14-15 Great James St, London

BREEAM Pre-Assessment Report

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Revision Schedule

Revision No.	Date	Details of Change
Rev 01	25/07/2019	First Issue
Rev 02	26/07/2019	Updated following comments from OA

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1.0 Introduction

This report sets out the BREEAM pre-assessment strategy for the proposed redevelopment of 14 & 15 Great James Street, London, which is located within the London Borough of Camden.

The proposals involve the major refurbishment of 15 Great James Street, including alterations to the envelope, replacement of building services systems, changes to the layout and decorating / finishing. The completed refurbishment will create a modern office environment and will be connected to 14 Great James Street, which has recently been refurbished to a similar standard.

The refurbishment of 15 Great James Street will need to follow current planning policy. Within the London Borough of Camden adopted Local Plan, Policy CC2 'Adapting to Climate Change' refers to BREEAM. Under this policy it is stated that non-domestic developments exceeding 500sqm floor area are expected to achieve an 'Excellent' rating under BREEAM. However, 15 Great James Street is a Grade II listed building and this listed status places significant constraints upon the design, some of which are in direct conflict with BREEAM performance standards. Therefore, whilst an Excellent rating will be sought it may not be possible to achieve the required score.

As the development primarily involves the refurbishment of an existing property it will be assessed under BREEAM Refurbishment and Fit Out (RFO) 2014, which is the current version of the most applicable BREEAM scheme. Within this report the proposed strategy for assessment under BREEAM RFO 2014 is discussed, with key and mandatory issues also identified.

2.0 BREEAM

2.1 Introduction to BREEAM

BREEAM is the Building Research Establishment's (the BRE) Environmental Assessment Method. This is a voluntary environmental assessment tool that is used to assess the environmental impact of buildings. The performance of the building is assessed against a range of environmental factors, with different sections focusing on specific sustainability issues. These sections each have differing weighting factors, which vary from scheme to scheme. For this RFO assessment they are:

- Management 13.96%
- Health & Wellbeing 15.07%
- Energy 17.41%
- Transport 5.43%
- Water 6.98%
- Materials 14.54%
- Waste 8.00%
- Land Use & Ecology 6.98%
- Pollution 11.63%
- Innovation Up to 10.00%

Within each of the sections of BREEAM are a range of different issues relating to the section, with credits awarded under an issue where the building meets or exceeds a performance benchmark defined by BREEAM. The credits achieved within each section are multiplied by the section weighting factor and then summed to determine an overall percentage score. This BREEAM score corresponds to an overall rating as shown in table 2.1 below.

BREEAM Score (%)	BREEAM Rating
< 30	Unclassified
≥ 30 - < 45	Pass
≥ 45 - < 55	Good
≥ 55 - < 70	Very Good
≥ 70 - < 85	Excellent
≥ 85	Outstanding

Table 2.1 BREEAM Ratings

2.2 BREEAM Schemes

As previously mentioned, BREEAM can be used to assess a range of development types. In the UK the Currently available BREEAM schemes are as follows:

- **BREEAM New Construction** – Used to assess new non-domestic construction
- **BREEAM Refurbishment & Fit Out** – Used to assess major refurbishment, minor refurbishment, reconfiguration and fit out of shell construction
- **BREEAM Domestic Refurbishment** – Used to assess the refurbishment of buildings to provide residential accommodation
- **BREEAM Communities** – Used to assess master planning and frameworks
- **BREEAM Infrastructure** – Used to assess civil engineering and public realm projects
- **BREEAM In Use** – Used to assess the performance of buildings during operation

2.3 Minimum Performance Standards

Under the BREEAM method minimum performance standards are required within issues to achieve specific ratings. As one would expect, the number of applicable minimum performance standards increases with the higher BREEAM rating that is sought. Table 2.2 summarises the minimum performance standards required under BREEAM RFO 2014.

BREEAM Issue	Pass	Good	Very Good	Excellent	Outstanding
Man03: Responsible construction practices	-	-	-	One credit (Considerate construction)	Two credits (Considerate construction)
Man04: Commissioning & handover	-	-	-	Criterion 9 (Building User Guide)	Criterion 9 (Building User Guide)
Man05: Aftercare	-	-	-	One credit: (Seasonal commissioning)	One credit: (Seasonal commissioning)
Ene01: Reduction of CO2	-	-	-	Six credits	Ten credits
Ene02:	-	-	One credit (First sub-metering credit)	One credit (First sub-metering credit)	One credit (First sub-metering credit)
Wat01: Water consumption	-	One credit (where applicable)	One credit (where applicable)	One credit (where applicable)	Two credits (where applicable)
Wat02: Water monitoring	-	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Mat03 Responsible sourcing of materials	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only	Criterion 1 only
Wst01: Project waste management	-	-	-	-	One credit
Wst03: Operational waste	-	-	-	One credit	One credit

Table 2.1 Minimum Performance Standards of BREEAM RFO 2014

3.0 BREEAM Pre-Assessment

3.1 Summary

As previously mentioned, a pre-assessment has been completed under the BREEAM RFO 2014 scheme. This scheme type is broken down into four categories with criteria within each applied to the assessment where relevant:

- **Part 1**: Fabric & Structure
- **Part 2**: Core Services
- **Part 3**: Local Services
- **Part 4**: Interior Design

A BREEAM pre-assessment workshop was held with the project team on site on Wednesday 17th July 2019. The primary purpose of this exercise was to determine the maximum BREEAM rating that could be achieved should a full assessment be completed and to advise the project team of any BREEAM related considerations at this early stage. The review also allowed any issues that are programme dependant or that could affect the planning process to be identified.

The pre-assessment has been completed for the proposed development based on design intent. The criteria are assessed as fully fitted, which assumes that there will be no additional fit out under a separate contract. The BREEAM pre-assessment score achieved is 63.1%, which achieves a Very Good rating with all mandatory requirements met. Table 3.1 provides a summary of the scores achieved in each section, whilst figure 3.1 shows the targeted credits against the BREEAM ratings.

BREEAM Section	Credits Available	Credits Targeted	% Achieved	% Section Weighting	Overall % Contribution
Management	21	15	71.43%	13.96%	9.97%
Health & Wellbeing	19	10	52.63%	15.07%	7.93%
Energy	26	13	50.00%	17.41%	8.71%
Transport	7	6	85.71%	5.43%	4.65%
Water	9	6	66.67%	6.98%	4.65%
Materials	13	7	53.85%	14.54%	7.83%
Waste	11	7	63.64%	8.00%	5.09%
Land Use & Ecology	3	3	100.00%	6.98%	6.98%
Pollution	13	7	53.85%	11.63%	6.26%
Innovation	10	1	10.00%	10.00%	1.00%
BREEAM Pre-Assessment Score					**63.1%**

Table 3.1 BREEAM Pre-Assessment Score Summary

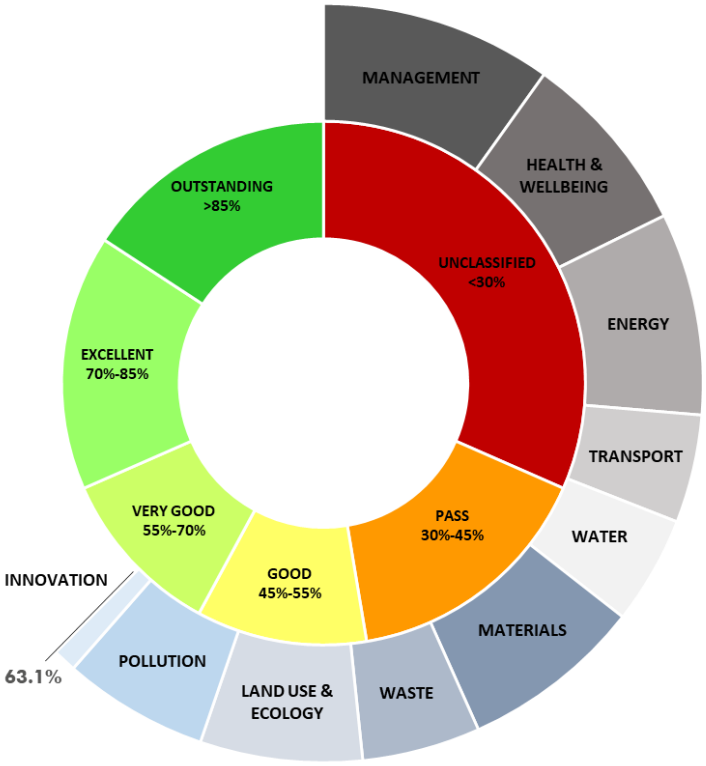

Figure 3.1 BREEAM Pre-Assessment Rating

3.2 Potential Credits

The pre-assessment score achieved during the workshop achieves a robust 'Very Good' rating but falls short of the minimum 70% required to achieve an 'Excellent' rating. During the pre-assessment meeting several BREEAM issues were identified that could be included within the target score to increase this above the 'Excellent' rating threshold, which are summarised below. These additional credits would uplift the target score by 9.55% to 72.6% overall. Whilst the client and project team are committed to include these to ensure an 'Excellent' rating is realised, it must be stated that some of these credits are uncertain at this stage and it may transpire that they cannot be achieved as the design is developed further. For this reason an 'Excellent' rating should be considered to be an aspiration for the assessment rather than a target, with a 'Very Good' rating being the more realistic target.

- **Man 01.2: Project brief and design : Sustainability Champion** – Appointment of a BREEAM Accredited Professional at design stage will allow 2 credits to be awarded, resulting in an additional 1.33%
- **Man 03.2: Responsible construction practices : Sustainability Champion** – Appointment of a BREEAM AP during the construction phase will allow 1 credit to be awarded, resulting in an additional 0.67%
- **Hea 01.1: Visual comfort : Glare control** – Installing glare control measures where needed (ideally with blinds) will gain an extra 1 credit for 0.79%

- **Hea 02.1: Indoor air quality : Minimising sources of air pollution** – If a specialist is instructed to complete VOC testing at the end of the project 1 credit can be gained with a value of 0.79%

- **Hea 04: Thermal comfort** – If air conditioning equipment is sized to allow for a future warmer climate and the thermal comfort modelling confirms this is effective 1 credit can be gained at a value of 0.79%

- **Ene 01.1: Reduction of energy use and carbon emissions** – Uncertain until the initial Part L calculations are completed, but another 3 credits from what was allocated could be realised, which would add 2.0% to the target score.

- **Tra 05: Travel plan** – Prepare a brief transport assessment and travel plan for an additional 1 credit worth 0.78%

- **Wat 01: Water consumption** – Very low flow sanitary fittings should allow 1 extra credit to be achieved, worth 0.78%

- **Wst 01.3: Project waste management : Resource efficiency** – If the lowest waste target of 2.1m^3 or 0.4 tonnes of construction waste per 100sqm floor area is achieved 1 extra credit worth 0.73% is available.

- **Pol 01: Impact of refrigerants** – By specifying air conditioning equipment that uses a low GWP refrigerant an extra credit worth 0.89% could be achieved

The above measures provide a total uplift to score 9.55%, improving the target score to 72.6% if all adopted. Whilst this is above the 'Excellent' threshold, in practice this score does not allow sufficient margin above the 70% threshold to allow for unforeseen shortfalls in the assessment process. Therefore it is likely that further additional credits would need to be identified to increase likelihood of meeting the 'Excellent' standard.

3.3 RIBA Stage 2 Issues

A number of BREEAM issues must be considered during the preliminary stages of the project should credits be sought. Of the targeted credits the following will need to be addressed immediately:

- **Man 01.1: Project brief and design : Stakeholder consultation** – Consultation will need to be carried out with local stakeholders following compliance requirements 5-8 and compliance note CN3.

- **Man 01.2: Project brief and design : Sustainability Champion** –BREEAM AP to be appointed to advise on securing the target BREEAM rating.

- **Hea 06: Safety and security** – Consultation with a security specialist to ensure recommendations are adopted in the principles of Secure by Design.

- **LE 04: Enhancing site ecology** – Ecologist needs to be approached to advise on any measures that could be adopted to enhance ecological value of planting.

3.4 Pre-Assessment Matrix

Management	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Man 01.1: Project brief and design : Stakeholder consultation	2	1.33%	2	1.33%			Prepare project team consultation plan & design responsibility matrix during stage 2.
Man 01.2: Project brief and design : Sustainability Champion	2	1.33%	0	0.00%	2	1.33%	*Would require appointment of BREEAM AP prior to completion of RIBA stage 2-3 for concept & early design involvement.*
Man 02: Life cycle cost and service life planning	4	2.66%	1	0.66%			Prepare a cost plan showing construction value in £/sqm.
Man 03.1: Responsible construction practices : Environmental management	1	0.66%	1	0.66%			Principle Contractor to operate ISO14001 Environmental Management System or comparable EMS.
Man 03.2: Responsible construction practices : Sustainability Champion	1	0.66%	0	0.00%	1	0.66%	*Would require appointment of BREEAM AP during the construction phase to influence and monitor site activities.*
Man 03.3: Responsible construction practices : Considerate construction	2	1.33%	2	1.33%			Principle contractor to register site with CCS and commit to achieving a score of 35, with at least 7 scored under each section.
Man 03.4: Responsible construction practices : Monitoring of construction site impacts	2	1.33%	2	1.33%			Monitor and record energy use, water use, delivery vehicle CO_2 and waste vehicle CO_2 on a monthly basis and report against KPIs.
Man 04.1: Commissioning and handover : Commissioning and testing schedule and responsibilities	1	0.66%	1	0.66%			Prepare a commissioning schedule including equipment to be commissioned, standards to be commissioned to and programme. M&E consultant to monitor all commissioning activities.
Man 04.2: Commissioning and handover : Commissioning building services	1	0.66%	1	0.66%			Appointment of M&E consultant to include: i. Undertaking design reviews and giving advice on suitability for ease of commissioning ii. Providing commissioning management input to construction programming and during installation stages iii. Management of commissioning, performance testing and handover/post-handover stages.
Man 04.3: Commissioning and handover : Testing and inspecting building fabric	1	0.66%	1	0.66%			Appointment of a suitably qualified thermographer to undertake a thermographic survey to confirm integrity of fabric. Air pressure test to be completed to confirm adventitious are leakage has been minimised.
Man 04.4: Commissioning and handover : Handover	1	0.66%	1	0.66%			Principle contractor to prepare a Building User Guide and a training schedule, covering the design intent, the available aftercare team, BUG, Introduction to systems & maintenance requirements.

Man 05.1: Aftercare : Aftercare support	1	0.66%	1	0.66%			Principle contractor to offer aftercare support to client by having a presence on site, facilitating training and being available for 12 months after handover. Client to monitor energy, water and occupancy satisfaction quarterly for first 3 years of occupation.
Man 05.2: Aftercare : Seasonal commissioning	1	0.66%	1	0.66%			Seasonal commissioning to be completed at 3, 6 & 9 months after handover to ensure systems are functioning correctly at all times of year.
Man 05.3: Aftercare : Post occupancy evaluation	1	0.66%	1	0.66%			Client to instruct a 3rd party to complete a POE 12 months after occupation, prepare a case study and publish online.
Management Totals	**21**	**13.96%**	**15**	**9.97%**	**3**	**1.99%**	

Health & Wellbeing	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Hea 01.1: Visual comfort : Glare control	1	0.79%	0	0.00%	1	0.79%	*Blinds or other glare control measures could be installed where required within Nr 15, although the listed status of the building may prevent this.*
Hea 01.2: Visual comfort : Daylighting	3	2.38%	0	0.00%			Cannot be achieved due to lower ground floor level having no windows.
Hea 01.3: Visual comfort : View out	2	1.59%	0	0.00%			Less than 80% of occupied floor area has a view out of a window and so this credit cannot be sought.
Hea 01.4: Visual comfort : Internal and external lighting, Zoning and control	1	0.79%	1	0.79%			Lighting design to follow SLL Code for Lighting 2012, LG7 and be appropriately zoned. Any external lighting to meet BS 5489-1:2013 & BS EN 12464-2:2014
Hea 02.1: Indoor air quality : Minimising sources of air pollution	4	3.17%	3	2.38%	1	0.79%	Appropriate consultant to prepare an indoor air quality plan to ensure good air quality is maintained with air intakes and extracts designed to be 10m apart. Finishes with low VOC levels to be specified. *For potential credit pre-completion testing of VOC levels internally would need to be completed to confirm good air quality.*
Hea 02.2: Indoor air quality : Adaptability - potential for natural ventilation	1	0.79%	0	0.00%			Cannot be achieved as lower ground floor must be mechanically ventilated.
Hea 04: Thermal comfort	3	2.38%	2	1.58%	1	0.79%	Thermal modelling to be completed using dynamic simulation software to confirm thermal comfort is maintained all year and controls strategy is effective. *For potential credit, modelling would need to demonstrate that thermal comfort can be maintained allowing for future climate change, i.e. by using a more extreme weather file.*

Hea 05.1: Acoustic performance : Education, Healthcare, Office and Law Courts building types	3	2.38%	3	2.38%			Acoustic consultant to confirm that ambient noise levels, sound insulation and reverberation levels to occupied areas comply with BS8233:2014. Pre-completion testing to be completed to confirm this.
Hea 06: Safety and security	1	0.79%	1	0.79%			Security specialist to be consulted by stage 3 to provide advice regarding security of the site. Secured by Design principles to be followed where possible.
Health and Wellbeing Totals	**19**	**15.07%**	**10**	**7.93%**	**3**	**2.37%**	

Energy	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Ene 01.1: Reduction of energy use and carbon emissions - Option 1: Whole building energy model	15	10.05%	5	3.35%	3	2.01%	Part L2A calculation to be completed on existing building and proposed refurbishment, with relative improvement in CO_2 emissions dictating credits awarded. *Additional credits may be available here, depending on results of PartL2A assessment.*
Ene 02: Energy monitoring	2	1.34%	2	1.34%			Sub-metering regime to be installed to ensure that 90% of primary energy use is identifiable, i.e. sub metering of key systems. Also relevant function areas to be separately sub-metered.
Ene 03: External lighting	1	0.67%	1	0.67%			New external lighting to have efficacy of 60 lms/W and be automatically controlled using presence detection and time switch or daylight control.
Ene 04.1: Low carbon design : Passive design	2	1.34%	0	0.00%			Not addressed at appropriate time
Ene 04.2: Low carbon design : Low or zero carbon technologies	1	0.67%	0	0.00%			LZC technologies not feasible due to Grade II listed status.
Ene 06: Energy efficient transportation systems	3	2.01%	3	2.01%			Lift supplier to complete traffic analysis and energy comparison to ensure lift is suitably sized and low energy option. Specified lift to include low energy features such as VVVF drive, standby mode and LED lighting.
Ene 08: Energy efficient equipment	2	1.34%	2	1.34%			New office equipment should be awarded an Energy Star1 rating OR be procured in accordance with the Government Buying Standards
Energy Totals	**26**	**17.41%**	**13**	**8.71%**	**3**	**2.01%**	

Transport	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Tra 01.1: Sustainable transport solutions : Accessibility Index	3	2.33%	3	2.33%			Central London location has a high PTAL and ensures maximum credits are achieved.
Tra 02: Proximity to amenities	1	0.78%	1	0.78%			Numerous amenities in close proximity to site.

Tra 03: Cyclist facilities	2	1.55%	2	1.55%			1 cycle space for every 20 occupants to be installed at lower ground floor level, with showers and changing facilities.
Tra 05: Travel plan	1	0.78%	0	0.00%	1	0.78%	*A transport consultant could be engaged to prepare transport assessment and travel plan, ensuring impact on local environment of additional travel is minimised.*
Transport Totals	**7**	**5.43%**	**6**	**4.65%**	**1**	**0.78%**	

Water	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Wat 01: Water consumption	5	3.88%	2	1.55%	1	0.78%	Low water consumption sanitary fittings to be specified. *Should ultra-low water fitting be specified an additional credit may become available.*
Wat 02: Water monitoring	1	0.78%	1	0.78%			Pulsed output water meter to be installed on incoming after supply.
Wat 03: Water leak detection	2	1.55%	2	1.55%			water leak detection system to be installed to sound alarm if a water leak is detected. Water supply to WC areas to be controlled via PIR to be switched off when WC not in use.
Wat 04: Water efficient equipment	1	0.78%	1	0.78%			
Water Totals	**9**	**6.98%**	**6**	**4.65%**	**1**	**0.78%**	

Materials	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Mat 01.2: Environmental impact of materials - Option 2: Elemental assessment of environmental performance information	6	6.71%	2	2.24%			Robust environmental performance information such as EPDs to be collected for newly specified materials or where materials are retained in situ.
Mat 03: Responsible sourcing of materials	4	4.47%	3	3.36%			Principle contractor to adopt a sustainable procurement policy and to procure key materials from supplier capable of providing EMS certification for the product such as ISO 14001 or BES 6001.
Mat 04: Insulation	1	1.12%	1	1.12%			Branded PIR insulation and mineral fibre insulation to be specified that has high thermal performance and high Green Guide to Specification value.
Mat 05: Designing for durability and resilience	1	1.12%	1	1.12%			Architect to identify areas of the design at risk from 'wear and tear' and environmental degradation, with appropriate protection measures specified.
Mat 06: Material efficiency	1	1.12%	0	0.00%			
Materials Totals	**13**	**14.54%**	**7**	**7.83%**	**0**	**0.00%**	

Waste	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Wst 01.1: Project waste management : Construction resource efficiency	1	0.73%	1	0.73%			Pre-refurbishment audit to be completed to identify materials that could be extract and re-used
Wst 01.2: Project waste management : Reuse and direct recycling of materials	2	1.45%	1	0.73%			Where possible, strip out materials to be re-used or sent back to manufacturer for closed loop recycling.
Wst 01.3: Project waste management : Resource efficiency	3	2.18%	3	1.45%	1	0.73%	Principle contractor to register with Smartwaste or similar and ensure that construction waste is limited to 1.2 tonnes or 4.5m^3 per 100sqm GFA. *Extra credit available if construction only waste can be restricted to 0.4 tonnes or 1.4m^3 per 100sqm GFA.*
Wst 01.4: Project waste management : Diversion of resources from landfill	1	0.73%	1	0.73%			Principle contractor to ensure that 85% of waste by volume or 90% by weight does not go to landfill.
Wst 03: Operational waste	1	0.73%	1	0.73%			Dedicated recycling waste storage area of at least 2sqm to be provided with easy access for collections.
Wst 04: Speculative floor and ceiling finishes	1	0.73%	1	0.73%			Occupant to agree finishes specification prior to installation.
Wst 05: Adaptation to climate change	1	0.73%	0	0.00%			Analysis not completed at appropriate time.
Wst 06: Functional adaptability	1	0.73%	0	0.00%			Analysis not completed at appropriate time.
Waste Totals	**11**	**8.00%**	**8**	**5.09%**	**1**	**0.73%**	

Land Use & Ecology	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
LE 04: Enhancing site ecology	1	2.33%	1	2.33%			Ecologist to be engaged to advise on planting regime that maximises ecological value.
LE 05: Long term impact on biodiversity	2	4.65%	2	4.65%			Most requirements not applicable due to lack of ecology on site. Planting to be indigenous and locally appropriate to create a new ecologically valuable habitat.
Land Use and Ecology Totals	**3**	**6.98%**	**3**	**6.98%**	**0**	**0.00%**	

Pollution	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Pol 01: Impact of refrigerants	3	2.68%	1	0.89%	1	0.89%	Refrigerant leak detection with automatic pump down to be included on systems, or systems to be hermetically sealed with less than 5kg refrigerant charge. *Additional credit available where refrigerant containing systems use refrigerant charge that has direct effect life cycle equivalent CO_2 emissions below 1,000kgco_{2e}/kW output.*

Pol 02: NOx emissions	3	2.68%	0	0.00%			Cannot be achieved as split system heating uses mains electricity with high NOx emissions.
Pol 03.1: Flood risk management and reducing surface water run-off : Flood risk management	2	1.79%	2	1.79%			EA maps identify site as having a low flood risk.
Pol 03.2: Flood risk management and reducing surface water run-off : Surface water run-off	2	1.79%	2	1.79%			Peak run off and volume run off from site will not increase as impermeable area will remain unchanged. Structural engineer to confirm with calcs allowing 30% for climate change.
Pol 03.3: Flood risk management and reducing surface water run-off : Minimising water course pollution	1	0.89%	0	0.00%			Cannot be achieved as first 5mm rainfall will go into drainage system.
Pol 04: Reduction of night time light pollution	1	0.89%	1	0.89%			External lighting to be designed in accordance with ILP guidance notes for reduction of obtrusive light and time switch controlled.
Pol 05: Reduction of noise pollution	1	0.89%	1	0.89%			Acoustic consultant to complete a noise impact assessment in accordance with BS 4142 to confirm no risk of noise pollution to local residents. HVAC system to be specified in accordance with recommended dB thresholds.
Pollution Totals	**13**	**11.63%**	**7**	**6.26%**	**1**	**0.89%**	

Innovation	Available		Targeted		Potential		Comments
	Credits	%	Credits	%	Credits	%	
Inn 01: Innovation	10	10.00%	0	0.00%			
Man 03: Responsible construction practices	1	1.00%	0	0.00%			
Man 05: Aftercare	1	1.00%	1	1.00%			See Man05 comments.
Hea 01: Visual comfort	1	1.00%	0	0.00%			
Hea 02: Indoor air quality	2	2.00%	0	0.00%			
Ene 01: Reduction of energy use and carbon emissions	5	5.00%	0	0.00%			
Wat 01: Water consumption	1	1.00%	0	0.00%			
Mat 01: Life cycle impacts	1	1.00%	0	0.00%			
Mat 03: Responsible sourcing of materials	1	1.00%	0	0.00%			
Wst 01: Construction site waste management	1	1.00%	0	0.00%			
Wst 02: Recycled aggregates	1	1.00%	0	0.00%			
Wst 05: Adaptation to climate change	1	1.00%	0	0.00%			
Pol 03: Flood risk management and reducing surface water run-off	1	1.00%	0	0.00%			
Innovation Totals (Up to a maximum of 10 credits)	**10**	**10.00%**	**1**	**1.00%**	**0**	**0.00%**	
Overall Totals	**132**	**110.0%**	**76**	**63.1%**	**13.00**	**72.6%**	

4.0 Conclusion

The proposed refurbishment works at 14-15 Great James Street have been designed to minimise the environmental impact of the refurbishment process and maximise its sustainability, creating a low energy, environmentally conscious and crucially pleasant working environment for the future occupants. A number of sustainable features will be incorporated into the design to achieve this as detailed within this report.

The proposed design has been assessed against BREEAM Refurbishment and Fit Out 2014 criteria (Parts 1). The predicted BREEAM score of 63.1% demonstrates that a robust 'Very Good' rating will be achieved when the full assessment is undertaken. The minimum score required to achieve a 'Very Good' rating is 55%, and therefore the proposed score allows an additional 8.1% over this threshold score to allow for any unforeseen short fall during the assessment process.

The predicted BREEAM score currently falls short of the 70% required for a 'Excellent' rating as required within the London Borough of Camden adopted Local Plan, Policy CC2 'Adapting to Climate Change'. This is primarily due to the design constraints imposed upon the project by the Grade II listed building status. The client and project team are fully committed to exploring all available options to improve the target score and achieve an 'Excellent' rating. However, as many of these options are uncertain and 'Excellent' rating should only be considered an aspiration at this stage.