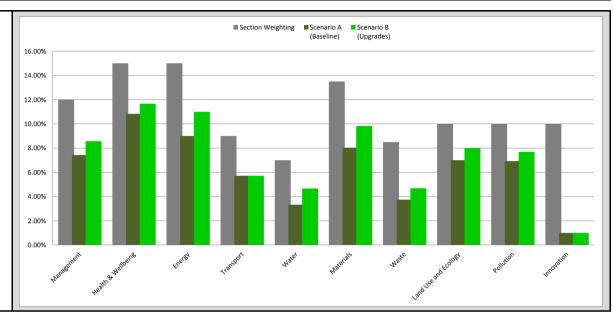
BREEAM 2014 Pre-assessment

Project:- Selwyn Primary Assessor:- Hulusi Mustafa Client:-

GallifordTry 07/08/2015



Credit Section	Section Weighting	Scenario A (Baseline)	Scenario B (Upgrades)
Management	12.00%	7.43%	8.57%
Health & Wellbeing	15.00%	10.83%	11.67%
Energy	15.00%	9.00%	11.00%
Transport	9.00%	5.71%	5.71%
Water	7.00%	3.33%	4.67%
Materials	13.50%	8.04%	9.82%
Waste	8.50%	3.75%	4.69%
Land Use and Ecology	10.00%	7.00%	8.00%
Pollution	10.00%	6.92%	7.69%
Innovation	10.00%	1.00%	1.00%
	Total Score	63.02%	72.82%
	BREEAM Rating	VERY GOOD	EXCELLENT



Scores are currrently based upon a range of assumptions which must be agreed by the design team Credits cannot be awarded unless the required evidence is provided.

Notes overleaf are a summary of the requirements only

39-41 North Road London N7 9DP

	Revision By	Date	Status	Changes made	Comments on Revision
-	Hulusi Mustafa	07/08/2015	DRAFT		
Α					
В					
С					
D					
E					
F					

VERY GOOD 63.02% EXCELLENT 72.82%





				VERY GOOD	EXCELLENT	1			
Category	Credit ID		Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
	Man 01	Project brief and design	4	4	4	Principle Contractor / CarbonPlan	One credit - Stakeholder consultation (project delivery)  1. Prort to completion of the Concept Design (RIBA Stage 2 or equivalent), the project delivery stakeholders (see Relevant definitions) have met to identify and define their roles, responsibilities and contributions for each of the key phases of project 2. In defining the roles and responsibilities for each key phase of the project, the following must be considered: a. End user requirements  2. In defining the roles and responsibilities for each key phase of the project, the following must be considered: a. End user requirements  3. Aims of the design and design strategy  5. Particular installation and construction requirements/finitiations  6. Occupies budget and beforials experted in maintaining any proposed systems  6. Requirements for the production of project and end user documentation  7. Requirements for the production of project and end user documentation  8. Requirements for the production of project and end user documentation  8. Requirements for commissioning, rularing and afference support.  9. The project team demonstrate how the project delivery stakeholder contributions and the outcomes of the consultation process have inflamenced or changed the Initial Project Erief, including if appropriate, the Project Execution Plan, Communication Strategy, and the Concept Design,  6. Prior to completion of the Concept Design,  7. Part project the design of the project Design stage, all relevant third party stakeholders consultation exercise have inflamenced and this covers the minimum consultation content (see compliance note CNS).  8. The project must demonstrate how the stakeholder contributions and outcomes of the consultation exercise have influenced for completion of the Concept Design stage, all relevant particles.  EFA schemes undertake a rigorous consultation process which involves engagament with all key stakeholders and stuture building users. Beyond this the Principe Contractor is required to submit Contractor Proposals by RIBA Work Stage 3	One credit: Sustainability Champion (design) (targeted)  A. Sustainability Champion has been appointed to facilitate the setting and achievement of BREEAM performance targets for the project. The design stage Sustainability Champion is appointed to perform this role during the feasibility stage (Stage 1, Preparation and Breif stage, as defined by the RIBA Plan of Work 2013 or equivalent).  2013 or equivalent.  2015 or equivalent (Stage 1) and the stage of	None
	Man 02	Life cycle cost and service life planning	4	0	0	Contractor / CarbonPlan	This is an onerous credits and a significant amount of work will need to be undertaken at an early stage with all the relevant documentation in place. These credits are currently not targeted.	Elemental Life cycle cost (LCC)  2 Credits - An elemental life cycle cost (LCC) analysis has been carried out, at Process Stage 2 (equivalent to Concept Design - RIBA Stage 2) together with any design option appraisals in line with Standardised method of life cycle costing for construction procurement PD 158865.20081.  Component level LCC Plan  1 Credit - A component level LCC plan has been developed by the end of Process Stage 4 (equivalent to Technical Design - RIBA Stage 4) in line with PD 158865.2008  Capital cost reporting  1 Credit - Report the capital cost for the building in pounds per square metre (Ek/m2), via the BREEAM Assessment Scoring and Reporting tool.	None
Management	Man 03	Responsible construction practices	6	5	6	Principle Contractor / CarbonPlan	Pre-requisite: All timber and timber based products used on the project is "Legally harvested and traded timber Environmental Management 1 Credit - Where the main contractor has an EMS system. The principal contractor implements best practice pollution prevention policies and procedures on site in accordance with Pollution Prevention Guidelines, Working at construction and demollion-elses. PPG6.  Sustainability Champion (Construction) 1 Credit - A Sustainability Champion is appointed to monitor the project to ensure on-going compliance with the relevant sustainability performance process criteria, and therefore BREEAM target(s), during the Construction, Handover and Close Out stages (as defined by the RIBA Plan of Works 2013, stages 5 and 6). The BREEAM Pwill visit the site regularly and record evidence.  The defined BREEAM performance target forms a requirement of the principal contractor's contract.  Considerate construction 2 Credits - Contractor is required to achieve a minimum score of 36 under the CCS scheme.  Monitoring of construction-site impacts. 1 Credit are stepped of the following which are standard Construction practice.  - Metering and monitoring energy and water from construction (SMARTWaste tool can be adopted to deliver compliance against this although most major contractors operate their own in house tools.)	Monitoring of construction site impacts (Uplift) - One credit Monitor and record data on transport movements and impacts resulting from delivery of the majority of construction materials to site and construction matter from site. As a minimum this must cover:  a. Transport of materials from the factory gate to the building asile, including any transport, intermediate storage and distribution, (see Pelevier definitions).  b. Scope of this monitoring must cover the following as a minimum:  i. Materials used in major building elements (i.e. those defined in BREEAM issue Mat 01 Life cycle impacts), including insulation materials.  ii. Ground works and landscaping materials.  c. Transport of construction waste from the construction gate to waste disposal processing/recovery centre gate. Scope of this monitoring must cover the construction waste groups outlined in the project's waste management plan.	None
	Man 04	Commissioning and handover	4	3	3	Principle Contractor / CarbonPlan	Commissioning and testins schedule and responsibilities  Credit-Commissioning and earling schedule in accordance with BSRIA and CIBSE Guidelines and appropriate standards for commissioning and earling schedule in accordance with BSRIA and CIBSE Guidelines and appropriate standards for commissioning and earling schedule and supplies and non-complex building services and control systems. An appropriate member of the design team is appointed to monitor and programme pre-commissioning, commissioning and where necessary re-commissioning.  One credit - Commissioning building services  5. The commissioning and testing schedule and responsibilities credit is achieved.  6. For buildings with complex building services and systems, a specialist commissioning manager is appointed during the design stage (by either the client or the principal contractor) with responsibility for: a. Undertaking design reviews and giving advice on suitability for ease of commissioning. b. Providing commissioning management input to construction programming and during installation stages. c. Management of commissioning, performance testing and handover/post-handover stages.  Where there are simple building services, this role can be carried out by an appropriate project team member (see oriterion 3), provided they are not involved in the general installation works for the building services system(s).  Che credit - Building Les Guide has been prepared. (Mandatory) A training schedule is prepared for building occupiers/premises managers.	Teatins and inspectine building labels: (Not south).  1 Grodit - where the main contractor accounts for either at thermographic survey or air pressure testing of 10% of the building and any defects remediated. Must be undertaken by Sultably Qualified Professional.	None
	Man 05	Aftercare	3	1	2	Principle Contractor	Seasonal commissioning 1 Credit - Where the Principle Contractor ensures the appropriate seasonal commissioning activities will be completed over a minimum 12 month period for complex and simple systems.	Aftercare support (targeted)  1 Credit - The main contractor will provide aftercare support to the building occupier for at least 1 month following occupation. There is an infrastructure in place to co-ordinate the collection and monitoring of energy and water consumption data for a minimum of 12 months.  Posts occupancy evaluation (Not targeted)  1 Credit where the Client makes a commitment to undertake Post Occupancy Evaluation for one year after building completion. This presents an additional cost to the project and is not sought at this stage.	None
	0.57% Per	Total Credit Section Score	21 12.00%	13 7.43%	15 8.57%				

VERY GOOD 63.02% EXCELLENT 72.82%





					VERY GOOD	EXCELLENT				
Ca	tegory	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
		Hea 01	Visual comfort	5	5	5	MEP Consultant / Architect	No credit: Darkinhitine  At least 80% of all occupier spaces must achieve the relevant daylight standards. Either the Universal Daylight Index (UDI) and Daylight Autonomy allow for both these credits to be achieved. There is some uncertainty within the Risk Register as to whether this credit can be achieved. There is some uncertainty within the Risk Register as to whether this credit can be achieved. There is some uncertainty within the Risk Register as to whether this credit can be achieved. There is some uncertainty within the Risk Register as to whether this credit can be achieved. There is some uncertainty within the Risk Register as to whether this credit can be achieved. There is some uncertainty within the Risk Register as to whether this credit is some uncertainty. The credit is some uncertainty within the Risk Register as to whether the Risk Register as to white Risk Register as the Risk		None
	Health and Wellbeing	Hea 02	Indoor air quality	5	3	3	MEP Consultant / Architect / CarbonPlan (Air Quality Consultant)	follows:  2. Provide fresh air into the building in accordance with the criteria of the relevant standard for ventilation.  3. Design ventilation pathways to minimise the build-up of air pollutants in the building, as follows: a. In air conditioned and mixed mode building/sispaces: i. The building's air intakes and exhausts are over 10m apart and intakes are over 20m from sources of external pollution; OR ii. The location of the building's air intakes and exhausts, in relation to each other and external sources of pollution, is designed in accordance with BS EN 13779/20071 Annex A2. b. In naturally ventilated buildings'spaces: openable windows-ventilators are over 10m from sources of external pollution.  4. Where present, HVAC systems must incorporate suitable filtration to minimise external air pollution, as defined in BS EN 13779-2007 Annex A2.	Exemalsharde & VICCs (Post-occupation testing). Host tarested but potential upilit) in credit where post-occupancy testing confirms that VOCs & formatdehyde levels are in accordance with the relevant standards.  One credit: Adaptability - Potential for natural ventilation (Potential Upilit)  3. The building ventilation strategy is designed to be flexible and adaptable to potential building occupant needs and climatic scenarios. This can be demonstrated as follows:  a. Occupied spaces of the building are designed to be appated for providing fresh air entirely via a natural ventilation strategy. The following are methods deemed to satisfy this criterion dependent upon the complexity of the proposed system:  i. Room depths are designed in accordance with CIBSE AM10 (section 2.4) to ensure effectiveness of any natural ventilation system. The openable window area in each occupied space is equivalent to 5% of the gross internal flow area of that commontive plate; OR.  ii. The design demonstrates that the natural ventilation strategy provides adequate cross flow of air to maintain the required thermal confinitor conditions and ventilation rates. This is demonstrated using ventilation design tool types recommended by CIBSE AM107 (or for education buildings by using the Class Vent tool).  For a strategy which does not rely on openable windows, or which has occupied spaces with a plan depth greater than 15m, the design must demonstrate in accordance with criterion 13.a. is above that the ventilation strategy can provide adequate cross flow of air to maintain the required thermal conflort conditions and ventilation strategy is capable of providing at least two levels or user-control on the supply of fresh air to the coupled space (see compliance note CN3.3 for further details).  NOTE (MEP to review): Where the building is predominantly naturally ventilated, but mechanical ventilation is necessary to boost ventilation during peak conditions, (i.e. maximum occupancy and/or peak-temperature conditions) and to the further orb	None
		Hea 04	Thermal comfort	3	2	2	MEP Consultant	Thermal Modelling  1 Credit: Approjate hermal modelling is to be carried out in accordance with CIBSE AM11 using appropriate software. Alternatively, for a building with a simple servicing strategy, ClassCool will suffice. TM52 Thermal Modelling is suitable for complex servicing strategies.  Temperature Control Strategy  1 Credit: All radiators and radiant panels will be controlled by tamperproof thermostatic radiator valves (TRVs) for rapid response local temperature control. MEP Engineer to confirm how this control strategy has been informed by the results of the modelling above.  MEP engineer to advise whether these credits can be achieved.	One credit - Adaptability (Climate Change Environment) - NOT TARGETED 1 credit where the hermal modeling has been carried out for a projected dimate change environment. This forms an extension of the first credit. This is an onerous credit and will require MEP Consultant to confirm whether this is something they have developed previously and whether it is to be targeted on this project. Relatively inexpensive credit to target however is dependant on what the modelling results require to be specified.	None
		Hea 05	Acoustic Performance	3	2	3	Acoustic Consultant / Architect / MEP Consultant	Pre-requisite: Require confirmation a suitably qualified acoustician has been appointed by the client at pre-	Reverberation (I credit): Teaching and study spaces/copen plan teaching spaces/corridor and stainwells, all to achieve relevant standards of acoustic performance (Control of reverberation, sound absorption and speech transmission index (STI)).  Once a Sultably Qualified Acoustician is on board they will be able to advise on the achievability of this credit. Celement Joseph (March 2013) details background noise levels which will form the basis of the acousticiants advice.	None
		Hea 06	Safety and Security	2	1	1	Architect / Security Consultant / Landscape Architect	One credit - Security of site and building (targeted)  1 credit: Where a suitably qualified security specialist (SOSS) carries out a Security Needs Assessment (SNA) during / prior. BRIA Stage 2 Concept Design) and the recommendations integrated into the design of the building. Due to the nature of the project the security consultation is often taken place at a later stage - this is acceptable on the basis that the timing of the consultation hasn't hindered the ability to adopt security measures e.g. changes to the design.  Design team to advise whether this will be undertaken and the principles of secured by design will be adopted. We require documented evidence of the engagement and examples of how this has influenced the design.	One credit - Safe Access (Not targeted)  1 credit - The requirement of the 1st credit is onerous as this requires careful consideration and planning of pedestrian, veloular and cycle access to the building including the lighting design. Design team (architect, landscaping, electrical) to confirm whether the BREEAM specific requirements of this credit can be achieved. Credit should ideally be considered during RIBA stage 2 to avoid non-compliance.  Once a concept landscape strategy is determined, landscape architect to advise whether their is safe, segregated access to pedestrians, cyclists and vehicles; a separate area for refuse collection.	None
		0.83% Per Credit	Total Credit Section Score	18 15.00%	13 10.83%	14 11.67%				





				VERY GOOD	EXCELLENT				
Category	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
	Ene 01	Reduction of energy use and carbon emissions	12	6	6	Energy Assessor / MEP Consultant	Credits will be reviewed none Part L2A modelling has been carried out. A reduction in CO2 emissions of at least 35%, of Part L2 raids is required under the London Plan. This is likely to be delivered through improved U-values, ultra efficient boilers, and solar PV.  It is estimated that a minimum of 6 credits will be achieved. MEP toadvise if any further credits are likely to be achieved and of the sustainability turnots.		None
	Ene 02	Energy monitoring	1	1	1	MEP Consultant	Energy metering systems are installed that enable at least 90% of the estimated annual energy consumption of each fuel to be assigned to the various end-use categories of energy consuming systems. Buildings with a total useful floor area greater than 1,000m2 are metered using an appropriate energy monitoring and management system Mandatory (1 credit): Separate accessible energy sub-meters with a pulsed output will be provided for the following in general but also for each use type: a. Space Heating b. Domestic Hot Water d. Cooling c. Fans (major) I. Lighting S. Small Power (lighting and small power can be on the same sub-meter where supplies are taken at each floor/department). In Other major energy-consuming items where appropriate metering must be by floor plate as a minimum - Kitchen, lifts (passenger), computer suites and Sport hall will need to be separately sub meterod. Requirements to be integrated into building services specification.		One credit (First sub- metering credit)
	Ene 03	External lighting	1	1	1	MEP Consultant	MEP to confirm that appropriate sub-metering Energy monitoring will be adopted.  One credit The average initial luminous efficacy of the external light fittings within the construction zone is not less than 60 luminaire lumens per circuit Watt. All external light fittings are automatically controlled for prevention of operation during daylight hours and presence detection in areas of intermittent pedestrian traffic.  MEP consultant to confirm requirements for external lighting (see also Hea 01 and Pol 04) will be met.		None
Energy	Ene 04	Low carbon design	3	,	,	MEP Consultant / Architect	LZC Feasibility Study & specification of Technology 1 credit can be targeted where a compliant LZC feasibility study has been carried out at RIBA stage 2 and the most suitable LZC fechnology specified.  The LZC study should cover as a minimum:  1. Energy generated from LZC energy source per year  2. Energy generated from LZC energy source per year  2. Lile cycle cost of the patential superficiation, accounting for payback  4. Local planning criteria, including land use and noise 5. Feasibility of exporting head/electricity from the system 6. Any available grants 7. All technologies appropriate to the building type, connecting the proposed building to an existing local community CHP system or source of waste heat or power OR specifying a buildingsite CHP system or source of waste heat or power with the potential to export excess heat or power with the potential to export excess heat or power via a local community energy scheme.  A minimum 35% reduction in CO2 is required under the London Plan and it is likely that a portion of this will be delivered via solar PV. MEP to confirm percentage reduction from enewables.  Note: this credit cannot be achieved unless a "meaningful reduction" in CO2 is achieved: As a quide, the installation should contribute at least 5% of overall building energy demand and/or CO2 emissions.  Risk register currently advises that there is currently no allowance for renewables. CarbonPlan to advise on funding solutions.	Building services engineer to confirm whether the following can demonstrably be achieved:  Passive Design (not targeted - potential upliff) (It credit): The building uses passive design measures to reduce the total heating, cooling, mechanical vertilation and lighting loads and energy consumption in line with the findings of the passive design analysis.  Face Cooling (not targeted - potential uplif) (It credit): Perceptible - possive design credit is achieved. Where the building utilises a free cooling strategy, with a good passive design, free cooling via night time cooling should be easily achievable. This will be determined from the TMS2 modelling data which has been carried out.	None
	Ene 06	Energy efficient transportation systems	0	0	0	Vertical Lift Contractor / MEP Consultant	ASSUMED THAT A PLATFORM LIFT FOR DDA COMPLIANCE WILL BE USED ON THIS SCHEE (I.E. SPEED <= 0.15 M/s).  MEP to advise if any passenger or goods lifts will be specified?	passenger and Goods lifts. The energy consumption has been calculated in accordance with BS EN ISO 25745 Energy performance of lifts, escalators and moving walks. Lift analysis to be developed to target any credits here.  If platform lifts are specified then these credits are not applicable.  2 credits: the most energy efficient features are specified in light of the analysis.	None
	Ene 08	Energy efficient equipment	2	0	2	Selwyn School / Principle Contractor / MEP Consultant		2 credits: The following equipment ETHER qualifies for an Enhanced Capital Allowance Scheme claim (e.e. is on the Energy Technology Product List, ETPL). OR has been awarded an Energy Star rating OR has been procured in accordance with the Government Buying Standards.  1. Office equipment  2. Domestic scale white goods and other small powered equipment  The project has incorporated at least two-thirds of the energy efficiency measures outlined in the section summaries of each of the relevant sections of CliBSE Guide TM505 (except as specified):  1. Section 8 (Drainage and kitchen waste removal)  2. Section 9 (Energy controls - specifically controls relevant to appliances)  3. Section 11 (Appliance specification - not fabrication or utensi specifications)  4. Section 12 (Marewashing: dishwashers and glasswashers)  5. Section 13 (Warewashing: dishwashers and glasswashers)  6. Section 16 (Coking appliance selection)  7. Section 15 (Walter temperatures, laps, faucets and water saving controls).  Confirmation will be required as to whether this is Principle Contractor or the Client's responsibility.	None
	0.79% Per Credit	Total Credit Section Score	19 15.00%	9.00%	11 11.00%				





				VERY GOOD	EXCELLENT				
Category	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
	Tra 01	Accessibility	3	2	2	Transport Consultant	The Accessibility Index for the site has been calculated as 7.14 from the proposed Main Entrance, therefore a maximum of two credits can be achieved.		None
	Tra 02	Proximity to Amenities	1	1	1	CarbonPlan	There is a relatively populated high street (Winchester Road, to the east of the sie) located within 500m of the site therefore it is anticipated that a post box, food outlet and Cash machine will be situated here. Credit to be reviewed.		None
Transp	Tra 03	Cyclist facilities	2	1	1	Landscape Architect / MEP Consultant	Cycle Storage  Torodit: Where adequate cycle storage for building users is specified:  Primary school = 5 cycle storage spaces per form or class in year group.  The proposed school will create a SFE primary school, the new 691 place primary school will include 45 full time equivalent (FTE) nursery places and a provision for 16 under 35.  STE = 3 x 5no. cycle storage spaces = minimum 15no. BREEAM compliant cycle storage spaces required.  Cycle storage area to be sheltered to protect from weathering, and external lighting for this to be in compliance with Hea 01 (External lighting criteria).	The current drawings confirm that no cyclist facilities will be provided for staff.	None
ort	Tra 05	Travel Plan	1	1	1	Transport Consultant / Landscape Architect / MEP Consultant / Selwyn Primary	A BEEEAM compliant Travel Plan will need to be produced in ight of a Transport Assessment. The Travel Plan will need to consider a range of building users and utilises surveys to inform the design of the building to improve transport assessability. The Travel Plan must be developed during the feasibility and design stages.  A transport assessment has been carried out by Robert West (June, 2014). This will need to inform the Travel Plan.  The recommendations of the Travel Plan will need to be incorporated into the design of the building.  The School must be involved in the development of the travel plan and they must confirm that the travel plan will be implemented post construction and be supported by the building's management in operation.		None
	1.29%	Total Credi	t 7	5	5				
	Per Credit	Section Score	9.00%	5.71%	5.71%				





_					VERY GOOD	EXCELLENT				
Cate	gory	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
		Wat 01	Water Consumption	5	2	3	MEP Consultant / Architect	Carbon Plan are able to provide a guideline set of flow rates to achieve credits upon request. Please supply the intended flow absols for CarbonPlan to review. This specification will need to be included within the specification documentation.  2 credits where a 25% improvement over the baseline is achieved from domestic scale water-consuming components.  a. WCs  b. Urinals  c. Taps (wesh hand basins and where specified kitchen taps and waste disposal unit)  c. Taps (wesh hand basins and where specified kitchen taps and waste disposal unit)  d. Baths  f. Dishwashers (domestic and commercial sized)  g. Washing machines (domestic and commercial or industrial sized).  No greywater or rainwater harvesting systems have been specified. The FOS requires water consumptions targets of 2.8 m3/person/year therefore it in anticipated that further credits will be available. Likely that flow restrictors will be installed.	3 credits where a 40% improvement over the baseline is achieved.  4 Credits where a reduction in water consumption over the baseline of 50% from the installations of sanitary fittings.	One credit
		Wat 02	Water Monitoring	1	1	1	MEP Consultant	Water Monitorine - Mandatory for Yery Good - 1 credit  1. The specification of a water meter on the mains water supply to each building; this includes instances where water is supplied via a borehole or other private source.  2. Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are teller fitted with easily accessible sub-meters or have water emointioning equipment interpol to the plant or area (see Compliance notes). The proposed Area Schedule would suggest that no such areas are present.  3. Each meter (main and sub) has a pulsed or other open protocol communication output to enable connection to an appropriate utility monitoring and management system, e.g. a building management system (BMS), for the monitoring of water consumption (see Relevant definitions).  4. If the sile on which the building is located has an existing BMS, managed by the same occupier/owner (as the new building), the pulsed/digital water meter(s) for the new building must be connected to the existing BMS.  MEP consultant to confirm.		Criterion 1 only
	Water	Wat 03	Water Leak Detection and Prevention	2	2	2	MEP Consultant	MEP Consultant to advise whether the following water monitoring/response systems will be specified.  One credit - Leak detection system  1. A leak detection system which is capable of detecting a major water leak on the mains water supply within the building and between the building and the utilities water meter is installed. The leak detection system must be:  a. A permanent automated water leak detection system that alors the building occupants to the leak OR an inbuilt automated diagnostic procedure for detecting leaks is installed.  b. Activated when the flow of water passing through the water meter/data logger is at a flow rate above a pre-set maximum for a pre-set period of time.  c. Able to identify different flow and therefore leakage rates, e.g. continuous, high and/or low level, over set time periods.  d. Programmable to suit the owner/occupiers' water consumption criteria.  e. Where applicable, designed to avoid false alarms caused by normal operation of large water-consuming plant such as chillers.  One credit - Flow control devices  2. Flow control devices that regulate the supply of water to each WC area/facility according to demand are installed and therefore minimise water leaks and wastage from sanitary fittings).  It is anticipated that flow control devices will be specified although MEP to advise.		None
		Wat 04	Water Efficient Equipment	,	0	1	Landscape Architect / MEP Consultant	the consequence was also wanted as the following the designation of the top o	The following are some examples of solutions deemed to satisfy compliance for a number of different building types or functions (where the unregulated water demand for that function is one of the significant contributor in the building).  1. Drip-fed subsurface irrigation incorporating soil moisture sensors. The irrigation control should be zoned to permit variable irrigation to different planting assemblages.  2. Reclaimed/recovered water from a rainwater collection or waste water recovery system, with appropriate storage, i.e. greywater collection from building functions or processes that use potable water, e.g. vehicle wash, training water in fire stations, sanitary facilities, irrigation etc. This should take into account the Government Buying Standards' where appropriate to the building type.  3. External landscaping and planting that relies solely on precipitation, during all seasons of the year.  4. All planting specified is restricted to contextually appropriate species that thrive without irrigation and will continue to do so in those conditions.  It is understood from the Risk Register that a spinkler system may potentially be installed. this will not be compliant and the credit cannot be targeted. Landscape Architect to advise on achievability.	None
		0.78% Per	Total Credi Section Score	t 9 • 7.00%	5 3.33%	7 4.67%				
		Credit	Ocotion Score	7.0070	0.0070	1.0770				





The control of the co		1		VERY GOOD	EXCELLENT				
And the control of th		Credit Name	Credit(s) Available			Responsibility		Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
Leadings colorised.  When the second processes of the	Mat 0		6	4	4		regularly use materials with a Green Guide Rating of A/A+. A detailed materials strategy is currently being		None
Propie Control of the Control of Authority Control of the Control	Mat 0	Boundary Protection	1	1	1		to ensure that at least 80% of the hard landscaping has a Green Guide rating of A/A+. Hard landscape aggregates		None
Contractor / Architect  Contra	Mat 0	13	4	2	3	Principle Contractor	scope of plan.  At least 80% of assessed materials will need to be sourced from suppliers capable of providing the relevant responsible sourcing certification i.e. BE56001 Ther 1/2.  Insulation: Architect and design team to ensure that insulation will be used that has an appropriate Green Guide rating, and sourced from suppliers capable of supplying the relevant responsible sourcing certification.  One credit - Sustainable procurement plan The principal contractor sources materials for the project in accordance with a documented sustainable procurement plan:  A plan that sets out a clear framework for the responsible sourcing of materials to guide procurement throughout a project and by all involved in the specification and procurement of construction materials. The plan may be prepared and adopted at an organisational level or be atterproject specific, and for the purposes of BREAM compliance, will lower the following as a minimum.  1. Risks and opportunities are identified against a broad range of social, environmental and economic issues. BS 8092/2009 Responsible sourcing sector certification schemes for construction products. Specification can be used as a guide to kinetify these issues.  2. Alms, objectives and targets to guide sustainable procurement activities.  3. The strategic assessment of sustainably sourced materials available locally and nationally. There should be a policy to procure materials locally where possible.  4. Procedures are in place to check and verify that the sustainable procurement plan is being mplemented dathered to on individual projects. These could include setting out measurement criteria, methodology and performance indicators to assess progress and demonstrate success.		Criterion 1 only
Material efficiency  1	Mat 0	Insulation	1	1	1	Contractor / Architect	sourcing certification (EMS ISO 14001/BES 6001 (ideally)). The elements specified must also hold a Green Guide		None
Mat 06  Mat 06  Mat 06  All Design Team	Mat O:		1	1	1		The building incorporates suitable durability and protection measures or designed features/solutions to prevent damage to vulnerable parts of the internal and external building and Indicapange elements. This must include, but is not necessarily limited to:     Roberton from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares     Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage,     delivery, corridor and kitchen areas.     Crotection against, or prevention from, any potential vehicular collision where vehicular parking and     manoeuviring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery     areas.  Protecting exposed parts of the building from material degradation     2. The relevant building elements incorporate appropriate design and specification measures to limit material     degradation due to environmental factors.		None
	Mat O		1	0		All Design Team		impact of material use and waste. This can be an easy credit to achieve providing the relevant reports/meeting minutes are in place demonstrating the design team have considered this and the results impacted on the design of the building.  CarbonPlan can develop and outline report and gather information from design team members for inclusion.  The above is carried out by the design/construction team in consultation with the relevant parties (see CRS) at each of the following RIBA stages:  Loncapt Design  Loncapt Design  Developed Design  Construction.  The involvement and documentation during key RIBA work stages makes targetting this credit untikely atthough may be sought as an uplift if the design team can provide demonstrable	None
	0.96% Per		it 14 e 13.50%	9 8.04%	11 9.82%				





				VERY GOOD	EXCELLENT				
Category	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
	Wst 01	Construction-site Waste Management	4	3	4	Principle Contractor / Waste/Demolition Contractor	Principle Contractor must be capable of achieving the required waste generation and waste diversion requirements. Cost Consultant to include requirements in ER's.  **Jo to three redits - Construction resource efficiency**  1. Where a Resource Management Plan (RMP) SWMP has been developed covering the non-hazardous waste related to on-site construction and declared off-site manufacture or fabrication (including demolition and excavation waste) generated by the building's design and construction (see CN3).  2. Where construction waste related to on-site construction and declared off-site manufacture/fabrication (excluding demolition and excavation waste) generated by the building design and construction is <7.5m3 / s 6.5 tonese per 100m2 gross internal floor area.  **Pre-Demolition Audit (MANDATORY /I targeting any credits here)**  Where existing buildings on the site will be demolithed a pre-demolition audit of any existing buildings, structures or had surfaces is completed to determine if, in the case of demolition, refutrishment/reduces for leastlike and, if not, to maximize the recovery of material from demolition for subsequent high grade/value applications. The audit must be referenced in the RMP and control existence of the reuse and recycling of the key refutrishment and demolition materials in accordance with the waste hierarchy.  **PLUS**  **Diversion from landfill**  **Irredict can be targeted where 70% (volume) of non-hazardous construction and 80% (volume) demolition waste (where applicable) generated by the project have been diverted from landfill.  **Waste materials will be resourced in the separate key waste groups as per Table - 53 (according to the waste streams generated by the scope of the works) either on-site or through a licensed contractor fractor for ecovery.		None
	Wst 02	Recycled aggregates	1	0	0	Contractor / Structural Engineer	Unlikely that suitable sources of recycled aggregates can be found within proximity to the site.	Use of recycled aggregates can often present an onerous task in terms of identifying the sources and applications of aggregates used on site and ensuring they classify as secondary aggregates.	None
Waste	Wst 03	Operational waste	1		1	Landscape Architect / Selwyn Primary	Torditt. Compliant waste storage area with good vehicular and pedestrian access. Must be clearly labelled to assist segregation of recyclable waste and within 20m of site entrance.  1. Dedicated space(s) is provided for the segregation and storage of operational recyclable waste volumes generated by the assessed building/unit, its occupant(s) and activities. This space must be: a. Clearly labelled, to assist with segregation storage and collection of the recyclable waste streams b. Accessible to building occupants or facilities operators for the deposit of materials and collections by waste management contractors c. Of a capacity appropriate to the building type, size, number of units (if relevant) and predicted volumes of waste that will arise from dailyweekly operational activities and occupancy related and occupancy related and contractors c. Of a capacity appropriate to the building superated by the building's use and operation, the following facilities are provided: a. Static waste compactor(s) or baler(s); situated in a service area or dedicated waste management space. b. Vesse(s) for storing segregated food waste resulting from the building's daily operation and use; OR adequate space(s) for storing segregated food waste and compostable organic material prior to collection and delivery to an alternative composting facility. c. Where organic waste is to be storedicomposted on-site, a water outlet is provided adjacent to or within the facility for cleaning and hyginee purposes.  Requirement for at least 2 sqm of recyclable waste storage area per 1000 sqm GIA.  Note: The area for storage of recyclable materials must be provided in addition to areas and facilities provided of orealing with general waste and chem waste management facilities, e.g. compectors, balers and compositers.  Landscape Architect to advise on achievability of credit.  Documented evidence e.g. email, meeting minutes etc., from the future building occupier are required confirming likely waste streams.		None
	Wst 05	Adaption to climate change	1	0	0	All Design Team		This credit requires the provision of a climate change adaption stratogy specific to the structural and fabric resilience of the building. This credit has been introduced as part of the new 2014 BREEAM scheme.	None
	Wst 06	Functional adaptability	1	0	0	All Design Team		This credit requires the provision of a functional adaption strategy study which considers a range of design measures to ensure adaptions to the building can be made over a buildings lifespan.  This credit has been introduced as part of the new 2014 BREEAM scheme.	None
	1.06% Per	Total Credit Section Score	8.50%	4 3.75%	5 4.69%				
	Credit	223							





				VERY GOOD	EXCELLENT	1			
Category	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
	LE 01	Site selection	2	1	2	Landscape Architect / Suitably Qualified Ecologist / Civil Engineer / Principle Contractor	Persiousiv Development Land (targeted)  1 credit: On the basis that the building is to be developed on top of existing hard standing (current school building), one credit is targeted. If the proposed development is built on existing land of ecological value e.g. playing field then this credit will need to be reviewed. This credit is to be reviewing by the Suitably Qualified Ecologist.	Contaminated Land (potential uptiff).  I credit: Risk Register confirms that there is a potential of contaminated land although this will need to be clarifled through turther ground investigations. Ground Investigation by EPS to be forward to BREEAM assessor to confirm if any contamination is present. TBC.	None
	LE 02	Ecological value / Protection	2	2	2	Suitably Qualified Ecologist / Landscape Architect / Principle Contractor	I credit: It is likely that the site will be deemed to be of low ecological value' and this will need to the confirmed by a suitably qualified ecologist (SQE).  1 credit: where suitable measures for ecological protection as recommended by the ecologist are in place during the construction process. Landscape architect to confirm protection measures.  It is understood that an Ecology Report/Survey has been understare and its has identified potential bat roosting and TPO over trees. Further investigations and surveys will be required to determine extent of protection measures. Any protection measures must be specified on landscape drawing/specifications and implemented during the pre-construction of acconstruction and construction of acconstruction of acconstruction of acconstruction acconstruction of acconstruction of acconstruction of acconstruction of acconstruction acconstruction of acconstruction of acconstruction acconstruction of acconstruction of acconstruction of acconstruction of acconstruction of acconstruction acconstruction of account accou		None
Land Use and Ecol	LE 03	Mitigating ecological impact on existing site ecology	2	2	2	Landscape Architect / Ecologist	Phase I Ecology Report to be issued to BREEAM Assessor. Following Landscape proposals a Phase II Ecology report may be requiredexisting report to be updated to advise on any further recommendation.  1 credit can be targeted where the design team work in accordance with the ecologist to protect the ecological value of the site (landscape design and planting) to achieve a change in ecological value of the site is less that zero but equal to or greater than minus nine.  2 credits can be targeted where the design team work in accordance with the ecological value equal to or greater than fines.  2 credits can be targeted where the design team work in accordance with the ecological value equal to or greater than 0.i.e. no negative change.  Where a Suitably Qualified Ecologist (SQE) has been appointed and, based on their site survey, they confirm the following and either the assessor of ecologist from the state of the sassessor of ecologist from the state of the sassessor of ecologist from the state of the sassessed site in the existing pre-developed state and expected state.  4. Area (m2) of the existing and proposed breat habitat plot types.  II. Average total taxon (plant species) richness within each habitat type.  The ecology report should stipulate general measures to mitigate impact on site ecology.		One credit
logy	LE 04	Enhancing site ecology	2	2	2	Suitably Qualified Ecologist / Landscape Architect	Phase I Ecology Report by Middlemarch gives recommendations to enhancement of site ecology. The Report will need to be updated in light of the proposed scheme, and landscape/lanting strategy. The landscape strategy should adopt the recommendations given by the SOE in order to maximise site ecology.  1 credit: A Suitably Qualified Ecologist will need to be consulted with during RIBA Work Stage 1 to determine a suitable strategy for the enhancement and protection of site ecology. Their subsequent report will need to be developed by RIBA Work Stage 2 to allow scope to maximise site ecology.  We require confirmation that the necessary appointments and reports were undertake at the required RIBA Work Stage (as aboreval.)  1 credit: where the strategy for enhancement of site ecology results in an increase in ecological value of 6 plant species or greater.  BREEAM LE 03/LE 04 calculations required as per LE03.		None
	LE 05	Long term impact on biodiversity	2	0	0	Suitably Qualified Ecologist / Principle Contractor / Selwyn School	Credits not targeted for Very Good.	lation Two Credits - Long term Habitat management (not largeted - potential updit) Pre-requisites (Where a landscape and habitat management plan, appropriate to the site, is produced covering at least the first five veers after project competion in accordance with BS 42020-20131 Section 11.1. This is to be handed over to the building owner/occupants for use by the grounds maintenance staff. To be developed by Suitably Qualified Ecologist.  PLUS  1 credit - At least TWO of the Additional Measures are implemented by the Principle Contractor 2 credits - At least FOUR of the Additional Measures are implemented by the Principle Contractor	None
	1.00% Per Credit	Total Cred Section Sco		7.00%	8.00%				





				VERY GOOD	EXCELLENT				
Category	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
	Pol 01	Impact of Refrigerants	3	1	2	MEP Consultant	If the first two credits are to be targeted then it will need to be specified that the installed refrigerants have a GWP of < 10.  This can be reduced to 1 credit where refrigerants have Direct Effect Life Cycle CO2 equivalent emissions of (IDELC CO2e) of ≤ 1000 kgCO2e/kW cooling capacity.  No refrigerants.  There credits can be awarded where no refrigerants are specified for the development. MEP consultant to confirm. What is the refrigerant charge of the cooling specified for IT/Server room?  MEP to advise on scope of cooling.	Lask Detection System:  I redfl: If the full credit is to be targeted then a compliant refrigerant leak detection system will need to be installed with automatic shut-down. This is not dependant on the first two credits.  An automated permanently installed multi-point sensing system, designed to continuously monitor the atmosphere in the vicinity of refrigeration equipment and, in the event of detection, raise an alarm. The system may be aspirated or have multiple sensor heads linked to a central alarm unit or BMS. Various sensor types are available including infra-red, semi-conductor or electro-chemical.  The system must be capable of automatically isolating and containing the remaining refrigerant(s) charge in response to a leak detection incident (see Other information).	None
	Pol 02	NOx Emissions	3	3	3	MEP Consultant	a credits: where the dry NOx emission level (measured at 0% excess O2) ≤ 40 mg/kWh (space heating and hot vater).  Ultra-efficient low NOx emissions boilers should be adopted on this scheme.  This will need to be included in the mechanical specification - Heart recovery can be considered as having zero NOx emissions for the purpose of this issue. We will need to know the energy balance on how much heat the NVHR is providing.		None
Pollution	Pol 03	Surface water run-off	5	3	3	Flood Risk Assessor / Civils/Drainage Engineer	Flood Resillinoe:  10 Credits: where the site specific flood risk assessment looking at all sources of flooding has confirmed has confirmed the set is becated within Flood Zone I (low risks of flooding). The report looks at all sources of flooding including tidal, fluvial, sewage, reservoirs, groundwater and surface water.  Surface Water Flund?  1 credit: Where evidence provided demonstrates that an appropriate consultant has been appointed and they have confirmed that the drainage measures specified ensure that the peak rate of run-off from the site to the watercourses (natural or municipal) is no greater for the developed set than it was for the pre-development site. This should comply at the 1 year and 100 year return period events, taking into account climate change.  The site specific FRA will need to be updated based on the proposals. This will reflect the effects on surface water n-off based on the proposed design and drainage strategy. Drainage Engineer to advise on achievability of BREEAMI credits based on proposed scheme. Credits to be reviewed.	Surface Water Fund!  I credit: Where evidence provided demonstrates that an appropriate consultant has been appointed and they have confirmed that there is no risk of flooding in the event of a local drainage system failure, AND EITHER.  - (Criterion 9)The post development run-off volume, over the development lifetime, is no greater than it would have been prior to the assessed site's development.  - Any additional predicted volume of run-off for the 100 year 6 hour event must be prevented from leaving the site by using infiltration or other SuDS techniques.  OR (only where criterion 9 for this credit cannot be achieved)  - Justification from the Appropriate Consultant indicating why the above criteria cannot be achieved i.e. where infiltration or other SuDS techniques are not technically viable options.  - The post development pask rate of run-off is reduced to a limiting discharge. Drainage design measures are specified to ensure that the post development pask rate of run-off is reduced to the limiting discharge. The limiting discharge is defined as the highest flow rate from the following options:  - The pier development 1-year peak flow rate; OR (maximum is 5 lis at discharge point)  - The mean amust flow rate (Dark and drainage strategy demonstrate that there is no discharge from the developed site for rainfall up to 5 mm. All water pollution prevention systems have been designed and installed in accordance with the recommendations of documents such as Pollution Prevention Guideline 3 (PPG-3) and other provides suitable SUDS. These should be incorporated into the section of the little for the first provides of the provides suitable SUDS. These should be incorporated into the section of the first provides and the sould be incorporated into the section of the first provides and the sould be incorporated into the section of the section of the sould be incorporated into the section of the sec	None
	Pol 04	Reduction of night time light pollution	1	1	1	MEP Consultant	The external lighting strategy has been designed in compliance with Table 2 (and its accompanying notes) of the ILP Gui dance notes for the reduction of obtustive light, 2011.  All external lighting (except for safety and security lighting) can be automatically switched off between 23:00 and 07:00.  If safety or security lighting is provided and will be used between 23:00 and 07:00, this part of the lighting system complies with the lower levels of lighting recommended during these hours in Table 2 of the ILP's Guidance notes.  Illuminated advertisements, where specified, must be designed in compliance with ILE Technical Report 5 – The Brightness of Illuminated Advertisements.  MEP consultant to advise on achievability of these credits.		None
	Pol 05	Reduction of noise pollution	1	'	'	Acoustic Consultant / Architect / MEP Consultant	Pre-requisiter. A Noise Assessment on the proposed plant to be carried out in accordance with the BREEAM requirements by a Suitably Qualified Ecologist. Once the design of the building has been determined, a more justiliable noise assessment can be undertaken and appropriate measures will be specified to ensure background noise from the plant room will be attenuated as necessary. Require confirmation that there are no noise sensitive buildings within 800m of the site. OR, where noise sensitive buildings are within 800m: The accusticians report has confirmed that noise attenuation measures (at source) have been specified in accordance with BS8233 and BB93. The noise level from the proposed site building, as measured in the locality of the nearest or most exposed night (250 to 07.00) compared to the background noise level. Once a Suitably Qualified Acoustician is on board they will be able to advise on the achievability of this credit. Clement Acoustics report (March 2013) details background noise levels which will form the basis of the acoustician's advise.		None
	0.77% Per Credit	Total Credi Section Score	it 13 e 10.00%	9 6.92%	10 7.69%				





				VERY GOOD	EXCELLENT				
Category	Credit ID	Credit Name	Credit(s) Available	Scenario A (Baseline)	Scenario B (Upgrades)	Responsibility	Issues with Scenario A (Baseline) for VERY GOOD Rating	Upgrade Credits (Scenario B) / Issues to be aware of	Min for VERY GOOD BREEAM rating
		Responsible construction practices	1	0	0	Principle Contractor	Credit not sought	Credit targeted requires a score of 40+ to be achieved. This is feasible but does require some additional effort to be required to demonstrate achievement over that of compliance under the considerate constructor's scheme.	None
	Man 05i	Aftercare	1	0	0	Principle Contractor	Credit Not Sought	The Main Contractor commits to ensuring there is (or will be) operational infrastructure and resources in place to co-ordinate the collection, monitoring and reporting of activities at quarterly intervals for the first three years of building occupation:	None
	Hea 01i	Visual Comfort	1	1	1	Architect	Innovation credit achieved if UDI is achieved.		None
	Ene 01i	Reduction of energy use and carbon emissions	1	0	0	MEP Consultant	Credit Not Sought		None
Inno	Wat 01i	Water Consumption	1	0	0	MEP Consultant	Credit Not Sought		None
vation	Mat 01i	Life Cycle Impacts	1	0	0	Principle Contractor	Credit Not Sought	Requires additional consideration of building materials to ensure that they are appropriately rated in the Green Guide to allow the required score for the exemplary credit to be achieved.	None
_	Mat 03i	Responsible Sourcing of Materials	1	0	0	Principle Contractor	Credit Not Sought	All suppliers of construction materials must be capable of providing the highest level of responsible sourcing certification, i.e. BES 6001.	None
	Wst 01	Construction-site Waste Management	1	0	0	Principle Contractor	Credit Not Sought		None
	Wst 02i	Recycled aggregates	1	0	0	Structural Engineer	Credit Not Sought		None
	Wst 05i	Adaption to climate change	1	0	0	All Design Team	Credit Not Sought		None
	1.00%	Total Cred	t 10	1	1				
	Per Credit	Section Scor		1.00%	1.00%				
		Overall Credit		75.00	87.00				
		Final BREEAM Scor		63.02%	72.82%				
		BREEAM Ratin	9	VERY GOOD	EXCELLENT				