SUSTAINABILITY STATEMENT

Camden Methodist Church

TheWesley

March 2017

CBRE

CONTENTS

APPENDICES

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Executive Summary

In accordance with Camden Council, Methodist International Centre Limited is to demonstrate that Camden Methodist Church will in principal demonstrate compliance with Camden Core Strategy Policy CS13 - Tackling climate change through promoting higher environmental standards, Camden Development Policies DP22 - Promoting Sustainable Design and Construction, DP23 – Water and Camden Planning Guidance CPG 3 – Sustainability.

To demonstrate compliance with Camden Council Policy, CBRE Limited has been appointed as Sustainability Consultants to undertake a BREEAM Assessment. The statement is to demonstrate, in principle, if BREEAM Excellent can be achieved, providing a quantitative response on how the Planning Application Proposal embodies BREEAM and identifying what the detailed design proposals are expected to reflect.

To verify if BREEAM Excellent can be achieved in principle, in a transparent and comprehensive manner, planning documentation, drawings and design specifications were appraised against the BREEAM UK New Construction 2014 assessment criteria for the building use type. Additionally, the design team were consulted in the construction of the BREEAM Pre-assessment to ensure the BREEAM Strategy accurately reflects the design proposals.

The Camden Methodist Church documents demonstrate that in principle, based upon the inclusion of the 'Base Case' 'BREEAM Very Good in Principle' and 'BREEAM Excellent in Principle' credits, a BREEAM Excellent rating of 74% is demonstrated, giving a 4% buffer over the minimum threshold (70%).

Of the 74%, the BREEAM issues were identified as 'Base Case', 'BREEAM Very Good in Principle' and 'BREEAM Excellent in Principle'.

BASE CASE: BREEAM issues that have been identified within the current proposals or will be included during design development. The BREEAM level that the Property can reasonably achieve is as follows:

- Camden Methodist Church is in a position to achieve in principle a BREEAM Pass rating of 39%.

BREEAM VERY GOOD IN PRINCIPLE: BREEAM issues that relate to contractor deliverables, appointment of additional consultants and the post occupancy elements, with low to medium costs

- 17% of the BREEAM issues could be reasonably included in the design development. In accounting for these items a BREEAM Very Good rating of 56% could be achieved in principle.

BREEAM EXCELLENT IN PRINCIPLE: BREEAM issues that can be reasonably included to achieve BREEAM Excellent in principle but could incur high costs

- 17% of the BREEAM issues will be addressed as the design develops and appointment of consultants. At this stage an assumption to compliance can only be made. In accounting for these items it is expected in principle that BREEAM Excellent of 74% is demonstrated. Complying with Camden Council Policies CS13 and DP22.

Introduction

In accordance with Camden Council Policy, TheWesley is to demonstrate that Camden Methodist Church will in principal demonstrate compliance with Camden Core Strategy Policy CS13 - Tackling climate change through promoting higher environmental standards, Camden Development Policies DP22 - Promoting Sustainable Design and Construction, DP23 – Water and Camden Planning Guidance CPG 3 – Sustainability.

To demonstrate compliance, CBRE Limited has been appointed as Sustainability Consultants to complete a Sustainability Statement. The statement is to demonstrate, in principle, if BREEAM Excellent can be achieved, providing a quantitative response on how the Planning Application Proposal embodies BREEAM and identifying what the detailed design proposals are expected to reflect.

2.1 SITE SCHEME AND DESCRIPTION

The proposal is to convert the existing church building into a mixed use development retaining a smaller church worship space alongside a 39-key hotel, to be managed by TheWesley Hotels. The exterior is to be retained with minor modifications and improvements whilst the interior is to be reconfigured for the new uses across lower ground, upper ground, first, second and third floors. The site plan is indicated below:

Source: Manalo and White

Camden Council

Camden Council's Sustainability Policies are set out below:

Policy CS13 – Tackling climate change through promoting higher environmental standards

Reducing the effects of and adapting to climate change

The Council will require all development to take measures to minimise the effects of, and adapt to, climate change and encourage all development to meet the highest feasible environmental standards that are financially viable during construction and occupation by:

a. ensuring patterns of land use that minimise the need to travel by car and help support local energy networks;

b. promoting the efficient use of land and buildings;

c. minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing, in order, all of the elements of the following energy hierarchy:

   i. ensuring developments use less energy,

   ii. making use of energy from efficient sources, such as the King's Cross, Gower Street, Bloomsbury and proposed Euston Road decentralised energy networks;

   iii. generating renewable energy on-site; and

d. ensuring buildings and spaces are designed to cope with, and minimise the effects of, climate change.

The Council will have regard to the cost of installing measures to tackle climate change as well as the cumulative future costs of delaying reductions in carbon dioxide emissions

Local energy generation

The Council will promote local energy generation and networks by:

e. working with our partners and developers to implement local energy networks in the parts of Camden most likely to support them, i.e. in the vicinity of:

   i. housing estates with community heating or the potential for community heating and other uses with large heating loads;

   ii. the growth areas of King's Cross, Euston; Tottenham Court Road; West Hampstead Interchange and Holborn;

   iii. schools to be redeveloped as part of Building Schools for the Future programme;

   iv. existing or approved combined heat and power/local energy networks and other locations where land ownership would facilitate their implementation.

f. protecting existing local energy networks where possible (e.g. at Gower Street and Bloomsbury) and safeguarding potential network routes (e.g. Euston Road);

Camden Council

Water and surface water flooding

We will make Camden a water efficient borough and minimise the potential for surface water flooding by:

g. protecting our existing drinking water and foul water infrastructure, including Barrow Hill Reservoir, Hampstead Heath Reservoir, Highgate Reservoir and Kidderpore Reservoir;

h. making sure development incorporates efficient water and foul water infrastructure;

i. requiring development to avoid harm to the water environment, water quality or drainage systems and prevents or mitigates local surface water and down-stream flooding, especially

Policy DP22 - Promoting sustainable design and construction

The Council will require development to incorporate sustainable design and construction measures. Schemes must:

a. demonstrate how sustainable development principles, including the relevant measures set out in paragraph 22.5, have been incorporated into the design and proposed implementation; and

b. incorporate green or brown roofs and green walls wherever suitable.

The Council will promote and measure sustainable design and construction by:

c. expecting new build housing to meet Code for Sustainable Homes Level 3 by 2010 and Code Level 4 by 2013 and encouraging Code Level 6 (zero carbon) by 2016.

d. expecting developments (except new build) of 500 sq m of residential floorspace or above or 5 or more dwellings to achieve "very good" in EcoHomes assessments prior to 2013 and encouraging "excellent" from 2013;

e. expecting non-domestic developments of 500sqm of floorspace or above to achieve "very good" in BREEAM assessments and "excellent" from 2016 and encouraging zero carbon from 2019.

The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as:

f. summer shading and planting;

g. limiting run-off;

h. reducing water consumption;

i. reducing air pollution; and

j. not locating vulnerable uses in basements in flood-prone areas.

Camden Council

When justifying the chosen design with regards to sustainability the following appropriate points must be considered:

Policy DP22 – Sustainable Design Principles

Table Subtitle

DESIGN	FABRIC/SERVICES
The layout of uses	Level of insulation
Floorplates size/depth	Choice of materials
Floor to ceiling height	Air tightness
Limiting excessive solar gain	Efficient HVAC and lighting systems
Reducing the need for artificial lighting	Effective building management systems
Overshading	The source of energy used
Optimising natural ventilation	Metering
Design for and inclusion of renewables	Counteracting the heat expelled from plant equipment
Impact on existing LZC technologies in the area	Enhancement of/provision for biodiversity
Sustainable urban drainage including provision for green/brown roof	Efficient water use
Adequate space for recyclable materials	Re-use of water
Bicycle storage	Educational elements for example visible meters
Measures to adapt to climate change	On-going management and review
Impact on microclimate	

Policy DP23 - Water

The Council will require developments to reduce their water consumption, the pressure on the combined sewer network and the risk of flooding by:

a. incorporating water efficient features and equipment and capturing, retaining and re-using surface water and grey water on-site;

b. limiting the amount and rate of run-off and waste water entering the combined storm water and sewer network through the methods outlined in part a) and other sustainable urban drainage methods to reduce the risk of flooding;

c. reducing the pressure placed on the combined storm water and sewer network from foul water and surface water run-off and ensuring developments in the areas identified by the North London Strategic Flood Risk Assessment as being at risk of surface water flooding are designed to cope with the potential flooding;

d. ensuring that developments are assessed for upstream and downstream groundwater flood risks in areas where historic underground streams are known to have been present; and

e. encouraging the provision of attractive and efficient water features.

Policy CPG3 - Sustainability

The Council is committed to reducing Camden's carbon emissions. This will be achieved by implementing large scale projects such as installing decentralised energy networks alongside smaller scale measures, such as improving the insulation and energy performance of existing buildings.

Camden Council

This guidance provides information on ways to achieve carbon reductions and more sustainable developments. It also highlights the Council's requirements and guidelines which support the relevant Local Development Framework (LDF) policies:

- CS13 - Tackling climate change through promoting higher environmental standards
- DP22 - Promoting sustainable design and construction
- DP23 – Water

CPG3 requires the following BREEAM minimum standards to be achieved:

- At least 60% of the energy credits
- At least 40% of the materials credits
- At least 60% of the water credits

BREEAM

4.0 BUILDING RESEARCH ESTABLISHMENT ENVIRONMENTAL ASSESSMENT METHOD (BREEAM)

The BREEAM UK Non Domestic Refurbishment and Fit Out 2014 scheme can be used to assess the environmental life cycle impacts of existing non-domestic buildings at the refurbishment and fit-out stages.

4.1 BREEAM RATINGS

The BREEAM rating benchmarks are as follows:

BREEAM rating benchmarks

BREEAM Rating	% SCORE
OUTSTANDING	≥ 85
EXCELLENT	≥ 70
VERY GOOD	≥ 55
GOOD	≥ 45
PASS	≥ 30
UNCLASSIFIED	< 30

4.2 BREEAM MINIMUM STANDARDS

BREEAM has adopted a 'balanced score-card' approach to the assessment and rating, to achieve a particular rating the majority of BREEAM credits can be traded. However, to ensure that performance against key environmental issues is not avoided BREEAM has a set of minimum standards in key areas.

For BREEAM Excellent the following is to be attained:

Minimum Standards for BREEAM Excellent rating level

BREEAM ISSUE	MINIMUM STANDARDS FOR VERY GOOD
Ene 02: Energy monitoring	First submetering credit
Wat 01: Water consumption	One Credit
Wat 02: Water monitoring	Water meter to be installed on the mains water supply to the building
Mat 03: Responsible sourcing	All timber is sourced in accordance with the UK Government's Timber Procurement Policy.
Man 03: Responsible construction practices	One credit
Man 04: Stakeholder participation	One credit (building user information)
Man 05: Aftercare	One credit (seasonal commissioning)
Ene 01: Reduction of CO_2 emissions	Minimum EPRNC of 0.36 (6 credits)
Wat 02: Water monitoring	Water meter to be installed on the mains water supply to the building
Wst 01: Project Waste Management	One Credit
Wst 03: Operational waste	One Credit

Source: BREEAM UK Non Domestic Refurbishment and Fit Out 2014 Technical Manual

Camden Methodist Church BREEAM Analysis

5.0 BREEAM ANAYSIS

Methodology

To verify if BREEAM Excellent can be achieved in principle, in a transparent and comprehensive manner, planning documentation, drawings and design specifications were appraised against the BREEAM Non Domestic Refurbishment and Fit Out assessment criteria for the building use type. Additionally, the design team were consulted in the construction of the BREEAM Pre-assessment to ensure the BREEAM Strategy accurately reflects the design proposals. This approach provided a thorough and analytical appraisal, identifying the relevant BREEAM specifications and allowing for a comprehensive insight into the BREEAM performance that can be demonstrated.

The documentation was appraised against each applicable BREEAM Issue classifying them as 'Base Case', 'BREEAM Very Good in Principle' and 'BREEAM Excellent in Principle' with the overall result quantified the BREEAM performance. The detailed response against each BREEAM assessment criteria is provided in Appendix A – Camden Methodist Church BREEAM Analysis.

Camden Methodist Church RAG classification

CLASSIFICATION	DETAIL
Base Case	BREEAM issues that have been identified within the current proposals or will be included during design development.
BREEAM Very Good in Principle	BREEAM issues that relate to contractor deliverables, appointment of additional consultants and the post occupancy elements, with low to medium costs
BREEAM Excellent in Principle	BREEAM issues that can be reasonably included to achieve BREEAM Excellent in principle but could incur high costs

Note: The worship space and hotel is being assessed under a single BREEAM Assessment with a single BREEAM Rating and Certificate. This is in accordance with the BREEAM Guidance Note GN10; Assessing mixed use developments and multiple buildings (or units) of similar function, which states:

'A single building with one dominant use but containing a number of different but related functional areas can have its BREEAM performance assessed in a single assessment report, and therefore single BREEAM rating and certificate'

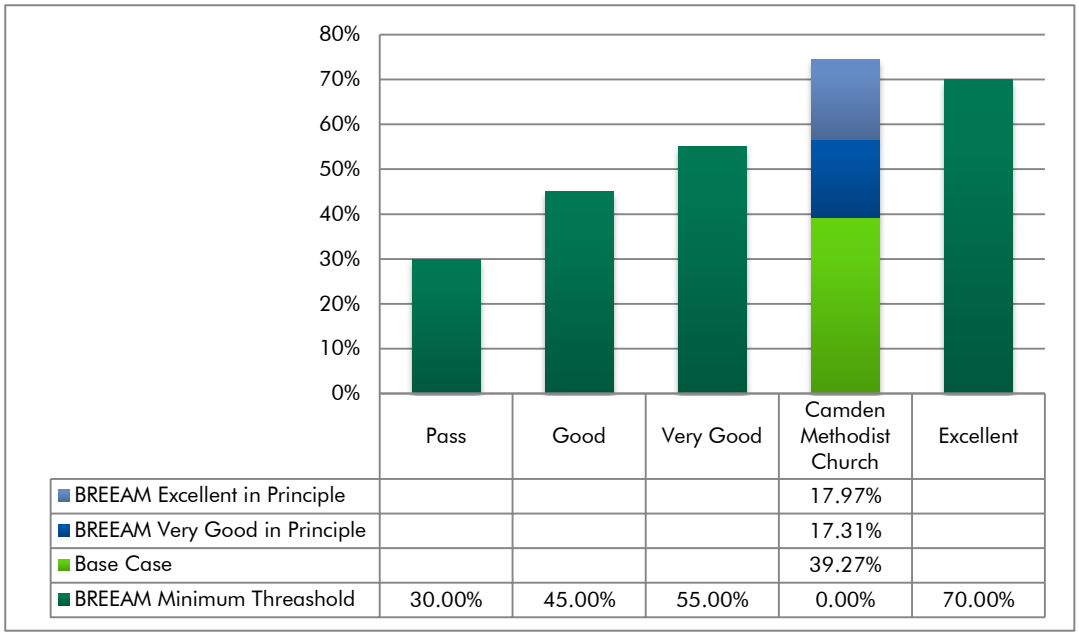
Appraisal

The Camden Methodist Church documents demonstrate that in principle, based upon the inclusion of the 'Base Case' 'BREEAM Very Good in Principle' and 'BREEAM Excellent in Principle' credits, a BREEAM Excellent rating of 74% is demonstrated, giving a 4% buffer over the minimum threshold (70%). The comprehensive response against each applicable BREEAM Issue is detailed in Appendix A – Camden Methodist Church BREEAM Analysis.

Camden Methodist Church BREEAM Analysis

BREEAM in Principle Performance

Camden Methodist Church BREEAM Appraisal performance against the BREEAM ratings



	Pass	Good	Very Good	Camden Methodist Church	Excellent
BREEAM Excellent in Principle				17.97%	
BREEAM Very Good in Principle				17.31%	
Base Case				39.27%	
BREEAM Minimum Threashold	30.00%	45.00%	55.00%	0.00%	70.00%

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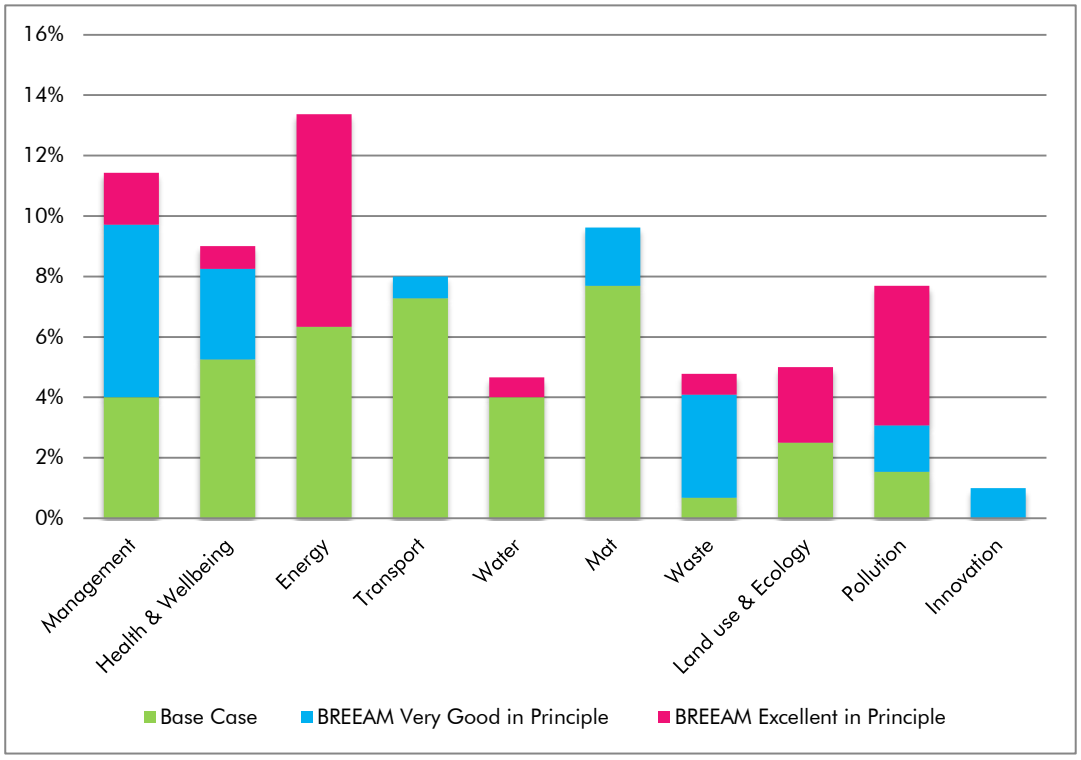
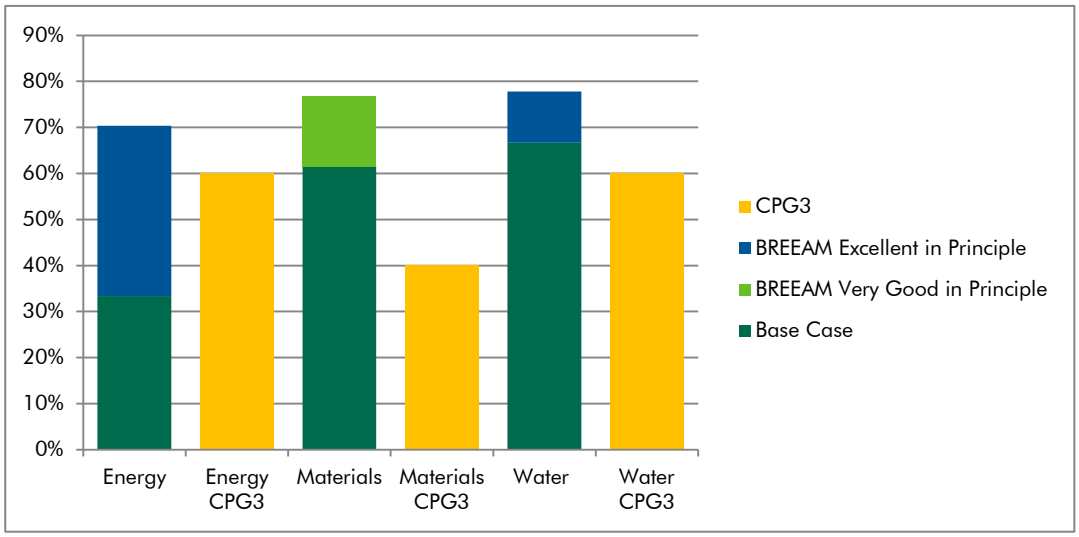
Camden Methodist Church BREEAM Analysis

BREEAM Section Breakdown



The table above shows the 'BREEAM Excellent in Principle' performance split between the 10 BREEAM Sections.

BREEAM Percentage of Energy, Materials and Water Credits Targeted



As indicated above, 70% of the energy credits, 77% of the materials credits and 78% of the water credits have been targeted, complying with the minimum standards outlined within CPG3.

Appendix A – Camden Methodist Church BREEAM Analysis details the document review and expectations made within each section.

Camden Methodist Church BREEAM Analysis

5.1 SUMMARY

In appraising the Camden Methodist Church proposals against the BREEAM criteria, it can be confirmed that BREEAM Excellent would be demonstrated in principle. The documents and drawings submitted to support the planning application give confidence that BREEAM is embedded from the outset, allowing BREEAM Excellent to be facilitated as the design develops. Therefore, complying with Camden Council Policy.

As the appraisal has been conducted against proposals that reflect RIBA Stage 3 it has been assumed that as the design progresses the BREEAM elements relating to contractor deliverables and the appointment of additional consultants will be addressed in the subsequent RIBA Stages.

Sustainability Features Overview

6.0 SUSTAINABLE DESIGN AND CONSTRUCTION

To demonstrate compliance with Camden Council Policy, an overview of the sustainability features that have been incorporated into the design as part of the BREEAM Assessment are outlined below:

For details of the proposed energy strategy for Camden Methodist Church, please refer to the Energy Strategy Report completed by CBRE Limited that accompanies this Sustainability Statement.

Camden Methodist Church - Sustainability Features	
Carbon emissions from the building have been reduced through:	
Efficient Heating and Cooling Systems	An air source heat pump has been specified. An air source heat pump can get heat from the air even when the temperature is as low as -15° C. Heat pumps have some impact on the environment as electricity is required to run the system, but the heat that is extracted from the air is constantly being renewed naturally. Air source heat pumps can have a high cooling COP as a result of the effective ventilation arrangements. The high cooling COP can result in considerable CO_2 savings compared to conventional systems.
Low Energy Internal Lighting	The building will be designed with energy efficient LED lighting and occupancy sensor controls in accordance with the Non-Domestic Services Compliance Guide.
Low Energy External Lighting	LED lighting with efficient lighting controls; PIR's and daylight cut off sensors will be specified ensuring efficient operation of the lighting system.
Solar PV	76m^2 of Solar PV will be incorporated into the design to further offset the electricity demand reducing the demand for electricity supplied from the grid.
High Performing Double Glazing	All new windows will be specified with window u-values that exceed Building Regulations Part L2A 2013.
Improvement over Existing Building	Cumulatively the proposed Building is estimated to reduce CO_2 emissions by 43% against the baseline existing building BER.
Energy Monitoring	Energy metering systems and BMS are proposed to 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

Sustainability Features Overview

The sustainable procurement and efficient use of natural resources and materials are demonstrated through:	
Responsible Sourcing of Timber	In accordance with BREEAM Mat 03 - Responsible sourcing of materials, Timber will be sourced from responsible sources in line with the UK Government Timber Procurement Policy and Forest Stewardship Council (FSC) or Programme for the Endorsement of Forestry Certification (PEFC).
BRE: Green Guide	The following basic building materials specified will have low embodied energy and achieve a rating of A+ to D in accordance with BRE: Green Guide to Specification: - Roof. - External walls. - Internal walls. - Ground and upper floors. - Windows.
Efficient Materials	The specification of materials that are robust, low maintenance and long lasting that suit the location and intended use.
Sustainable Procurement	The materials will be procured in line with a sustainable procurement plan.
Minimising the generation of waste and maximising the reuse or recycling of waste is demonstrated through:	
Demolition Management Plan	Commitment within the Contractor's Employer Requirements (ERs) to implement a demolition management plan to minimise demolition waste by salvaging waste materials for re-use or recycling on site or off site.
Site Waste Management Plan	Commitment within the Contractor's ERs to implement a Site Waste Management Plan covering the waste hierarchy; Reduce, Reuse and Recycle in order to divert waste from landfill.
Waste Facilities	Sufficient space has been designed for the storage of refuse and recycling complying with Camden Council policy. The dedicated refuse store will provide adequate space for the segregation and storage of recyclable waste in line with BREEAM Wst 03 – Operational Waste requirements.
Pollution (noise, air and urban runoff) and the impact of natural hazards such as flooding will be minimised through:	
Best Practice Pollution Policies	Commitment within the Contractor's ERs to implement best practice pollution policies in regards to air (dust) and water pollution to minimise pollution and the impact upon the environment.

Sustainability Features Overview

Energy Efficient External Lighting Controls	Specification of low energy external space and security lighting, with efficient lighting controls; PIR's and daylight cut off sensors, to minimise light pollution.
Acoustically Efficient Buildings	The acoustic design report completed by CSG Acoustics confirms that the design will comply with Camden Council requirements and BREEAM Pol 05 – noise attenuation, indicating that the noise impact of the building will be minimised.
Flood Risk	The flood map for planning confirms that the development location is in Flood Zone 1 with a low probability of flooding.
The comfort, safety and security of the building users are demonstrated through:	
Glare Control	In accordance with BREEAM Hea 01 - Visual Comfort, the design will incorporate glare control features.
Lighting Levels	In accordance with BREEAM Hea 01 – Visual Comfort, the lighting design will provide adequate illuminance (lux) levels in accordance with CIBSE Lighting Guide 7: Offices.
Security Standards	A security needs assessment will be completed as part of the BREEAM assessment
The protection and promotion of biodiversity and green infrastructure is demonstrated through:	
Ecology	The building footprint is of hard standing with no features of ecological value. Features for improving the ecological value of the site will be investigated as the design develops.

Sustainability Features Overview

Water Use and Supplies

To minimise the use of mains water the design has incorporated the following water efficient features as part of the BREEAM Assessment:

The use of mains water will be minimised through:	
Water Efficient Fixtures and Fittings	To promote water conservation water efficient fixtures and fittings will be installed to achieve a 25% improvement over the baseline exceeding the BREEAM Excellent minimum requirements outlined under BREEAM Wat 01 – Water Consumption
Leak Detection and Isolation Valves	To reduce the impact of water leaks and improve water conservation the design will incorporate a leak detection system capable of detecting a major leak on the mains water supply, alongside isolation valves to regulate the supply of water to the WC areas according to demand.

6.1 SUMMARY

Through the BREEAM Assessment, the sustainability features required to comply with Camden Council Policy have been demonstrated in principle. As the sustainability statement has been prepared for the proposals that reflect RIBA Plan of Work Stage 3, it demonstrates that the sustainability performance requirements have been set at developed design and will be followed through as the design progresses. This ensures that the sustainability elements will be included in the contractor ERs and developed further in the subsequent RIBA Plan of Work Stages.

APPENDICES

Appendix A; Camden Methodist Church BREEAM Pre-assessment

BREEAM 2014 Refurbishment & Fit out

Building name	Camden Methodist Church	KEY		BREEAM Ratings	
Version	V2		BREEAM minimum standard	Outstanding	85%
Base Case	BREEAM issues that can reasonably be achieved within the design specifications.	CLIENT	James Barr - Camden Town Methodist Church	Excellent	70%
BREEAM Very Good in Principle	BREEAM issues that relate to contractor deliverables, appointment of additional consultants and the post occupancy elements, with low to medium costs	ARCH & PM	Ben - Manalo & White Architects	Very Good	55%
BREEAM Excellent in Principle	BREEAM issues that can be reasonably included to achieve BREEAM Excellent in principle but could incur high costs	M&E	Green Planet Design Engineers		
Base Case	39.27%	CONTRACTOR	Requirements to be included in the ERs		
		ACOUSTIC CONSULTANT	CSG Acoustics		
BREEAM Very Good in Principle	56.58%				
	Very Good				
BREEAM Excellent in Principle	74.55%				
	Excellent				

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
Management								
	Project Brief and Design	Man 01	4	2	2		ARCH CLIENT PM	**Low Risk** *Stakeholder consultation covering project delivery and relevant third parties. *Consultation on the development must have been carried out in accordance with BREEAM requirements. It must be demonstrated that the design has developed in accordance with the feedback from the consultations. **Medium Risk** *BREEAM AP is appointed to facilitate the setting and achievement of BREEAM Targets and Monitor progress through the RIBA Stages
	Life cycle cost and service life planning	Man 02	4	1		3	PM	**Low Risk** *Capital cost of the refurbishment to be reported on the BREEAM Reporting Tool **High Risk - Life Cycle Analyst to be consulted to confirm if these credits can still be achieved.** *An elemental life cycle cost analysis to be completed at RIBA Stage 2 *A component life cycle cost analysis to be completed at RIBA Stage 4
	Responsible construction practices	Man 03	6		5		CLIENT PM CONTRACTOR	**Minimum standards: Excellent - One credit (Considerate construction) Outstanding - Two credits (Considerate construction)** **Medium Risk - CONTRACTOR ER'S** To be included in the Contractor ER's, the contractor will: * Energy consumption must be monitored & reported during construction * Water consumption must be monitored & reported during construction * Transport movements of construction materials and waste transfer must be monitored & reported during construction * All site timber must be sourced in accordance with the Government's Timber Procurement Policy *The contractor operates an EMS for their main operations e.g. ISO 14001/EMAS & implements best practice pollution prevention policies *Achieve a score of 35 or more with a score of 7 in each of the 5 sections under the CCS.
	Commissioning and handover	Man 04	4	4			ARCH M&E CONTRACTOR	**BREEAM Minimum Standard; Excellent- Outstanding: Criterion 9 (Building User Guide)** **Low Risk** *A schedule of commissioning and testing that identifies and includes a suitable timescale for commissioning and re-commissioning of all complex and non-complex building services and control systems and testing and inspecting building fabric. *A Building User Guide (BUG) is developed prior to handover, for distribution to the building occupiers and premises managers *Defects identified in the site inspection, thermographic survey and the airtightness testing reports are rectified prior to building handover and close out. Any remedial work must meet the required performance characteristics for the building/element. *The survey/testing is undertaken by a Suitably Qualified Professional (see Relevant definitions) in accordance with the appropriate standard, with visual inspection conducted by a representative of the main contractor or by an independent inspector such as a clerk of works.

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
	Aftercare	Man 05	3		3		CLIENT PM	**BREEAM Minimum Standard: Excellent - Outstanding - Parts 2 - Core Services and 3 Local Services only: One credit (Seasonal commissioning)** **Medium Risk** *There is (or will be) operational infrastructure and resources, including building user guide, in place to provide aftercare support to the building occupier(s), *seasonal commissioning activities will be completed over a minimum 12-month period, once the building becomes substantially occupied. *The client or building occupier makes a commitment to carry out a post occupancy evaluation (POE) exercise one year after initial building occupation.
	Management environmental score		**21**	**7**	**10**	**3**		
		11.43%	**12%**	**4.00%**	**5.71%**	**1.71%**		
Health & Wellbeing								
	Visual comfort	Hea 01	7	2			M&E	**Low Risk** *Internal and external lighting systems are designed to avoid flicker and provide appropriate illuminance (lux) levels. Internal lighting is zoned to allow for occupant control. *Potential for glare has been designed out of all relevant building areas.
	Indoor Air Quality	Hea 02	5	2	1		ARCH M&E CONTRACTOR	**Low Risk** * MECH- undertake an indoor air quality plan that considers: a. Removal of contaminant sources b. Dilution and control of contaminant sources c. Procedures for pre-occupancy flush out d. 3rd party testing and analysis. *ARCH- All finishes and fittings to meet the BREEAM table 8 VOC criteria by product type **Medium Risk - CONTRACTOR ER'S** * Principal contractor ERs to include formaldehyde and VOC testing
	Safe containment in laboratories	Hea 03	0					**Issue not applicable**
	Thermal comfort	Hea 04	3	2		1	M&E	**Low Risk** *Thermal modelling carried out to appropriate standards. *The thermal modelling analysis has informed the temperature control strategy for the building and its users *The thermal model demonstrates that compliance with CIBSE Guide A or equivalent has been achieved *For air conditioned buildings, the PMV (predicted mean vote) and PPD (predicted percentage of dissatisfied) indices based on the above modelling are reported via the BREEAM assessment scoring and reporting tool. **High Risk** *The thermal modelling analysis confirms that the building can comply with CIBSE Guide A under a climate change scenario
	Acoustic performance	Hea 05	4		3		ARCH ACOUSTIC CONSULTANT	**Medium Risk - requires appointment of an acoustician** **BREEAM Pre-requisite; A suitably qualified acoustician is appointed by the client at the appropriate stage of the project to provide early advice on influencing outline design solutions to:** *Bedrooms: Airborne sound insulation values are at least 5dB higher and impact sound insulation values are at least 3dB lower than the performance standards listed in Building Regulations Part E.
	Safety & security	Hea 06	1	1			ARCH	**Low Risk** A Suitably Qualified Security Specialist (SQSS) conducts an evidence based Security Needs Assessment (SNA) during or prior to Concept Design (RIBA Stage 2 or equivalent),
	Health & wellbeing environmental score		**20**	**7**	**4**	**1**		
			15%	**5.25%**	**3.00%**	**0.75%**		
Energy								

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
	Reduction of CO_2 Emissions	Ene 01	15			10	ARCH M&E CBRE BC	***BREEAM Minimum Standard; Excellent requires (full assessments): Six credits, varies for other assessment types Outstanding requires (full assessments): Ten credits, varies for other assessment types*** **High Risk - 8 credits To be confirmed at the detailed design stage** *Hotel to attain at least 8 credits. *Evidence that the project has complied with the minimum requirements of Building Regulations Approved Document Part L2B *To confirm compliance the existing building epc.inp file and the proposed building epc.inp file is required. **High Risk - 2 credits - Architect to confirm** *A specialist study has been undertaken by a Suitably Qualified Heritage Conservation Specialist (see Relevant Definitions) at the *Concept Design stage (equivalent to RIBA Stage 2), to investigate the implications of improving building fabric and services performance while minimising the potential negative impacts of both the historic character of the building, the condition of the building fabric and indoor air quality. *The study includes looking at the potential for improving ventilation, air tightness and moisture control within the building, ensuring that these are considered in balance with that of the welfare of the historic building fabric. This includes considering materials specified, impacts on breathability of the building, paying attention to additional ventilation that may be required e.g. roof, wall and floor voids. *The report makes recommendations for potential improvements to the building fabric in accordance with best practice guidance
	Energy monitoring	Ene 02	1	1			M&E	***BREEAM Minimum Standard; Parts 2, 3 and 4, Very good- Outstanding: First sub-metering credit.*** **Low Risk** * 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
	External Lighting	Ene 03	1	1			M&E	**Low Risk** *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.
	Low carbon design	Ene 04	3	1			M&E	**Low Risk** *A feasibility study has been carried out to establish the most appropriate on-site/near-site low or zero carbon (LZC) energy source(s) for the building/development and is specified.
	Energy efficient cold storage	Ene 05	2	1			M&E	**Low Risk** *The refrigeration system, its controls and components have been designed, installed and commissioned in accordance with BREEAM Guidance: a.In accordance with the Code of Conduct for carbon reduction in the refrigeration retail sector1 (see Other information) and BS EN 378-2 Refrigeration systems and heat pumps - Safety and environmental requirements. b.Using robust and tested refrigeration systems/components, normally defined as those included on the Enhanced Capital Allowance (ECA) Energy Technology Product List (ETPL)2 or an equivalent list (see CN8 for a list of components). c.The refrigeration plant has been commissioned to comply with the criteria for commissioning outlined in BREEAM issue Man 04 Commissioning and handover.
	Energy efficient transport systems	Ene 06	3	3			M&E	**Low Risk** *Transportation analysis to be undertaken to determine the optimum number and size of lifts *Lifts to include two energy efficient features with the greatest potential energy saving: a.The lifts operate of the following in a standby condition during off-peak periods. For example the power side of the lift controller and other operating equipment such as lift car lighting, user displays and ventilation fans switch off when the lift has been idle for a prescribed length of time. b.The lift car lighting and display lighting provides an average lamp efficacy, (across all fittings in the car) of > 55 lamp lumens/circuit Watt. c.The lift uses a drive controller capable of variable speed, variable-voltage, and variable-frequency (VVVF) control of the drive motor. 4.Where the use of regenerative drives is demonstrated to save energy, they are specified.
	Energy efficient laboratory	Ene 07	0					**BREEAM issue not assessed in this scheme**

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
	Energy efficient equipment	Ene 08	2	2			M&E Client	**Low Risk** *Identification of the building's unregulated energy consuming loads which have a major impact on the total unregulated energy demand. *Demonstrate a meaningful reduction in the total unregulated energy demand of the building *Small plug in power equipment: -the following equipment has been awarded an Energy Star rating OR has been procured in accordance with the Government buying Standards. * Kitchen & Catering facilities: -The project has incorporated at least two-thirds of the energy efficiency measures outlined in the section summaries of each of the following sections of CIBSE 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 utensil specifications) 4.Section 12 (Refrigeration) 5.Section 13 (Warewashing: dishwashers and glasswashers) 6.Section 14 (Cooking appliance selection) 7.Section 15 (Water temperatures, taps, faucets and water saving controls).
	Drying space	Ene 09	0	0				**BREEAM issue not assessed in this scheme**
	Energy environmental score		**27**	**9**	**0**	**10**		
			19%	**6.33%**	**0.00%**	**7.04%**		
Transport								
	Public transport accessibility	Tra 01	5	5				**Low Risk** ***The hotel is easily accessible and has a PTAL rating of 6B and a total AI value of 42.
	Proximity to amenities	Tra 02	1	1			ARCH	**Low Risk** ***Hotel is within 500m of a grocery shop, post box and cash machine.
	Cyclist facilities	Tra 03	2	2			ARCH	**Low Risk** *Confirm number of building users for the building to calculate. The required amount of cycle spaces is: 1 cycle rack for every 10 staff and 1 for every 10 beds The number of cycle racks can be reduced by 50% once the numbers have been confirmed. Based on initial calculations 3 cycle spaces are needed subject to confirmation upon number of staff and visitors. *At least two of the following types of compliant cyclist facilities have been provided: a.Showers b.Changing facilities c.Lockers d.Drying spaces
	Maximum Car Parking capacity	Tra 04	2	2			ARCH	**Low Risk** Less than 6 car parking spaces are provided.
	Travel Plan	Tra 05	1		1		TRANSPORT CONSULTANT PM	**Medium Risk - REQUIRES APPOINTMENT OF TRANSPORT CONSULTANT** *A travel plan has been developed as part of the feasibility and design stages. *A site specific travel assessment/statement has been undertaken to ensure the travel plan is structured to meet the needs of the particular site and covers the following (as a minimum): a.Where relevant, existing travel patterns and opinions of existing building or site users towards cycling and walking so that constraints and opportunities can be identified. b.Travel patterns and transport impact of future building users. c.current local environment for walkers and cyclists (accounting for visitors who may be accompanied by young children). d.Disabled access (accounting for varying levels of disability and visual impairment). e.Public transport links serving the site. f.Current facilities for cyclists. *The travel plan includes a package of measures to encourage the use of sustainable modes of transport and movement of people and goods during the building's operation and use. *If the occupier is known, they must be involved in the development of the travel plan and they must confirm that the travel plan will be implemented post refurbishment or fit-out and be supported by the building's management in operation
	Transport environmental score		**11**	**10**	**1**	**0**		
			8%	**7.27%**	**0.73%**	**0.00%**		
Water								

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
	Water Consumption	Wat 01	5	3			ARCH M&E CONTRACTOR	**BREEAM Minimum Standard; Good-Excellent: One Credit, Outstanding: Two credit.** **Low Risk** *water efficient sanitary fittings are to be installed . Required flow rates to be included in the Principal Contactor ERs: WC- 4l, WHB taps 7.5l/min, Showers 4l/min, Baths 140l, Urinals 3l/bowl/hour, Kitchen tap 7.5l/min, Restaurant pre-rinse nozzles- 8.3l/min, domestic sized dishwasher 13l/cycle, Commercial sized dishwasher 6l/rack, commercial sized washing machine 7.5l/kg.
	Water monitoring	Wat 02	1	1			M&E	**BREEAM Minimum Standard; Part 2 only Good-Outstanding: Criterion 1, specification of a water meter in the mains water supply to each building.** **Low Risk** *Incoming supply to have pulsed water meter *Water-consuming plant or building areas, consuming 10% or more of the building's total water demand, are either fitted with easily accessible sub-meters or have water monitoring equipment integral to the plant or area *Each meter (main and sub) has a pulsed output to enable connection to a Building Management System (BMS) for the monitoring of water consumption.
	Water leak detection and prevention	Wat 03	2	1		1	CLIENT M&E PM	**Low Risk** *Recognition of leak detection systems capable of detecting a major water leak on the mains water supply **High Risk** *BREEAM compliant flow control devices are installed on the WC areas to ensure that water supplied only when needed. Considerable cost as flow control for each ensuite
	Water efficient equipment	Wat 04	1	1			ARCH	**Low Risk** ***Landscaping and planting will rely solely on manual watering or precipitation or will have a compliance BREEAM irrigation system.
	Water environmental score		**9**	**6**	**0**	**1**		
			6%	**4.00%**	**0.00%**	**0.67%**		
Materials								
	Life Cycle Impacts	Mat 01	6	3	1		ARCH	**Low Risk** The following building elements are to be rated; * External walls * Windows * Roof * Upper floor slab * Internal walls * Floor finishes / coverings *Hard landscaping These elements will collectively attain 3credits. **Medium Risk** A total of 4 credits is achieved
	Hard Landscaping and boundary protection	Mat 02	0					**BREEAM issue not included in the assessment**
	Responsible sourcing	Mat 03	4	2	1		ARCH CONTRACTOR	**BREEAM Minimum Standard; Pass-Outstanding: Criterion 1; all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy.** **Low Risk** * all timber used on the project is sourced in accordance with the UK Government's Timber Procurement Policy. * 80% of the materials (breakdown is detailed in the BREEAM guidance) within the below is to be responsibly sourced; 1. Structural Frame 2. Ground floor 3. Upper floors (including separating floors) 4. Roof 5. External walls 6. Internal walls 7. Foundation/substructure 8. Fittings: includes stair case, windows (frame and glazing units), doors (internal and external), floor finishes and any other significant fitting or finish present (see also Compliance note). 9. Hard landscaping (see also BREEAM Compliance note) *Materials sourced in accordance with a sustainable procurement plan. **Medium Risk** *a total of 3 credits is achieved

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	Insulation	Mat 04	1	1			ARCH CONTRACTOR M&E	**Low Risk** ***Recognition of the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties. ***Insulation Index for the building fabric and services insulation is the same as or greater than 2.5 ***insulation subject to assessment: external walls, ground floor, roof and building services.
	Designing for durability and resilience	Mat 05	1	1			ARCH	**Low Risk** ***The building incorporates measures to reduce impacts associated with damage and wear-and-tear. *Relevant building elements incorporate appropriate design and specification measures to limit material degradation due to environmental factors. 1. Areas of the building have been identified (both internal and external) where vehicular, trolley and pedestrian movement occur. 2. The design incorporates suitable durability and protection measures or design features/solutions to prevent damage to the vulnerable parts of the building. This must include, but is not necessarily limited to: a. Protection from the effects of high pedestrian traffic in main entrances, public areas and thoroughfares (corridors, lifts, stairs, doors etc.). b. Protection against any internal vehicular/trolley movement within 1m of the internal building fabric in storage, delivery, corridor and kitchen areas. c. Protection against, or prevention from, any potential vehicular collision where vehicular parking and manoeuvring occurs within 1m of the external building façade for all car parking areas and within 2m for all delivery areas.
	Material efficiency	Mat 06	1	1			ARCH	**Low Risk** *Opportunities have been identified, and appropriate measures investigated and implemented within the scope of refurbishment or fit-out works, to optimise the use of materials through building design, procurement, refurbishment, maintenance and end of life *The above is carried out by the design/construction team in consultation with the relevant parties at each of the following RIBA stages: a.Preparation and Brief b.Concept Design c.Developed Design d.Technical Design e.Construction.
	Materials environmental score		**13**	**8**	**2**	**0**		
			12.5%	**7.69%**	**1.92%**	**0.00%**		
Waste								
	Project waste management	Wst 01	7		5		ARCH CONTRACTOR	**BREEAM Minimum Standard; Outstanding: 1 credit** **Medium Risk** *pre-refurbishment audit of all existing buildings, structures or hard surfaces within the scope of the refurbishment or fit-out zone is completed. The audit must be referenced in the resource management plan, needs to illustrate the key materials that are to be recycled or reused, identify local recycling facilities and set targets for diverting the key materials waste from landfill. *Audit should be carried out before Concept Design Stage (equivalent to RIBA stage 2) **Medium Risk - CONTRACTOR ER'S** * Contractor is to prepare a compliant SWMP targeting a resource efficiency of ≤2.1m3 of waste generated per 100m2 gifa or ≤0.4 tonnes of waste generated per 100m2 per gifa. * Contractor is to divert 85% by vol or 90% by tonnage of non hazardous waste from landfill and 90% by vol or 95% by tonnage of demolition waste from landfill.
	Recycled aggregates	Wst 02	1					**BREEAM issue not included in the assessment**
	Operational waste	Wst 03	1	1			ARCH	**BREEAM Minimum Standard; Excellent - Outstanding: 1 credit** **Low Risk** ***Dedicated areas provided for each commercial unit. *There is dedicated space(s) to cater for the segregation and storage of operational recyclable waste volumes. *The dedicated space(s) must be: a. Clearly labelled, to assist with segregation, storage and collection of the recyclable waste streams b. Accessible for the deposit of materials and collections c. Sized; when catering is provided; at least 4m2 per 1000m2 of nfa < 5000m2 or a minimum of 20m2 for nfa ≥ 5000m2
	Speculative floor and ceiling finishes	Wst 04	0	0				**BREEAM Issue not applicable for this assessment**

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
	Adaption to climate change	Wst 05	1			1	ARCH M&E PM	**High Risk** *Conduct a climate change adaptation strategy appraisal for structural and fabric resilience by the end of Concept Design (RIBA Stage 2 or equivalent), in accordance with the following approach: *Carry out a systematic (structural and fabric resilience specific) risk assessment to identify and evaluate the impact on the building over its projected life cycle from expected extreme weather conditions arising from climate change and, where feasible, mitigate against these impacts. The assessment should cover the following stages: a.Hazard identification b.Hazard assessment c.Risk estimation d.Risk evaluation e.Risk management.
	Functional adaptability	Wst 06	1					**BREEAM Issue not targeted**
	Waste environmental score		**11**	**1**	**5**	**1**		
			7.50%	**0.68%**	**3.41%**	**0.68%**		
Land use & Ecology								
	Site selection	LE 01	0					**BREEAM issue not applicable to this assessment**
	Ecological value of site and protection of ecological features	LE 02	1	1			CLIENT PM	**Low Risk** *All existing features of ecological value (see Relevant definitions) within and surrounding the refurbishment or fit-out zone and site boundary area are adequately protected from damage during clearance, site preparation and refurbishment or fit-out activities in line with BS42020: 20131. *In all cases, the principal contractor is required to construct ecological protection recommended by the Suitably Qualified Ecologist (SQE), prior to any preliminary site refurbishment or fit-out or preparation works (e.g. erection of temporary site facilities)
	Mitigating Ecological Impact	LE 03	0					**BREEAM issue not applicable to this assessment**
	Enhancing Site Ecology	LE 04	1			1	CLIENT PM SUITABLY QUALIFIED ECOLOGIST	**High Risk** *Suitably qualified ecologist to be appointed to enhance the site ecology
	Long Term Impact on Biodiversity	LE 05	2					**BREEAM Issue not targeted**
	Land use & ecology environmental score		**4**	**1**	**0**	**1**		
			10.00%	**2.50%**	**0.00%**	**2.50%**		
Pollution								
	Impact of refrigerants	Pol 01	3			3	M&E	**High Risk** *Where systems using refrigerants have a permanent automated refrigerant leak detection system installed; OR where an inbuilt automated diagnostic procedure for detecting leakage is installed.
	Nox Emissions	Pol 02	3					**BREEAM Issue not targeted due to the diversity of plant systems**
	Surface water run off	Pol 03	5		2	3	CIVIL	**BREEAM Pre-requisite: an appropriate consultant is to be appointed to carry out, demonstrate and/or confirm the requirements listed under surface water run off.** **Medium Risk** *FRA to confirm that the site is of low flood risk **High Risk** *Appropriate consultant to undertake the required calculations for surface water run off *Appropriate consultant to undertake the required design for minimising water course pollution in line with the SUDs manual. Up to date drainage plan to be provided to the building users.
	Reduction of night time pollution	Pol 04	1	1			M&E	**Low Risk** *External lighting to comply with the ILP 2011 guidance notes *External lighting controls to be set for automatic switch off between 2300-0700 *safety or security lighting used 2300-0700 to be designed in line with the ILP guidance notes Table 2 *Illuminated advertisements to be in line with ILE technical report 5.
	Noise attenuation	Pol 05	1	1			CLIENT PM ACOUSTIC CONSULTANT	**Low Risk - ACOUSTICIAN APPOINTED** *Noise impact assessment (NIA) to be undertaken by a suitably qualified acoustician in line with BS7445. *The noise level from the proposed site/building, as measured in the locality of the nearest or most exposed noise-sensitive development, is a difference no greater than +5dB during the day (07:00 hr to 23:00 hr) and +3dB at night (23:00 hr to 07:00 hr) compared to the background noise level. *Where the noise source(s) from the proposed site/building is greater than the levels described in criterion 4, measures have been installed to attenuate the noise at its source to a level where it will comply with criterion 4.
	Pollution environmental score		**13**	**2**	**2**	**6**		
			10.00%	**1.54%**	**1.54%**	**4.62%**		

BREEAM Section	Topic	Issue ref	Credits available	Base Case	Very Good in Principle	BREEAM Excellent in Principle	Responsibility	Commentary
Innovation								
		Inn 01	10		1		CLIENT PM CONTRACTOR	**Medium Risk - MAN 05 AFTERCARE** *There are, or will be, operational infrastructure and resources in place to coordinate the following activities at quarterly intervals for the first three years of building occupation: a.Collection of occupant satisfaction, energy consumption and (where available) water consumption data. b.Analysis of the data to check the building is performing as expected and make any necessary adjustments to systems controls or to inform building user behaviours. c.Setting targets and/or appropriate actions for reducing water and energy consumption and monitor progress towards these. d.Feedback any 'lessons learned' to the design team and developer for use in future projects. e.Provision of the actual annual building energy, water consumption (where available and accessible) and occupant satisfaction data to BRE for the purpose of future BREEAM performance benchmarking.
			10	0	1	0		
	Innovation environmental score		**10.00%**	**0.00%**	**1.00%**	**0.00%**		
	Score			39.27%	17.31%	17.97%		