SOUTHFACING

Appendix A

Mercure Bloomsbury Hotel Extension

BREEAM Pre-Assessment Summary Report

Pre-assessment

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1.0 Introduction

This report is intended as a summary of the BREEAM pre-assessment review for the following project:

Project Name	Mercure Bloomsbury Hotel Extension
BREEAM Version	BREEAM 2018 NC
Assessment Stage	Pre-Assessment Stage
Lead Assessor	Sophie Hemmings
Target Rating	Excellent (70%)

2.0 Scoring scenarios

It should be noted that the pre-assessment scores have been based on the following scoring scenarios;

- Likely Current - The number likely achieved.
- Potential - Current, plus credits which could be gained.

On this basis, the following scores are considered achievable under each scenario;

Scenario	Score	BREEAM Rating
Likely Current	35.5	Pass
Potential	46.8	Good

Based on the information we have to date, the scores currently indicate that a rating of 'Pass' 35.5% is currently likely to be achieved, and a potential rating of 'Good' 46.8% could be achieved with some additional cost/work incurred.

As this project would be registered under the new BREEAM New Construction UK 2018 scheme, the requirements have become slightly more onerous than in previous schemes. This means that some credits which may previously have been easy to achieve now require a greater deal of resource and/or cost input. There are a number of iterations in the design process of the project, and a number of credits are required to be met at early Concept Design. As the project is currently progressing through planning, we feel that these credits have not yet been engaged early enough to be achieved.

As this particular project is an extension of a number of hotel rooms onto an existing building, much of the existing services and infrastructure will come from the existing building. For BREEAM, we would be required to assess the existing building to evidence a number of the credits, and as the scheme has only recently been updated, this is unlikely to meet some of the requirements (e.g. current British Standards). Each individual hotel room would also be required to be individually metered, with a PIR in each bathroom.

A number of external consultants would also be required to be appointed to achieve some of the credits in BREEAM, such as an ecologist, life cycle analysis of materials, cost consultant and drainage engineer. As these are unlikely to be employed, some of the credits cannot be achieved.

In addition, the site is located in a very busy, very restricted area of Central London, which means that construction activity will be very limited in what can be achieved. As it is also a conservation area, the range of materials which can be procured are again very limited.

2.1 Minimum Standards

In addition performance against the minimum standards (required for the specified target rating) under each scenario is summarised below;

Issue	Likely Current	Potential
Man 03 - Responsible construction practices	Yes	Yes
Man 04 - Commissioning and handover	Yes	Yes
Man 04 - Commissioning and handover	Yes	Yes
Man 05 - Aftercare	No	Yes
Ene 01 - Reduction of energy use and carbon emissions	No	Yes
Ene 02 - Energy monitoring	Yes	Yes
Wat 01 - Water consumption	Yes	Yes
Wat 02 - Water monitoring	Yes	Yes
Mat 03 - Responsible sourcing of construction products	Yes	Yes
Wst 01 - Construction waste management	Yes	Yes
Wst 03 - Operational waste	No	No

If the required minimum standards are not met then the target rating will not be achieved regardless of overall score.

3.0 - Credits and Comments Table

		Available	Likely Current	Potential	Comments
Management					
Man 01	Project brief and design	4	0	1	**Potential:** Credit 4 BREEAM AP (Developed Design): Credits above achieved and monitoring at key DTM's throughout Developed Design. **Not targeted:** Credit 1 Project Delivery Planning: Consultation with all team members prior to Concept Design stage. Currently not a contractor on board. Credit 2 Stakeholder Consultation (Interested Parties): Prior to Technical Design, and carried out by an independent party. Has not been carried out. Credit 3 BREEAM AP (Concept Design): Appointed during project preparation and brief stage. Defined BREEAM performance target set between client and team no later than Concept Design stage. BREEAM AP not involved at this stage.
Man 02	Life cycle cost and service planning	4	1	1	**Likely Current:** Credit 4 Capital Cost Reporting: Reporting the capital cost for the building in pounds per square metre (£k/ m2). **Not Targeted:** Credit 1-2 Elemental Life Cycle Cost Plan: Providing comparisons which inform the design. Credit 3 Component Level LCC Option Appraisal: Providing comparisons which inform the design. Given the peacemeal nature of the project this will add significant cost to the project.
Man 03	Responsible construction practices	6	5	6	**Likely Current**: Pre requisite: All timber and timber products must be legally sourced and harvested. Credit 1 Environmental Management: The contractor having an ISO14001 certificate. Credit 2 BREEAM AP (Site): Sustainability Champion during construction, handover and close out stages. Credit 3 Responsible Construction Management: Exceeding best practices on site. (*1 credit is a mandatory requirement for Excellent*). Credit 4 Monitoring Construction Site Impacts (Utilities): Monitoring water and energy consumption on site. **Potential:** Credit 5 Monitoring of Construction Site Impacts (Transport of Construction Materials and Waste): Monitoring transport of construction materials and waste.
Man 04	Commissioning and handover	4	3	3	**Likely Current:** Credit 1 Commissioning - Testing Schedule and Responsibilities: Commissioning schedule and responsibilities. (*Mandatory requirement to achieve Very Good*). Credit 2 Commissioning - Design and Preparation: Complex systems have a dedicated commissioning manager appointed during design stage. Credit 4 Handover: A Building User Guide will be provided *(Mandatory requirement for rating of Excellent)*. **Not targeted:** Credit 3 Testing and Inspecting Building Fabric: Commissioning of building fabric (thermographic survey). This could be added to the contractor requirements or done at the end if required but likely to be difficult to achieve in practice given the extension nature of the project.
Man 05	Aftercare	3	1	3	**Likely Current:** Credit 1 Aftercare Support: Aftercare support from the design team, including initial support in the first month, and longer term care to the occupants for the first 12 months.

					Potential: Credit 2 Commissioning - Implementation: Seasonal commissioning over a minimum of 12 months. Given existing systems may be used, this would be difficult to achieve. *(Mandatory requirement for Very Good).* Credit 3 Post Occupancy Evaluation: A commitment to carry out a Post Occupancy Evaluation one year after occupancy (review, feedback from users, sustainability performance, and appropriate dissemination e.g. on a website).
Management Totals: (+exemplary)		**21 (+1)**	**10**	**14**	
Management score totals:		**11**	**5.238**	**7.333**	
Health & Wellbeing					
Hea 01	Visual comfort	4	3	3	**Likely Current:** Credit 1 Control of Glare from Sunlight: Can be achieved by default since there are no workstations or screens. Credit 3 View Out: View Out from all workstations/desks. Not thought to be any workstations as part of this project. Credit 4 Internal and External Lighting Levels, Zoning and Control: Internal and external lighting levels in accordance with relevant CIBSE Lighting guides, external lighting in accordance with BS5489 and relevant internal zoning is provided. **Not targeted:** Credit 2 Daylighting: Daylighting in occupied spaces. Unlikely to be achieved on this project.
Hea 02	Indoor air quality	4	0	0	**Not targeted:** Pre-requisite: Indoor Air Quality Plan is provided. Credit 1 Ventilation: Recirculation of internal pollutants reduced. Intakes and exhausts are likely to be closer than 10m apart. Credit 2-3 Emissions from Construction Products: Emissions data from products used inside the building. Credit 4 Post-construction indoor air quality measurement: Note that testing would incur additional cost and would need to be timed appropriately. All these credits would add significant cost to the project.
Hea 04	Thermal comfort	3	3	3	**Likely Current:** Credit 1 Thermal Modelling: Thermal modelling needs to be carried out in accordance with CIBSE AM11. Credit 2 Design for Future Thermal Comfort: Thermal modelling will be used to demonstrate the same comfort under a projected climate change environment (the same model is run with future weather files, and any failure needs to be explained how it can be mitigated in the future). Credit 3 Thermal Zoning and Controls: Thermal modelling above informs appropriate thermal zoning and control. Any underfloor heating will need careful review and will need to be appropriately specified.
Hea 05	Acoustic performance	4	4	4	**Likely Current:** Credit 1 Acoustic Performance: (4 credits available) Where a suitably qualified acoustician is appointed to confirm the performance requirements for each and the testing regime required for indoor ambient noise levels, reverberation and rain noise. Testing and remedial works also required.
Hea 06	Security	1	1	1	**Likely Current:** Credit 1 Security of site and building: An ALO must be consulted prior to Concept Design and their recommendations incorporated.
Hea 07	Safe and healthy surroundings	1	1	1	**Likely Current:** Credit 1 Safe Access: Safe and segregated site access for bicycles, pedestrians, cars and deliveries. This should be achieved due to central London location and limited site access (e.g. no cars).

	Health & Wellbeing Totals: (+exemplary)	**17 (+4)**	**12**	**12**	
	Health & Wellbeing score totals:	**14**	**9.882**	**9.882**	
Energy					
Ene 01	Reduction of energy use and carbon emissions	13	0	4	**Potential:** Credit 1 Energy Performance (9 credits available): At this stage the technical team – due to the constraints of the site – are unable to achieve enhancements that would achieve additional credits under this section. *4 credits are required for BREEAM Excellent.* **Not Targeted:** Credit 2 Prediction of operational energy consumption (4 credits available): Prior to completion of the Concept Design, relevant members of the design team hold a preliminary design workshop focusing on operational energy performance. Additional modelling is carried out to set targets.
Ene 02	Energy monitoring	2	2	2	**Likely Current:** Credit 1 Sub-metering of End-use Categories: All energy consuming systems accounting for greater than 90% of the total annual energy consumption (space heating, hot water heating, humidification, cooling, fans, lighting and small power) will be metered with a pulsed output and labelled *(Mandatory requirement for a rating of Very Good)*. Credit 2 Sub-metering of High Energy Load and Tenancy Areas: Areas of high energy load or tenancy areas will be sub-metered.
Ene 03	External Lighting	1	1	1	**Likely Current:** Credit 1 External Lighting: No external lighting OR The average luminous efficacy of all external light fittings is not less than 70 lumens per circuit watt. Daylight sensors and PIR's are fitted appropriately.
Ene 04	Low carbon design	3	2	2	**Likely Current:** Credit 1 Passive Design: The first credit under Hea04 Thermal Comfort has been achieved, and a passive design analysis has been carried out at Concept Design Stage to reduce the total heating, cooling, mechanical ventilation and lighting demands. Credit 3 Low Zero Carbon Technologies: A LZC feasibility has been carried out at Concept Design Stage by an energy specialist and a technology has been potentially identified. **Not targeted:** Credit 2 Free Cooling: Included in credit 1 is the provision of any free cooling strategies.
Ene 06	Energy efficient transportation systems	2	2	2	**Likely Current:** Credit 1 Energy Consumption: Where a lift transport analysis has been carried out and the most energy efficient solution chosen. Credit 2 Energy Efficient Features: Where the lift is chosen with a number of energy efficient features.
	Energy Totals: (+exemplary)	**21 (+8)**	**7**	**11**	
	Energy score totals:	**16**	**5.333**	**8.381**	
Transport					
Tra 01	Transport assessment and travel plan	2	0	0	**Not Targeted:** Credit 1 Travel Plan (2 credits available): Provision of a travel plan at the feasibility and design stages which feeds into the amenities provided for the development. A travel plan will not be provided.
Tra 02	Sustainable transport measures	10	0	0	**Not Targeted:** Credit 1 Sustainable Transport Measures (10 credits available): Tra01 must be achieved. Award credits according to the Accessible Index (AI) of the project, and the total number of points achieved for the options implemented

					(such as cycle spaces, cycle facilities, electric car charging points etc.). Location gives AI of 44.72. Unlikely to achieve more than 6 due to onerous requirements. As tra01 will not be achieved, no credits can be awarded here.
	Transport Totals: (+exemplary)	**12**	**0**	**0**	
	Transport score totals:	**10**	**0**	**0**	
Water					
Wat 01	Water consumption	5	3	3	**Likely Current:** Credit 1 Water consumption: Opportunity to achieve 3 credits where water efficient fittings are specified.
Wat 02	Water monitoring	1	1	1	**Likely Current:** Credit 1 Water Monitoring: A water meter with a pulsed output is attached to the mains water supply for each building, and pulsed output sub-meters are provided for each water consuming plant or area that consumes 10% or more of the total water demand. These must be connected to a BMS if available.
Wat 03	Water leak detection	2	1	1	**Likely Current:** Credit 1 Leak Detection System: Leak detection system will need to be specified. **Not Targeted:** Credit 2 Flow Control Devices: Sanitary supply shut off/PIR sensors on all WC areas. In a hotel, this is still required in each individual room. This would incur a substantial additional cost.
	Water Totals: (+exemplary)	**8 (+1)**	**5**	**5**	
	Water score totals:	**7**	**4.375**	**4.375**	
Materials					
Mat 01	Environmental impacts from construction products - Building life cycle assessment (LCA)	7	0	3	**Potential:** Credit 1 Superstructure: Up to 6 credits available. Requires some degree of LCA to be carried out. 3 credits could be achieved but would require further review. **Not Targeted:** Credit 2 Substructure: 1 credit. As above but for the substructure of the building. This cannot be achieved as the project is an extension above the current substructure.
Mat 02	Mat 02 Environmental impacts from construction products - Environmental Product Declarations (EPD)	1	0	0	**Not Targeted:** Credit 1 Environmental Impacts from Construction Materials: EPD's will be required for construction materials.
Mat 03	Responsible sourcing of construction products	4	1	2	**Likely Current:** Pre requisite: All timber and timber products must be legally sourced and harvested. Credit 1 Enabling Sustainable Procurement: Contractor procures materials in accordance with a sustainable procurement plan. **Potential:** Credit 2 Measuring Responsible Sourcing: Materials suppliers BES6001/ISO14001 certificates are provided for all major building elements. 1 credit likely, more are difficult to achieve.
Mat 05	Designing for durability and resilience	1	1	1	**Likely Current:** Credit 1 Designing for Durability and Resilience: Where vulnerable parts of the building are protected from damage and material degradation from environmental factors.
Mat 06	Material efficiency	1	0	0	**Not Targeted**: Credit 1 Material Efficiency: Where material use has been optimised in building design, procurement, construction,

					maintenance and end of life. This is a review that happens regularly throughout the construction process and will add significant cost to the project.
	Materials Totals: (+exemplary)	**14 (+4)**	**2**	**6**	
	Materials score totals:	**15**	**2.143**	**6.429**	
Waste					
Wst 01	Construction waste management	5	2	3	**Likely Current:** Credit 1 Pre-demolition Audit: Audit of any existing buildings, structures or hard surfaces being considered for demolition. This must be used to determine whether refurbishment or reuse is feasible and, in the case of demolition, to maximise the recovery of material for subsequent high grade or value applications. Credit 3 Diversion of Resources from Landfill: Where 70% non demo and 80% demo waste is diverted from landfill. **Potential:** Credits 2-4 Construction Resource Efficiency: (1 credit likely) Where less than 13.3m3 or 11.1 tonnes per 100m2 floor area of waste is generated during construction.
Wst 02	Use of recycled and sustainably sourced aggregates	1	0	0	**Not targeted:** Credit 1 Recycled Aggregates: Re-use of demolition materials on site. Provision of recycled or secondary aggregate to contribute to total high-grade aggregate, as well as distances sourced from. This would require a significant amount of additional resource to achieve, given the nature of the project.
Wst 03	Operational waste	1	0	0	**Not Targeted:** Credit 1 Operational Waste: At least 2sqm of external recyclable waste storage space is provided per 1000sqm floor area, and a further 2sqm when there is a kitchen. Require further information on current facilities, but it is likely that these facilities will not comply. *(Mandatory requirement for Excellent).*
Wst 05	Adaptation to climate change	1	0	1	**Potential:** Credit 1 Adaptation to Climate Change - Structural and Fabric Resilience: A climate change adaptation strategy appraisal is carried out by end of Concept Design, assessing risk from the expected impact of extreme weather conditions arising from climate change.
Wst 06	Design for disassembly and adaptability	2	0	0	**Not Targeted:** Credit 1 Design for Disassembly and Adaptability: A building specific functional adaptation strategy appraisal has been carried out by Concept Design. It covers adaptation of building to changes in working practices or change in use, easy replacement of plant, and accessibility of local services, as well as ability for major refurbishment.
	Waste Totals: (+exemplary)	**10 (+3)**	**2**	**4**	
	Waste score totals:	**6**	**1.2**	**2.4**	
Land Use & Ecology					
LE 01	Site selection	2	1	1	**Likely Current:** Credit 1 Previously Occupied Land: Where the new development is on a site where previously there was a building. **Not targeted:** Credit 2 Contaminated Land: Where the previously developed land/ground is contaminated (e.g. lead, asbestos) and remedial works will be carried out. Highly unlikely for this project.
LE 02	Identifying and understanding the risks and opportunities for the site	2	1	1	**Likely Current:** 1 credit available for Route 1, 2 credits for Route 2. Credit 1 Identifying and Understanding Risks: 1 credit likely. Ecological value of the land is determined.
LE 03	Managing negative impacts on ecology	3	2	2	**Likely Current:** Credit 1 Planning, Liaison Implementation and Data: Construction works planned early to minimise disturbance, and

					stakeholders consulted. Credit 2 Managing Negative Impacts of the Project: 1 credit likely. No negative impact on site ecology as a result of works. 1 credit for Route 1, 2 for Route 2.
LE 04	Enhancement of Ecological value	4	1	1	**Likely Current:** 1 credit available for Route 1, 3 credits for Route 2. Credit 1 Enhancement of Ecology: Implemented solutions and measures based on recommendations from recognised 'local' ecological expertise, specialist input and guidance to inform the adoption of locally relevant ecological solutions and measures which enhance the site. **Not Targeted:** Route 2 Credits 2-4: Calculations from ecologist on enhancements made determine number of credits to be awarded.
LE 05	Long term management and maintenance	2	1	1	**Likely Current:** Credit 1 Planning, liaison, data, monitoring and review management and maintenance: Maintenance and ongoing monitoring. As part of the tenant or building owner information supplied, include a section on Ecology and Biodiversity to inform the owner or occupant of local ecological features, value and biodiversity on or near the site. **Not Targeted:** Credit 2 Landscape and ecology management plan (or similar) development: Landscape and Habitat Management Plan is provided for the first 5 years after occupation, in line with BS 42020:2013.
Land Use & Ecology Totals: (+exemplary)		**13 (+1)**	**6**	**6**	
Land Use & Ecology score totals:		**13**	**6**	**6**	
Pollution					
Pol 01	Impact of refrigerants	3	0	1	**Potential:** Credit 1-3 Impact of Refrigerants: Opportunity to attain 1 credit, to be investigated. Three credits can be achieved if no refrigerants are used.
Pol 02	Local air quality	2	0	0	**Not Targeted:** Credit 1 Local Air Quality: Highly unlikley to meet requirements as domestic hot water will be provided fromthe existing gas boilers.
Pol 03	Flood and surface water management	5	0	0	**Not Targeted:** Credit 1-2 Flood Resilience: Where a flood risk assessment can demonstrate the site is in a low flood risk zone from all sources. FRA required. Credit 3 Surface Water Runoff: An appropriate consultant confirms that drainage measures will ensure the peak rate of run-off from the site is no greater than pre-development and complies with the 1 in 100 year return event. Credit 4 Surface Water Runoff: An appropriate consultant confirms that flooding will not occur in the event of local drainage system failure and either the post development run-off volume is no greater than pre-development (for the 100 year, 6 hour event and allowing for climate change) and any additional volume is prevented from leaving the site by SuDS or infiltration. Will need to be investigated further. Credit 5 Minimising Watercourse Pollution: There is no discharge up the the first 5mm rainfall. Also, a comprehensive drainage plan will be made available to future occupants and maintenance agreements are in place for all SuDS. *A drainage engineer will need to be employed to ensure that these credits can be achieved.*
Pol 04	Reduction of night time light pollution	1	1	1	**Likely Current:** Credit 1 Reduction of Night Time Light Pollution: Where the external lighting strategy has been designed in

					accordance with Table 2 of the ILP Guidance for obtrusive light, 2011 and can be switched off between 2300-0700hrs with a timeswitch.
Pol 05	Reduction of noise pollution	1	1	1	**Likely Current:** Credit 1 Reduction of Noise Pollution: Where an acoustician has carried out a noise impact assessment on the surrounding sensitive buildings in accordance with BS4142:2014 and the difference must be no greater than +5dB throughout day and night to background noise.
	Pollution Totals: (+exemplary)	**12**	**2**	**3**	
	Pollution score totals:	**8**	**1.333**	**2**	
Innovation					
AI	Approved Innovation	1	0	0	
	Innovation Totals: (+exemplary)	**1**	**0**	**0**	
	Innovation score totals:	**1**	**0**	**0**	
	OVERALL SCORE TOTALS:	**101**	**35.5**	**46.8**	