings and Excellent for the school are achieved under the CfSH and BREEAM schemes respectively

CfSH is a Communities and Local Government scheme which aims to introduce a step change in sustainable home building practice. This involves a rating system which assesses the sustainability of a site against 9 key categories, awarding credits for good performance within the category. Depending upon the number of credits the site will be awarded a Level of 1-6 with 1 being the lowest achievement and 6 being a zero carbon home and thus highest achievement.

BREEAM is an internationally recognised scheme which sets the standard for best practice in building design, construction and operation. Like CfSH it is a credit based rating system assessing 9 key categories. Depending upon the number of credits awarded the site will achieve a rating ranging from Pass to Outstanding. This scheme applies to office and retail separately; thereby resulting in 2 assessments and awards.

The four sites are outlined below;

- Area A - This development consists of two linked multi-floor blocks of flexible retail units on 5 levels with additional retail units located within railway arches. The blocks and arches have a combined GEA of approximately 8,635m^2. An enclosed restaurant is located on the top of each of the blocks. The development space is assumed to be split between retail (83%) and food outlets (17%). Both the retail and food spaces are largely open-air markets, with only 10% of each being enclosed and conditioned/heated.

- Area B - This development comprises two residential blocks comprising 42 apartments, with a total GEA of approximately 4,825 m^2 and a single main entrance for the primary school, nursery and arches consisting of mixed light/general industrial units and a public cycle store with a total GEA of approximately 3183 m^2. The school will also use No 1 Hawley Road which is a Grade II listed building over three floors approximately 229 m^2. (It should be noted that though the demand forecast for 1 Hawley road is included in this assessment it is not included in the energy efficiency commitments contained in this report of the commitments in terms of U-Values or BREEAM Education Rating due to its listed status) It should also be noted that the school will be in outline with all matters reserved.

- Area C - This development consists of two separate residential blocks, namely Block C1 and C2. Block C1 comprises local retail at ground floor and 5 levels of residential above, along Castlehaven Road. Block C2 comprises of three levels of commercial floor space within the central building and Part 5, Part 7 and Part 9 story levels of residential above. The proposal includes arches consisting of light industrial units and two shared lower ground / basement floors which link the Blocks which will be used for plant storage and class D2 use. The overall development space is 26,334 m 2 GEA.

- Area D - This development comprises a ground floor café, commercial space provided at ground and basement, and residential apartments above. The total floor area for Area D is approximately 5,597 m^2 GEA.

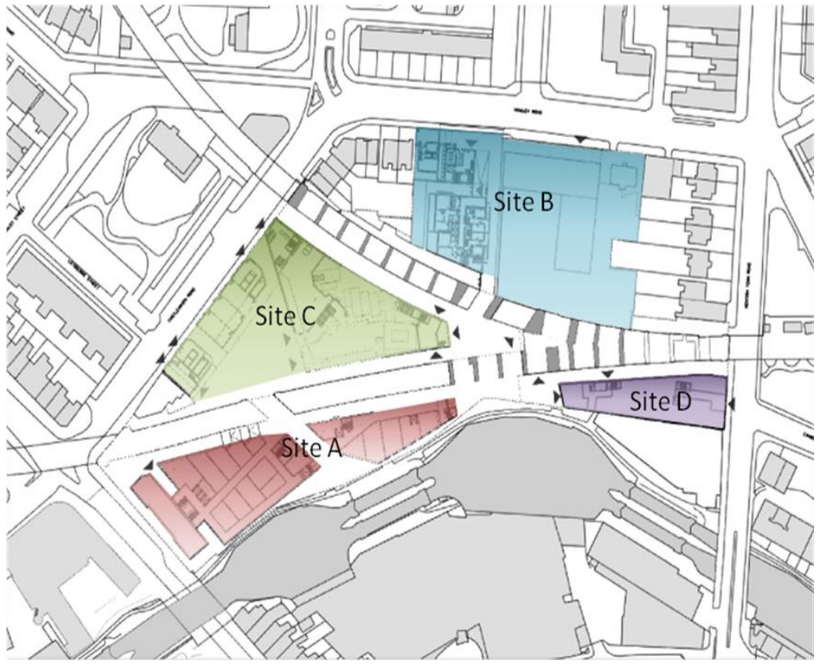


Figure 1: Camden Lock Village Plan

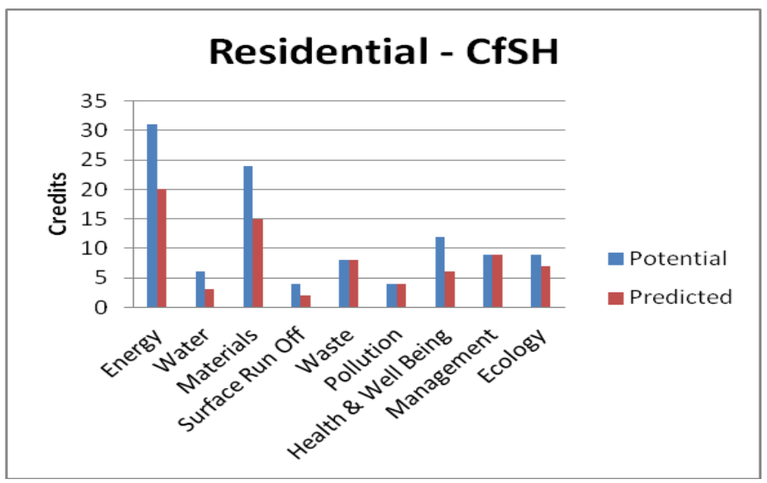
The site will be provided with an integrated Energy Strategy with communal heating systems incorporating combined heat and power plant.

3. Residential - Code for Sustainable Homes

The residential accommodation occupies areas within Site B, C and D.

The analysis of the site determined that the Energy section of the assessment has the largest number of unclaimed credits however 3 credits are achieved in ENE 1 to meet the pre-requisites for Code Level 4.

3.1 Summary of Credits



	Energy	Water	Materials	Surface Run Off	Waste	Pollution	Health & Well Being	Management	Ecology
Potential	31	6	24	4	8	4	12	9	9
Predicted	20	3	15	2	8	4	6	9	7

Figure 2: Credit Breakdown for Residential CfSH.

3.2 Table of Credits

See proceeding page.

(M) denotes issues with mandatory elements

					Current Assumptions		Responsibility
Category	**Weighting Factor %**	**Title**	**Issue**	**Avail. Credits**	**Predicted Credits**	**Points**	
Energy	36.4	Ene 1	Dwelling Emission Rate (M)	10	3		Services Consultant
Each credit is worth	(1.17)	Ene 2	Fabric Energy Efficiency (M)	9	7		Services Consultant/Architect
		Ene 3	Energy Display Devices	2	2		Services Consultant/Architect
		Ene 4	Drying Space	1	1		Architect
		Ene 5	Energy Labelled White Goods	2	1		Architect
		Ene 6	External Lighting	2	2		Services Consultant
		Ene 7	Low/Zero Carbon Energy	2	2		Services Consultant
		Ene 8	Cycle Storage	2	1		Architect
		Ene 9	Home Office	1	1		Services Consultant/Architect
		Category 1 Totals		**31**	**20**	**23.48**	
Water	9	Wat 1	Internal Portable Water Use (M)	5	3		Services Consultant
Each credit is worth	(1.5)	Wat 2	External Water Use	1	0		Services Consultant/Specialist
		Category 2 Totals		**6**	**3**	**4.50**	
Materials	7.2	Mat 1	Environmental Impact of materials (M)	15	10		Main Contractor/Architect
Each credit is worth	(0.3)	Mat 2	Responsible sourcing of materials: Basic Elements	6	3		Architect
		Mat 3	Responsible sourcing of materials: Finishing Elements	3	2		Architect
		Category 3 Totals		**24**	**15**	**4.50**	
Surface Water Run-off	2.2	Sur 1	Reduce Surface Water Run-off (M)	2	0		Structural Engineer
Each credit is worth	(0.55)	Sur 2	Flood Risk	2	2		Structural Engineer
		Category 4 Totals		**4**	**2**	**1.10**	
Waste	6.4	Was 1	Household Waste Storage & Recycling Facilities (M)	4	4		Architect
Each credit is worth	(0.80)	Was 2	Construction Site Waste Management	3	3		Main Contractor
		Was 3	Composting	1	1		Architect
		Category 5 Totals		**8**	**8**	**6.40**	
Pollution	2.8	Pol 1	GWP of Insulants	1	1		Services Consultant/Architect
Each credit is worth	(0.70)	Pol 2	NOx Emissions	3	3		Services Consultant
		Category 6 Totals		**4**	**4**	**2.80**	
Health & Wellbeing	14	Hea 1	Daylighting	3	1		Services Consultant
Each credit is worth	(1.17)	Hea 2	Sound Insulation	4	0		Services Consultant/Architect/ Specialist
		Hea 3	Private Space	1	1		Architect
		Hea 4	Lifetime Homes (M)	4	4		Architect
		Category 7 Totals		**12**	**6**	**7.00**	
Management	10	Man 1	Home User Guide	3	3		Architect
Each credit is worth	(1.11)	Man 2	Considerate Constructors	2	2		Main Contractor
		Man 3	Construction Site Impacts	2	2		Main Contractor
		Man 4	Security	2	2		Architect/Client
		Category 8 Totals		**9**	**9**	**10.00**	
Ecology	12	Eco 1	Ecological Value of Site	1	1		Ecological Consultant/Client
Each credit is worth	(1.33)	Eco 2	Ecological Enhancement	1	1		Ecological Consultant/Client
		Eco 3	Protect of Ecological Features	1	1		Main Contractor
		Eco 4	Change of Ecological Value	4	2		Ecological Consultant/Client
		Eco 5	Building Footprint	2	2		Architect
		Category 9 Totals		**9**	**7**	**9.33**	
		Assessment Totals			74	69.12	
						Level	4

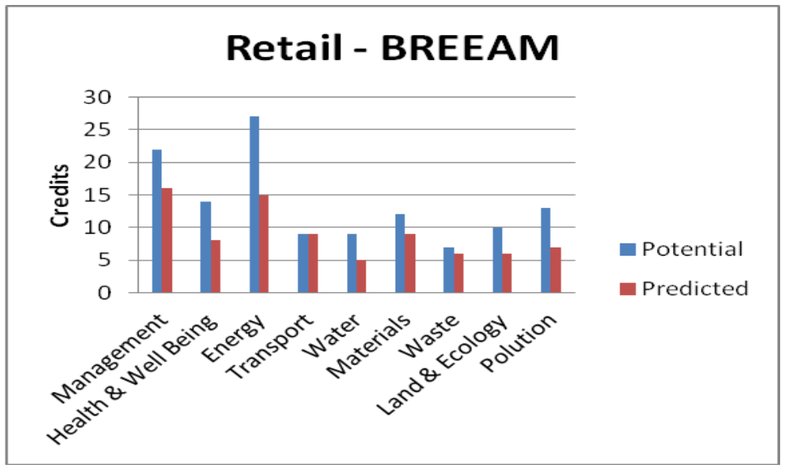
4. Retail – BREEAM

The retail accommodation occupies areas within Sites A, C and D.

The analysis of the site determined that the Energy section of the assessment has the largest number of unclaimed credits. The primary cause of this is the type of tenants that will occupy the spaces. The energy consumption within the retail has been assumed to be worst case and therefore fewer credits are achievable.

Waste from the retail areas will have local collection points with a centralised main collection point in Site C.

4.1 Summary of Credits



	Management	Health & Well Being	Energy	Transport	Water	Materials	Waste	Land & Ecology	Pollution	Innovation
Potential	22	14	27	9	9	12	7	10	13	10
Predicted	16	8	15	9	5	9	6	6	7	0

Figure 3: Credit Breakdown for Retail BREEAM

4.2 Table of Credits

See proceeding page.

04
Retail – BREEAM

(M) denotes issues with mandatory elements					Current Assumptions		Responsibility
Category	**Weighting Factor %**	**Title**	**Issue**	**Avail. Credits**	**Predicted Credits**	**Points after weighting**	
Management	12	Man 01	Sustainable Procurement (M)	8	7		Main Contractor/Client/ Tenant
Each credit is worth	1.83	Man 02	Responsible Construction Practices	2	2		Main Contractor
		Man 03	Construction Site Impacts	5	4		Main Contractor
		Man 04	Stakeholder Participation	4	3		Client/Tenant
		Man 05	Life Cycle Cost and Service Planning	3	0		Quantity Surveyor/Others
		Category 1 Totals		**22**	**16**	**8.73**	
Health and Wellbeing	15	Hea 01	Visual Comfort (M)	2	1		Services Consultant/ Tenant
Each credit is worth	(1.5)	Hea 02	Indoor Air Quality	4	0		Services Consultant/ Tenant
		Hea 03	Thermal Comfort	2	2		Services Consultant
		Hea 04	Water Quality (M)	1	1		Services Consultant
		Hea 05	Acoustic Performance	2	2		Acoustic Consultant/ Architect
		Hea 06	Safety and Security	2	2		Specialist/ Architect
		Category 2 Totals		**13**	**8**	**9.23**	
Energy	19	Ene 01	Reduction of CO_2 Emissions	15	6		Services Consultant
Each credit is worth	0.63	Ene 02	Energy Monitoring (M)	2	2		Services Consultant
		Ene 03	External Lighting	1	1		Services Consultant
		Ene 04	Low and Zero Carbon Technologies	5	2		Services Consultant
		Ene 06	Energy Efficient Transportation Systems	2	2		Services Consultant
		Ene 08	Energy Efficient Equipment	2	2		Client/Tenant
		Category 3 Totals		**27**	**15**	**10.56**	
Transport	8	Tra 01	Public Transport Accessibility	5	5		Architect
Each credit is worth	0.88	Tra 02	Proximity to Amenities	1	1		Architect
		Tra 03	Cyclist Facilities	2	2		Architect
		Tra 05	Travel Plan	1	1		Client
		Category 4 Totals		**9**	**9**	**8.00**	
Water	6	Wat 01	Water Consumption (M)	5	3		Services Consultant
Each credit is worth	0.66	Wat 02	Water Monitoring (M)	1	1		Services Consultant
		Wat 03	Water Leak Detection and Prevention	2	1		Services Consultant
		Wat 04	Water Efficient Equipment	1	0		Services Consultant
		Category 5 Totals		**9**	**5**	**3.33**	
Materials	12.5	Mat 01	Life Cycle Impact	5	5		Architect
Each credit is worth	1.04	Mat 02	Hard Landscaping and Boundary Protection	1	1		Architect
		Mat 03	Responsible Sourcing of Materials (M)	3	1		Main Contractor
		Mat 04	Insulation	2	1		Main Contractor/ Architect
		Mat 05	Designing for Robustness	1	1		Architect
		Category 6 Totals		**12**	**9**	**9.38**	
Waste	7.5	Wst 01	Construction Waste Management	4	4		Main Contractor
Each credit is worth	1.07	Wst 02	Recycled Aggregates	1	0		Structural Engineer
		Wst 03	Operational Waste	1	1		Architect
		Wst 04	Speculative Floor and Ceiling Finishes	1	1		Client
		Category 7 Totals		**7**	**6**	**6.43**	
Land Use and Ecology	10	Le 01	Land Use and Ecology	2	1		Ecological Consultant/Client
Each credit is worth	1	Le 02	Ecological Value of Site and Protection of Ecological	1	1		Ecological Consultant/Client

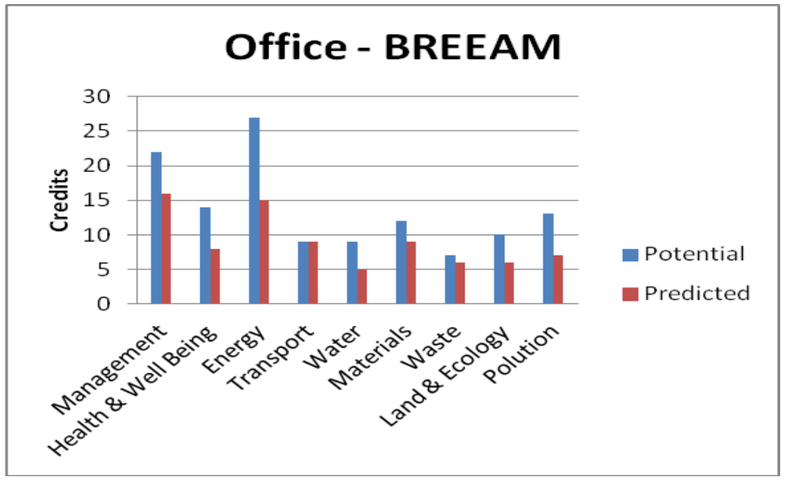
			Features				
		Le 03	Mitigating Ecological Impact (M)	2	2		Ecological Consultant/Client
		Le 04	Enhancing Site Ecology	3	1		Ecological Consultant/Client
		Le 05	Long Term Impact on Biodiversity	2	1		Ecological Consultant/Client
		Category 8 Totals		**10**	**6**	**6.00**	
Pollution	10	Pol 01	Impact of Refrigerants	3	0		Services Consultant
Each credit is worth	0.77	Pol 02	NOx Emissions	3	3		Services Consultant
		Pol 03	Surface Water Run Off	5	2		Services Consultant
		Pol 04	Reduction of Night Time Light Pollution	1	1		Services Consultant
		Pol 05	Noise Attenuation	1	1		Acoustic Consultant/ Architect
		Category 9 Totals		**13**	**7**	**5.38**	
Innovation	10	Inn 01	Innovation	10	0		
Each credit is worth	1						
		Category 10 Totals		**10**	**0**	**0.00**	
		Assessment Totals			**81**	**67.04**	
					RATING	Very Good	

5. Office – BREEAM

The office accommodation is located within Site C and D.

The analysis of the site determined that the Energy section of the assessment has the largest number of unclaimed credits. The office areas will be occupied by small-medium enterprises. The landlord does not wish to enforce green measures on these types of tenants and therefore the achieved energy credits have not been maximised at this stage of the design.

5.1 Summary of Credits



	Management	Health & Well Being	Energy	Transport	Water	Materials	Waste	Land & Ecology	Pollution	Innovation
Potential	22	14	27	9	9	12	7	10	13	10
Predicted	16	8	15	9	5	9	6	6	7	0

Figure 4: Credit Breakdown for Office BREEAM

5.2 Table of Credits

See proceeding table.

05
Office – BREEAM

(M) denotes issues with mandatory elements

Category	Weighting Factor %	Title	Issue	Avail. Credits	Predicted Credits	Points after weighting	Responsibility
						Current Assumptions	
Management	12	Man 01	Sustainable Procurement (M)	8	7		Main Contractor/Client/ Tenant
Each credit is worth	1.83	Man 02	Responsible Construction Practices	2	2		Main Contractor
		Man 03	Construction Site Impacts	5	4		Main Contractor
		Man 04	Stakeholder Participation	4	3		Client/Tenant
		Man 05	Life Cycle Cost and Service Planning	3	0		Quantity Surveyor/Others
		Category 1 Totals		**22**	**16**	**8.73**	
Health and Wellbeing	15	Hea 01	Visual Comfort (M)	3	1		Services Consultant/Tenant
Each credit is worth	(1.5)	Hea 02	Indoor Air Quality	4	0		Services Consultant/Tenant
		Hea 03	Thermal Comfort	2	2		Services Consultant
		Hea 04	Water Quality (M)	1	1		Services Consultant
		Hea 05	Acoustic Performance	2	2		Acoustic Consultant/ Architect
		Hea 06	Safety and Security	2	2		Specialist/Architect
		Category 2 Totals		**14**	**8**	**8.57**	
Energy	19	Ene 01	Reduction of CO_2 Emissions	15	6		Services Consultant
Each credit is worth	0.63	Ene 02	Energy Monitoring (M)	2	2		Services Consultant
		Ene 03	External Lighting	1	1		Services Consultant
		Ene 04	Low and Zero Carbon Technologies	5	2		Services Consultant
		Ene 06	Energy Efficient Transportation Systems	2	2		Services Consultant
		Ene 08	Energy Efficient Equipment	2	2		Client/Tenant
		Category 3 Totals		**27**	**15**	**10.56**	
Transport	8	Tra 01	Public Transport Accessibility	3	3		Architect
Each credit is worth	0.88	Tra 02	Proximity to Amenities	1	1		Architect
		Tra 03	Cyclist Facilities	2	2		Architect
		Tra 04	Maximum Car Parking Capacity	2	2		Architect
		Tra 05	Travel Plan	1	1		Client
		Category 4 Totals		**9**	**9**	**8.00**	
Water	6	Wat 01	Water Consumption (M)	5	3		Services Consultant
Each credit is worth	0.66	Wat 02	Water Monitoring (M)	1	1		Services Consultant
		Wat 03	Water Leak Detection and Prevention	2	1		Services Consultant
		Wat 04	Water Efficient Equipment	1	0		Services Consultant
		Category 5 Totals		**9**	**5**	**3.33**	
Materials	12.5	Mat 01	Life Cycle Impact	5	5		Architect
Each credit is worth	1.04	Mat 02	Hard Landscaping and Boundary Protection	1	1		Architect
		Mat 03	Responsible Sourcing of Materials (M)	3	1		Main Contractor
		Mat 04	Insulation	2	1		Main Contractor/ Architect
		Mat 05	Designing for Robustness	1	1		Architect
		Category 6 Totals		**12**	**9**	**9.38**	
Waste	7.5	Wst 01	Construction Waste Management	4	4		Main Contractor
Each credit is worth	1.07	Wst 02	Recycled Aggregates	1	0		Structural Engineer
		Wst 03	Operational Waste	1	1		Architect
		Wst 04	Speculative Floor and Ceiling Finishes	1	1		Client
		Category 7 Totals		**7**	**6**	**6.43**	
Land Use and Ecology	10	Le 01	Land Use and Ecology	2	1		Ecological Consultant/Client
Each credit is worth	1	Le 02	Ecological Value of Site and Protection of Ecological Features	1	1		Ecological Consultant/Client
		Le 03	Mitigating Ecological Impact (M)	2	2		Ecological Consultant/Client
		Le 04	Enhancing Site Ecology	3	1		Ecological Consultant/Client
		Le 05	Long Term Impact on Biodiversity	2	1		Ecological Consultant/Client

		Category 8 Totals		**10**	**6**	**6.00**	
Pollution	10	Pol 01	Impact of Refrigerants	3	0		Services Consultant
Each credit is worth	0.77	Pol 02	NOx Emissions	3	3		Services Consultant
		Pol 03	Surface Water Run Off	5	2		Services Consultant
		Pol 04	Reduction of Night Time Light Pollution	1	1		Services Consultant
		Pol 05	Noise Attenuation	1	1		Acoustic Consultant/ Architect
		Category 9 Totals		**13**	**7**	**5.38**	
Innovation	10	Inv 01	Innovation	10	0		
Each credit is worth	1						
		Category 10 Totals		**10**	**0**	**0.00**	
		Assessment Totals			81	**66.38**	
					Rating	Very Good	

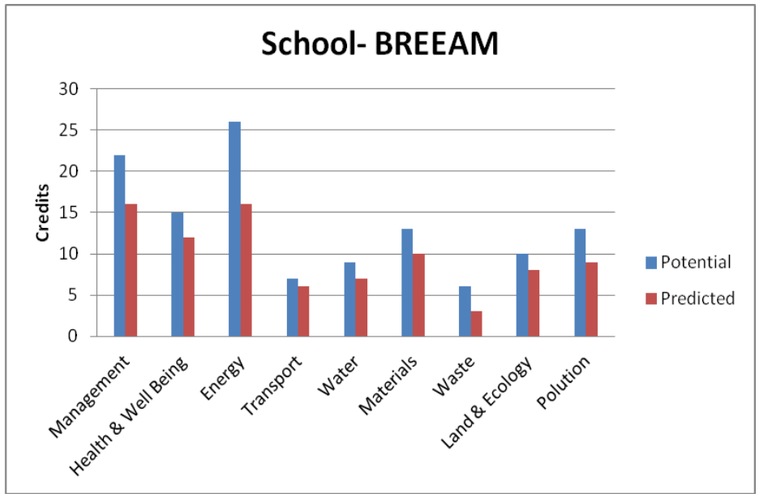
6. Education – BREEAM

The school is located within Site B.

The analysis of the site determined that the Energy section of the assessment has the largest number of unclaimed credits. The school requires an Excellent rating as a minimum. The design team have targeted credits within the energy section to meet the minimum requirement for Excellent at this stage of the design.

There are also a number of losses of credits from the management category which occurs as a result of the lack of a life cycle costing and service plan.

6.1 Summary of Credits



	Management	Health and Well Being	Energy	Transport	Water	Materials	Waste	Land and Ecology Use	Pollution	Innovation
Potential	22	15	26	7	9	13	6	10	13	10
Predicted	16	12	16	6	7	10	3	8	9	1

Figure 5: Credit Breakdown for Education BREEAM

6.2 Table of Credits

See proceeding page.

(M) denotes issues with mandatory elements

Category	Weighting Factor %	Title	Issue	Avail. Credits	Current Assumptions: Predicted Credits	Current Assumptions: Points after weighting	Responsibility
Management	12	Man 01	Sustainable Procurement (M)	8	7		Main Contractor/ Client/Tenant
Each credit is worth	2.02	Man 02	Responsible Construction Practices	2	2		Main Contractor
		Man 03	Construction Site Impacts	5	4		Main Contractor
		Man 04	Stakeholder Participation	4	3		Client/Tenant
		Man 05	Life Cycle Cost and Service Planning	3	0		Quantity Surveyor/Others
		Category 1 Totals		**22**	**16**	**8.73**	
Health and Wellbeing	15	Hea 01	Visual Comfort (M)	3	3		Services Consultant/ Tenant
Each credit is worth	1.72	Hea 02	Indoor Air Quality	4	3		Services Consultant/ Tenant
		Hea 03	Thermal Comfort	2	2		Services Consultant
		Hea 04	Water Quality (M)	1	1		Services Consultant
		Hea 05	Acoustic Performance	3	2		Acoustic Consultant/ Architect
		Hea 06	Safety and Security	2	1		Specialist/ Architect
		Category 2 Totals		**15**	**12**	**12.00**	
Energy	19	Ene 01	Reduction of CO_2 Emissions	15	8		Services Consultant
Each credit is worth	3.77	Ene 02	Energy Monitoring (M)	1	1		Services Consultant
		Ene 03	External Lighting	1	1		Services Consultant
		Ene 04	Low and Zero Carbon Technologies	5	2		Services Consultant
		Ene 06	Energy Efficient Transportation Systems	2	2		Services Consultant
		Ene 08	Energy Efficient Equipment	2	2		Client/Tenant
		Category 3 Totals		**26**	**16**	**11.69**	
Transport	8	Tra 01	Public Transport Accessibility	3	3		Architect
Each credit is worth	0.43	Tra 02	Proximity to Amenities	1	1		Architect
		Tra 03	Cyclist Facilities	2	1		Architect
		Tra 05	Travel Plan	1	1		Client
		Category 4 Totals		**7**	**6**	**6.86**	
Water	6	Wat 01	Water Consumption (M)	5	3		Services Consultant
Each credit is worth	0.41	Wat 02	Water Monitoring (M)	1	1		Services Consultant
		Wat 03	Water Leak Detection and Prevention	2	2		Services Consultant
		Wat 04	Water Efficient Equipment	1	1		Services Consultant
		Category 5 Totals		**9**	**7**	**4.67**	
Materials	12.5	Mat 01	Life Cycle Impact	6	4		Architect
Each credit is worth	1.24	Mat 02	Hard Landscaping and Boundary Protection	1	1		Architect
		Mat 03	Responsible Sourcing of Materials (M)	3	2		Main Contractor
		Mat 04	Insulation	2	2		Main Contractor/ Architect
		Mat 05	Designing for Robustness	1	1		Architect
		Category 6 Totals		**13**	**10**	**9.62**	
Waste	7.5	Wst 01	Construction Waste Management	4	2		Main Contractor
Each credit is worth	0.34	Wst 02	Recycled Aggregates	1	0		Structural Engineer
		Wst 03	Operational Waste	1	1		Architect
		Category 7 Totals		**6**	**3**	**3.75**	
Land Use and Ecology	10	Le 01	Land Use and Ecology	2	1		Ecological Consultant/ Client
Each credit is worth	.76	Le 02	Ecological Value of Site and Protection of Ecological Features	1	1		Ecological Consultant/ Client
		Le 03	Mitigating Ecological Impact (M)	2	2		Ecological Consultant/ Client
		Le 04	Enhancing Site Ecology	3	2		Ecological Consultant/ Client
		Le 05	Long Term Impact on Biodiversity	2	2		Ecological Consultant/

							Client
		Category 8 Totals		**10**	**8**	**8.00**	
Pollution	10	Pol 01	Impact of Refrigerants	3	2		Services Consultant
Each credit is worth	.99	Pol 02	NOx Emissions	3	2		Services Consultant
		Pol 03	Surface Water Run Off	5	3		Services Consultant
		Pol 04	Reduction of Night Time Light Pollution	1	1		Services Consultant
		Pol 05	Noise Attenuation	1	1		Acoustic Consultant/ Architect
		Category 9 Totals		**13**	**9**	**6.92**	
Innovation	10	Inv 01	Innovation	10	1		
Each credit is worth	.76						
		Category 10 Totals		**10**	**1**	**0.77**	
		Assessment Totals			87	**72.23**	
					Rating	Excellent	