

7ABC Bayham Street, Camden

Sustainability Statement

Camden Lifestyle (UK) Ltd

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7ABC Bayham Street, Camden

Sustainability Statement

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1. Executive Summary

- 1.1 This Sustainability Statement presents the sustainability credentials for a proposed scheme at 7ABC Bayham Street, Camden.
- 1.2 Consideration has primarily been given to planning policy and other requirements prior to a review of sustainability in the context of the wider community, design and construction.
- 1.3 Planning consent has been granted for the *“Full Planning Application for the demolition of existing buildings (B1a Use Class) and erection of a part 3, part 4, part 5 storey building (with two basement levels), comprising co-working office floorspace (B1a Use Class), hotel accommodation (C1 Use Class) and an ancillary café/bar and fitness facilities; works to the existing access and associated works.”* Variations are being sought as part of a Section 73 Application.
- 1.4 At a strategic level, the development of commercial uses will provide employment for local people, improve the local economy, increase the wealth and lifestyle of employed individuals and contribute to local business rates. Furthermore, demand for hotel accommodation is likely to increase in line with the direction of historical trends. The development is considered to be beneficial to the local community and aligned with socio-economic requirements.
- 1.5 A number of sustainable design features are proposed and construction will be responsibly managed to ensure minimal impact on the environment and local community.
- 1.6 It is proposed to assess the scheme against BREEAM with a target rating of “Excellent” for both the hotel and offices.
- 1.7 Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority.

2. Introduction

- 2.1 Ensphere Group Ltd was commissioned by Camden Lifestyle (UK) Ltd to produce a Sustainability Statement for a proposed development at 7ABC Bayham Street, Camden.

Site and Surroundings

Site

- 2.2 The site is located in central London in the London Borough of Camden, to the southern end and western side of Bayham Street. Bayham Street is a wide one-way route which runs parallel to the east of Camden High Street (A400).
- 2.3 The site has a regular shape and currently comprises three existing buildings 7A, 7B and 7C and the lawful planning use of these buildings is Offices (Class B1a). The site is contained on three sides, with access only being achievable from Bayham Street.

Surroundings

- 2.4 The character of the area is mixed but is categorised as commercial by the Conservation Area Appraisal “Sub Area 1 (‘Commercial’)”.
- 2.5 The site is approximately 100m northeast of Mornington Crescent underground station, 400m south of Camden underground station and 900m north of both Euston and King’s Cross/St Pancras National Rail stations. In addition, nine high frequency bus routes operate in the area.

Consented Scheme

- 2.6 Full Planning Application for the demolition of existing buildings (B1a Use Class) and erection of a part 3, part 4, part 5 storey building (with two basement levels), comprising co-working office floorspace (B1a Use Class), hotel accommodation (C1 Use Class) and an ancillary café/bar and fitness facilities; works to the existing access and associated works.

Section 73

- 2.7 A Section 73 Application is now being submitted to accommodate variations.

Report Objective

- 2.8 The objective of the Sustainability Statement is to outline how sustainability and the principles of sustainable development have been incorporated into the development proposals.

3. Assessment Methodology

Sustainability & Sustainable Development

- 3.1 “Sustainability” is a broad concept generally used to describe the ability to perpetuate a particular state of being. It is widely used in the context of development and where there is potential for changing circumstances to cause an impediment to the perpetuation of a phenomenon.
- 3.2 The term is subjective and the understanding of the concept is influenced by perceptions and aspirations. “Sustainability” is therefore variably defined but normally encapsulates a wide range of issues, often characterised by their relationship with the economy, society and the environment (the “three pillars” of sustainability).
- 3.3 These issues are not necessarily mutually exclusive and whilst they are often presented as such, technically, the economy is a function of society; and society concerns the interrelationships and behaviours of one species within the wider environment. Nevertheless, the identification and characterisation of these issues enables a better understanding of the things that matter in decision making, which enable a balance to be struck when priorities compete.
- 3.4 The term “sustainable development” is often used interchangeable with “sustainability” but it is narrower in scope and seeks to promote the perpetuation of human advancement. The “Brundtland Report” (officially titled “Our Common Future” and written by the United Nations World Commission on Environment and Development, Chaired by Gro Harlem Brundtland in 1987), presents perhaps the most widely cited and understood interpretation of this concept:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs”

- 3.5 The definition introduces the concept of “needs” and the generational timeframe for evaluating whether an action is sustainable or otherwise.

Analysis Methodology

- 3.6 Given the broad definitions associated with the terminology of “sustainability” and “sustainable development”, understanding how these concepts have been interpreted and incorporated into the local planning regime requires a review of the planning policy as well as the documents upon which the policy is based. The report therefore commences with an overview of the planning policy and other considerations.

- 3.7 An appraisal of the sustainability credentials of the scheme then follows. Structure is important when assessing sustainability due to the breadth of issues being considered; an approach has been created based upon the phases of the development cycle relevant to the planning decision making processes, with consideration given to the “three pillars” (discussed above) and requirements of policy.

Assessment Matrix

	Economic	Social	Environmental
Strategic	✓	✓	✓
Design	✓	✓	✓
Construction	✓	✓	✓

- 3.8 It is recognised that the scale and nature of the scheme will affect the relative importance of the matrix dimensions and entries. For example, a single residential unit is unlikely to be viewed as having a major societal impact on the basis of its scale relative to its context. However, the societal implications of an urban extension may be much more significant.
- 3.9 The emphasis is therefore case specific, and the assessment sections of this report seek to highlight the relevant factors in a suitably balanced manner.

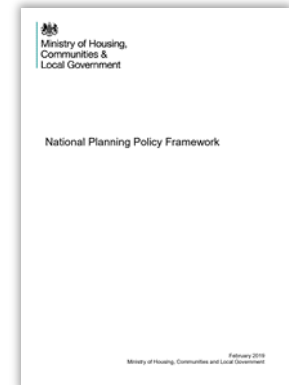
4. Planning Context

4.1 Local planning policy relevant to sustainable development is considered below:

National Context

National Planning Policy Framework (2019)

4.2 The National Planning Policy Framework (NPPF) was updated in February 2019. Paragraphs 7, 8 and 10 of the revised NPPF include reference to the following:



7. *“the purpose of the planning system is to contribute to the achievement of sustainable development. At a very high level, the objective of sustainable development can be summarised as meeting the needs of the present without compromising the ability of future generations to meet their own needs”.*

8. *“Achieving sustainable development means that the planning system has three overarching objectives, which are interdependent and need to be pursued in mutually supportive ways (so that opportunities can be taken to secure net gains across each of the different objectives):*

- *An economic objective*
- *A social objective*
- *An environmental objective”*

10. *“So that sustainable development is pursued in a positive way, at the heart of the Framework is a presumption in favour of sustainable development”*

Planning Practice Guidance (2016; updated 2018)

- Climate Change - Advises how planning can identify suitable mitigation and adaption measures in plan-making and the application process to address the potential for climate change.
- Design - Design affects how people interact with places and can affect a range of economic, social and environmental objectives. The guidance states that planning policies and decisions should seek to ensure that the physical environment supports these objectives.
- Natural Environment - Explains key issues in implementing policy to protect biodiversity, including local requirements.

London Context

The London Plan Consolidated with Alterations Since 2011 (2016)

4.3 The London Plan was further updated in March 2016. The Plan is the overall strategic plan for London. Chapter five of the Plan details London's Response to Climate Change. The following policies are considered pertinent to this Statement:



- Policy 5.2 (*Minimising Carbon Dioxide Emissions*) – includes:
 - An Energy Hierarchy: Be Lean; Be Clean; Be Green;
 - Carbon reduction targets for major developments; including a “zero carbon” target for 2019;
 - Sets out the information requirements for energy assessments.
- Policy 5.3 (*Sustainable Design & Construction*) – encourages consideration of sustainability as part of the design and construction;
- Policy 5.5 (*Decentralised Energy Networks*) – requires planning authorities to require developers prioritise connection to existing or planned decentralised energy networks where feasible;
- Policy 5.6 (*Decentralised Energy in Development Proposals*) – encourages development to establish or connect to energy networks;
- Policy 5.7 (*Renewable Energy*) – within the framework of the Energy Hierarchy, major development proposals should provide a reduction in expected carbon dioxide through the use of on-site renewable energy generation, where feasible;
- Policy 5.9 (*Overheating and Cooling*) – major development proposals should reduce potential overheating and reliance on air conditioning systems in accordance with a Cooling Hierarchy;
- Policy 5.10 (*Urban Greening*) – encourages development proposals to integrate green infrastructure;
- Policy 5.11 (*Green Roof and Development Site Environs*) – encourages major development to include roof, wall and site planting;
- Policy 5.12 (*Flood Risk Management*) – development proposals must comply with the flood risk assessment and management requirements of the NPPF;

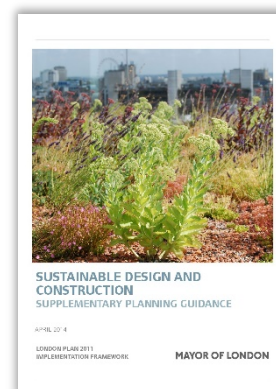
- Policy 5.13 (*Sustainable Drainage*) – encourages developers to utilise sustainable drainage systems (SUDS) unless there are practical reasons for not doing so;
- Policy 5.15 (*Water Use and Supplies*) – development should minimise the use of mains water by incorporating water saving measures and targeting 105 litres of less per head per day;
- Policy 5.17 (*Waste Capacity*) – suitable waste and recycling storage facilities are required in all new development.

Sustainable Design and Construction Supplementary Planning Guidance (2014)

4.4 This SPG aims to support developers, local planning authorities and neighbourhoods to achieve sustainable development. It provides guidance on to how to achieve the London Plan objectives effectively, supporting the Mayor's aims for growth, including the delivery of housing and infrastructure.

4.5 The guidance in this SPG is intended to:

- provide detail on how to implement the sustainable design and construction and wider environmental sustainability policies in the London Plan;
- provide guidance on how to develop more detailed local policies on sustainable design and construction;
- provide best practice guidance on how to meet the sustainability targets set out in the London Plan; and
- provide examples of how to implement sustainability measures within developments.



Emerging London Plan (2019)

4.6 The draft New London Plan is a broad plan to shape the way London develops over the next 20-25 years. Sustainability and energy are discussed in Chapter 3 (Design), Chapter 8 (Green Infrastructure and Natural Environment) and Chapter 9 (Sustainable Infrastructure). The following draft policies are considered important to this report:

- Draft Policy D1 (*London's Form, Character and Capacity for Growth*) – Development should aim for high sustainability standards (with reference to the policies within London Plan Chapter's 8 and 9);



- Draft Policy D6 (*Housing Quality and Standards*) – Encourages developers to consider qualitative aspects of a development to ensure successful sustainable housing;
- Draft Policy SI1 (*Improving Air Quality*) – Development should not lead to further deterioration of existing poor air quality;
- Draft Policy SI2 (*Minimising GHG Emissions*) – Encourages major development to be zero-carbon and minimise annual and peak energy demand in accordance to ‘Be Lean, Be Clean, Be Green, Be Seen’ energy hierarchy.
- Draft Policy SI3 (*Energy Infrastructure*) – Major development proposals in Heat Network Priority Areas should have a communal low-temperatures heating system and the heating source should be selected in accordance to the Heating Hierarchy;
- Draft Policy SI4 (*Managing Heat Risk*) – Encourages development to minimise adverse impacts on the urban heat island and to assess the risk of internal overheating and reduce reliance on air conditioning.

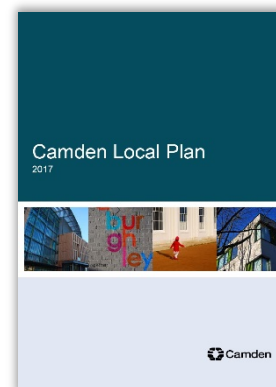
Local Context

Camden Local Plan (June 2017)

4.7 The Local Plan sets out the planning policies, site allocations and land designations Borough-wide and is the central document in the Borough’s Development Plan.

4.8 The following policies are considered relevant to this report:

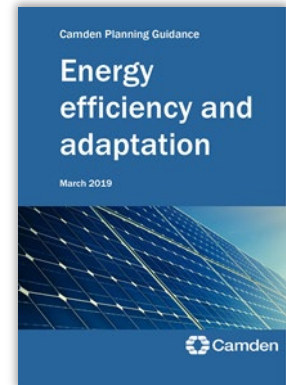
- Policy G1 (*Delivery and Location of Growth*) – promotes sustainability with regards to the efficient use of land and buildings;
- Policy D1 (*Design*) – includes a requirement for development to be sustainable with regards to design and construction;
- Policy CC1 (*Climate Change Mitigation*) – promotes zero carbon development, consideration of the Energy Hierarchy (encouraging connection to District Energy Networks), reduced reliance on transport by car and resource efficiency;
- Policy CC2 (*Adapting to Climate Change*) – requires development to seek to protect existing green space, use of SUDS, incorporating biodiverse roofs, consideration of overheating risks, encourages the use of the Home Quality Mark and Passivhaus Standards along with BREEAM “excellent” for non-domestic and refurbishment developments >500sqm;



- Policy DM1 (*Delivery and Monitoring*) – supports sustainable development;

**Camden Planning Guidance – Energy Efficiency & Adaptation
(March 2019)**

- 4.9 This guidance provides information on key energy and resource issues within the borough and supports Local Plan Policies CC1 Climate change mitigation and CC2 Adapting to climate change.
- 4.10 Includes requirements concerning credits under certain BREEAM categories (60% energy, 60% water and 40% materials); and reference the 20% renewables target.



5. Site Context

- 5.1 In line with the “three pillars” of sustainability discussed within the methodology section, the site context has been considered with regard to its economic, social and environmental context; acknowledging that interrelationships exist between many of these issues.

Socio Economic Context

Output Area Classifications

- 5.2 Area classifications for Great Britain have been produced after every census since 1971, and as of the 2001 Census, they have been extended to cover the UK as a whole.
- 5.3 Using socioeconomic and demographic data from each census, the classifications seek to identify areas of the country with similar characteristics. Therefore, the presented information should not be interpreted as an assessment specific to the Application Site and the surrounding area; but rather it is a reflection of the characteristics of areas with a similar socioeconomic and demographic pattern.
- 5.4 Data from the 2011 Census has been released identifying the site as having an Output Area Code of E00004747 and is classified as “Ethnicity Central” (Supergroup Code 3), “Endeavouring Ethnic Mix” (Group Code 3b) and “Multi-Ethnic Professional Service Workers” (Subgroup Code 3b3).
- 5.5 Radial Plots are provided by the Office for National Statistics. Each data point on a radial plot displays the value for each one of the 60 standardised and transformed 2011 Census variables used.
- 5.6 The data indicates higher than average number of persons aged 25-44; population density; and full-time students. Residential accommodation is predominantly flats with social and private renting being more prevalent than ownership. Overcrowding levels are above average. The radial plots indicate that for those persons who work, employment is more likely to be in finance / insurance / real estate, transport & storage and information & communication sectors.

Indices of Multiple Deprivation

- 5.7 The English Indices of Deprivation use 38 separate indicators, organised across seven distinct domains of deprivation. The Indices of Multiple Deprivation data are then constructed by combining the seven transformed domain scores, using the following weights; income (22.5%); employment (22.5%); health and disability (13.5%); education, skills and training (13.5%); barriers to housing and services (9.3%); crime (9.3%); and living environment (9.3%).
- 5.8 The IMD can be used to rank every Lower Layer Super Output Area in England according to their relative level of deprivation. The data is not a measure of affluence; therefore the area ranked as the least deprived is not necessarily the most affluent.

- 5.9 The IMD data comprise a numeric value in a scale of 1 to 32,844 (1=most deprived) and are represented in a coloured scale of deciles (1=most deprived – dark red; 10=least deprived – dark blue) in the respective maps. Government data (illustrated below) indicates that the area ranks 10,959 out of 32,844; where 1 is the most deprived. The area is therefore considered to have a modest level of deprivation overall. The table below provides the data for the individual domains:

Table 7.1 **IMD Domain Scores**

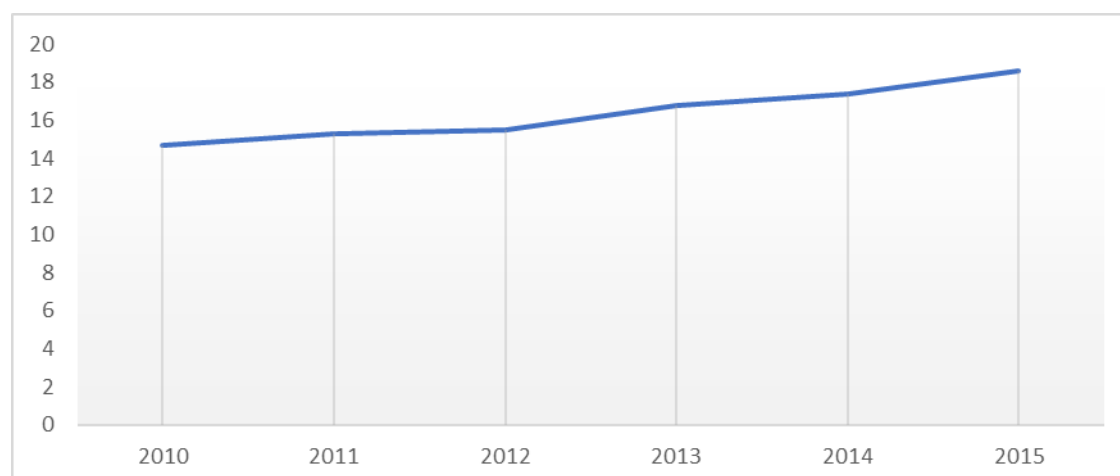
Domain	Score
Income Rank	9,881
Employment Rank	10,600
Education, Skills and Training Rank	24,965
Health Deprivation and Disability Rank	14,512
Crime Rank	8,695
Barriers to Housing and Services Rank	8,975
Living Environment Rank	4,445
Rank of IMD Score	10,959

Note: Scores out of 32,844, where 1 is the most deprived.

Tourism

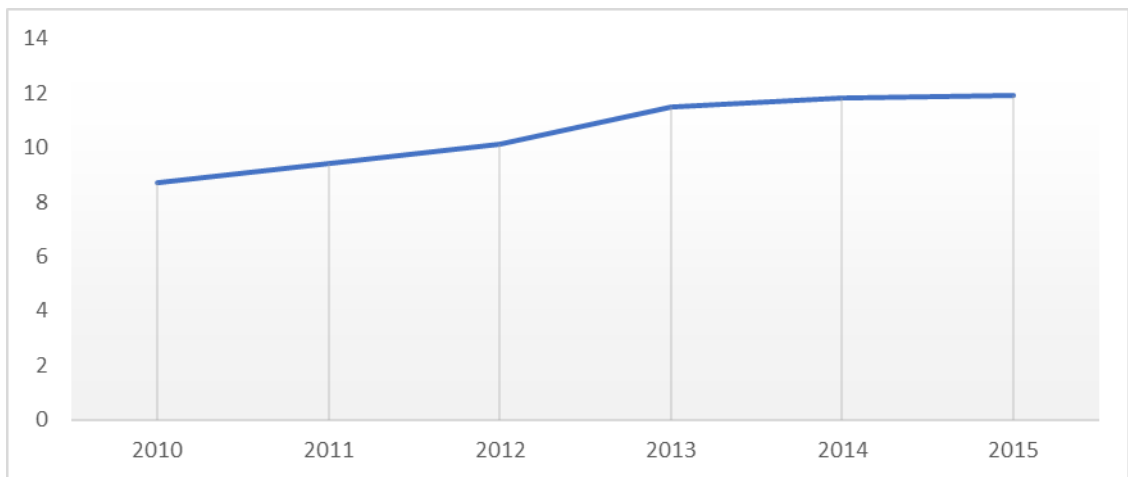
- 5.10 Data is available from London & Partners, a not-for-profit public-private partnership, funded by the Mayor of London and various commercial partners.
- 5.11 This indicates that the capital received a record number of international visitors in 2015 (at 18.6 million), which represents a 26% increase compared to 2010 levels. The city received 108.3 million overnight visits from overseas visitors which, while this remained steady against 2014, equates to a 20% increase from 2010. Overseas visitor expenditure also increased, by 36% between 2010 and 2015.

Figure 7.1 **Overnight Visits in London from Overseas Visitors (millions)**



Source: ONS Data

Figure 7.2 Expenditure Spend in London from Overseas Visitors (£ billion)



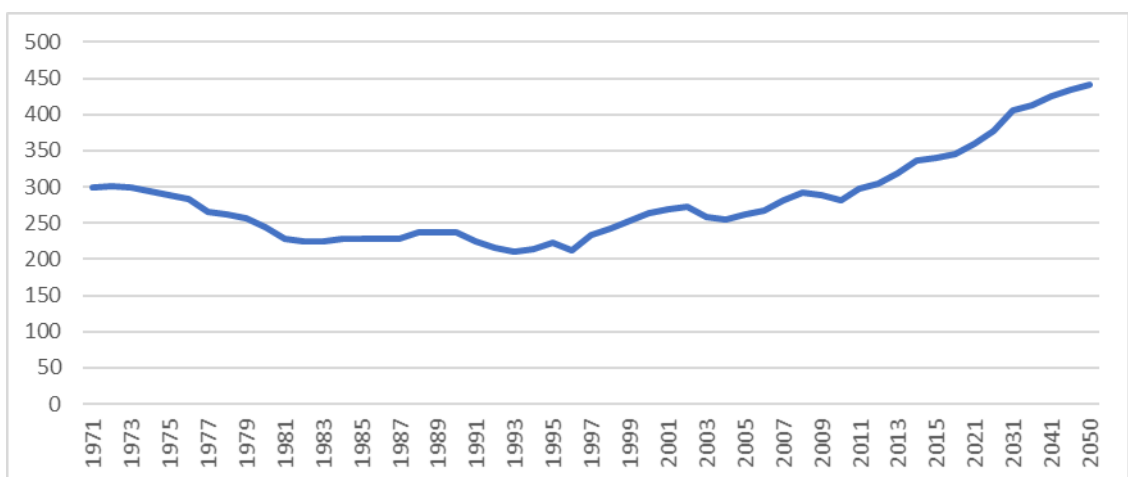
Source: ONS Data

- 5.12 More recent data, as referenced in the Financial Feasibility Study, suggests that the above trends have continued. The latest ONS statistics indicate that London received 15.1 million international tourists during the first three quarters of 2017, representing a 7.5% increase compared to the same period in 2016. Additionally, overnight stays increased by 1.7% and total spend increased by 19.9% over the same period.

London Labour Market

- 5.13 Labour market data has been compiled by the Greater London Authority in the context of an analysis of the London's economy and the economic issues facing the capital.
- 5.14 Data is available on a borough by borough basis and the following presents the historic and projected employee jobs for the London Borough of Camden.

Figure 7.3 Historic and projected borough employee jobs (Camden), 1971-2050



Environmental Context

- 5.15 The environmental context is assessed in greater detail in the accompanying environmental reports. The following provides an overview of the pertinent matters:

Land Use

- 5.16 The site constitutes brownfield land, meaning that its development will reduce the pressure to develop elsewhere and on Greenfield.

Flooding / Groundwater

- 5.17 From review of the Environment Agency (EA) Indicative Flood Maps, the site is identified as being in Flood Zone 1 and having a low probability of flooding.
- 5.18 According to the Environment Agency (EA) data, the site is not located within a Groundwater Source Protection Zone.

Ecology

- 5.19 In the absence of any existing soft landscaping, the ecological value associated with the area proposed for development is considered to be low.

Public Transport

- 5.20 Many of the social and economic issues concern accessibility, which in its broadest sense is regarded as a combination of access to local shops, services, amenities, employment opportunities; as well as access to public and other transport facilities.
- 5.21 Therefore, the accessibility of the proposed scheme to local amenities is a relevant consideration in determining whether the site represents a sustainable location.
- 5.22 According to the Transport for London mapping resource, the site has excellent access to public transport and has a PTAL rating of 6b (Best).

6. Sustainable Design Proposals

- 6.1 This section presents an overview of the proposed sustainable design features for the scheme.

Environmental Standards

- 6.2 It is proposed to assess the scheme against BREEAM and, in line with planning policy requirements, target an “Excellent” rating for both the hotel and office developments. Furthermore, 60% of the credits will be targeted under the energy and water sections and 40% under materials. Indicative assessments are presented in the appendices of this report.

Energy

- 6.3 Further detail on energy matters is presented in the Energy Statement accompanying the application.

Energy Efficiency

- 6.4 It is intended that the performance of the building fabric will incorporate relatively low U-Values to reduce the rate at which the building loses heat, preserving the heat within the space and reducing the requirement for mechanical heating.

Low Carbon & Renewable Technologies

- 6.5 Renewable and low carbon technologies have been considered as part of the design following the prioritisation of efficiency. The following is proposed:

- Air Source Heat Pumps to provide space heating and hot water.

- 6.6 In line with the London Plan and Council policies, a carbon saving >35% against Part L 2013 baseline has been targeted for the development.

Water Conservation, Water Quality and Flooding

- 6.7 Water saving fittings and appliances shall be installed; the following form a basis of the proposals:

- Dual flush toilets of 6/3 litres;
- Water consumption levels not higher than 4.5 litres/minute in wash hand basins and 5 litres/minute in kitchenette taps;
- Showers (where present) with a maximum flow rate of 8 litres/minute at 3 bar pressure.

- 6.8 The existing site is entirely hardstanding impermeable ground and therefore the volume of water run-off over the development’s lifecycle will be no greater than it would have been prior to development. Moreover, the planted roof terraces will reduce the run-off post-development.

Materials & Waste

- 6.9 The materials strategy for the development shall consider lifecycle environmental impacts, durability, responsible sourcing and pre-fabrication potential, with a view to optimising materials utilisation and safeguarding natural resources. Measures will include:
- The majority of major elements (walls, floors, roof) with an 'A' or 'A+' rating in the BRE's Green Guide to Specification;
 - Use of all timber products that come from an accredited Forest Stewardship Council (FSC) source;
 - Use of suppliers/products that operate Environmental Management Systems (e.g. ISO14001, EMS) as per minimum and BES 6001 certification for major applications; and
 - Consideration of durability, pre-fabrication and dismantling potential in selecting main elements.
- 6.10 The operational waste strategy comprises provision of dedicated space of adequate size and in convenient locations for storage of general refuse, recyclables and food waste. Internal and external storage will be considerate of the Building Regulations and Council requirements.

Pollution

- 6.11 No on-site fossil fuel usage is proposed for the heating system, meaning that local air quality impacts will be negligible.
- 6.12 Transport emissions shall be minimal, as the site offers excellent connections to public transport services and a wide range of amenities at walking distance; the development shall also promote cycling by providing secure cycle storage spaces.
- 6.13 Measures relating to building design, fabric design and landscaping shall be implemented as appropriate so that internal ambient noise levels are acceptable for the intended use and do not compromise the health & well-being of occupants.
- 6.14 The external lighting strategy shall be designed to minimise light spillage and night time light pollution in line with the ILP's Guidance notes for the reduction of obtrusive light; low illuminance levels, fittings and controls shall be employed accordingly.
- 6.15 Good internal air quality will be achieved through the creation of a building envelope with a low air permeability; meaning that the building fabric will reduce the infiltration of pollution from the external environment.

- 6.16 The developer will also endeavour to avoid the use of materials with a high VOC (volatile organic compound) content; therefore ensuring an improved air quality for the completed development.

Ecology

- 6.17 The ecological value of the proposed development will be greater than the existing development. A suitably qualified ecologist has been appointed and all appropriate recommendations will be implemented.

7. Sustainable Construction Proposals

- 7.1 It is recognised that the construction industry has the potential to cause significant environmental impacts through resource use, waste generation and pollution. It is therefore proposed to manage the construction phase in a sustainable manner to ensure that these impacts are reduced.

Responsible Construction Practices

Impacts on Neighbours, Pedestrians, Road Users and Workforce

- 7.2 The main contractor will register with the Considerate Constructors Scheme to ensure that the contractor carries out the construction operations in a safe and considerate manner, with due regard to local residents, road users, the workforce and the environment. A target of achieving a score of at least 35 and with a minimum score of 7 in each of the five sections shall be set. This represents a high level of performance and a commitment to responsibly manage construction activities.

Environmental Management

- 7.3 It is expected that the principal contractor for the project shall also operate a third party certified Environmental Management System (EMS), demonstrating sound management and systematic control of environmental impacts.

Materials Optimisation and Waste

- 7.4 A pre-demolition audit shall be undertaken to establish the potential for reuse of materials for on-site applications or salvaging for reuse/recycling off-site.
- 7.5 The Site Waste Management Plan (SWMP) will detail the design measures towards optimum use of materials, set specific targets for construction and demolition waste generation and appropriate mechanisms/protocols for segregating waste on-site and monitoring overall waste management.
- 7.6 The development will aim for more than 95% by tonnage of demolition and construction waste to be diverted from landfill as per minimum.

Pollution Prevention

Pollution Prevention Guidelines

- 7.7 The Environment Agency's (EA) Pollution Prevention Guidelines (PPG) shall be followed as appropriate to minimise pollution risks from construction activities; works will also be in line with the Environment Agency's Building a better environment, A guide for developers (2006) guidance.

Air Pollution

7.8 Best practice methods for minimising the formation of dust and emissions from construction activities shall be implemented, as appropriate to the specific site and proposed activities. Control measures may include:

- Appropriate site layout;
- Solid screens/barriers or other physical boundaries around dust/emission generating activities;
- Good site maintenance and regular inspections for liquid spillages; and
- Sealed storage for cement, sand and fine aggregates.

7.9 In addition to the above, the contractor shall comply with the BRE Code of Practice to control dust from construction and demolition activities.

Water Pollution

7.10 Appropriate measures shall be implemented to minimise risks of watercourse and underground water pollution, in line with EA's PPG 5 Works in, near or liable to affect watercourses and the Guide for developers Building a better environment, as stated above. Relevant guidance within the London Plan's SPGs shall also be followed as appropriate. Specific measures shall be outlined in the contractor's CEMP.

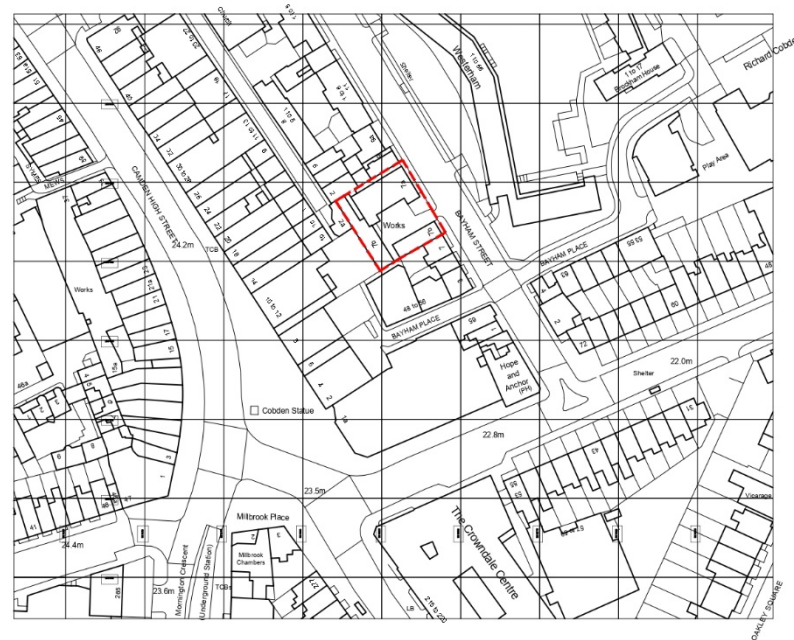
8. Summary

- 8.1 This Sustainability Statement provides an overview as to how the proposed scheme contributes to sustainable development in the context of the strategic, design and construction considerations.
- 8.2 Sustainability is a broad concept and covers a range of environmental, social and economic considerations. A review of Camden Council's planning policies has identified a number of requirements relating to sustainable development. Of these, Local Plan policies G1 (*Delivery and Location of Growth*), D1 (*Design*), CC1 (*Climate Change Mitigation*), CC2 (*Adapting to Climate Change*) and DM1 (*Delivery and Monitoring*) are considered most pertinent. Consideration has also been given to the National and London planning policy framework.
- 8.3 Development proposals include a Section 73 Variation to the planning consent for "*Full Planning Application for the demolition of existing buildings (B1a Use Class) and erection of a part 3, part 4, part 5 storey building (with two basement levels), comprising co-working office floorspace (B1a Use Class), hotel accommodation (C1 Use Class) and an ancillary café/bar and fitness facilities; works to the existing access and associated works.*"
- 8.4 At a strategic level, the development of commercial uses will provide employment for local people, improve the local economy, increase the wealth and lifestyle of employed individuals and contribute to local business rates. Furthermore, demand for hotel accommodation is likely to increase in line with the direction of historical trends. The development is considered to be beneficial to the local community and aligned with socio-economic requirements.
- 8.5 A range of sustainable design and construction features are proposed including:
- Incorporation of Air Source Heat Pumps (ASHPs);
 - Water saving sanitary fittings and appliances to deliver a water efficient development;
 - The use of materials with a low lifecycle environmental impact and embodied energy;
 - Efficient construction and operational waste management;
- 8.6 It is proposed to assess the scheme against BREEAM with a target rating of "Excellent" for both the hotel and offices.
- 8.7 Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority.

Appendices

A. Site Plans

Copyright: All rights reserved. This drawing must not be reproduced without permission. Only the original drawing should be relied upon. Contractors, subcontractors and suppliers must verify all dimensions on site before commencing any work or making any shop drawings. All shop drawings to be submitted to the architect / interior designer for comment prior to fabrication. This drawing is to be read in conjunction with the architect's / interior designer's specification, bills of quantities / schedules, structural, mechanical & electrical drawings and all discrepancies are to be reported to the architect / interior designer. Do not scale from this drawing. Dimensions are in millimetres unless otherwise stated.



--- Site Boundary

NOTES

Location Plan
scale 1:1250

**dexter
moren
associates**
architecture urban design
interior design creative media
www.dextermoren.com

57d
jamestown road
london nw1 7db
UK
t: 020 7267 4440

architecture

F0 Issued for Pre-application
rev amendments

14.08.20 SQ PW
date by chk

project
Bayham Street
London, NW1 0EY

drawing title
Site Location Plan

scale
1:1250 @ A3
NTS @ A4

date
14.08.20

drawn by
PW

client
Camden Lifestyle (UK) Ltd

drawing status
Pre-Application

job no.
1783

drawing no.
A 000 001

revision
F0

B. Key Local Planning Policy Requirements

London Planning Policy Framework

Key London Plan planning policy is detailed below:

The London Plan as Altered (2016)

The London Plan is the overall strategic plan for London. Chapter five details London's Response to Climate Change and includes a number of policies that set the overarching principles for reducing carbon emissions in the built environment:

Policy 5.2 – Minimising Carbon Dioxide Emissions

Planning Decisions

- A) Development proposals should make the fullest contribution to minimising carbon dioxide emissions in accordance with the following energy hierarchy:
- 1) Be lean: use less energy;
 - 2) Be clean: supply energy efficiently;
 - 3) Be green: use renewable energy.
- B) The Mayor will work with boroughs and developers to ensure that major developments meet the following targets for carbon dioxide emissions reduction in buildings. These targets are expressed as minimum improvements over the Target Emission Rate (TER) outlined in the national Building Regulations leading to zero carbon residential buildings from 2016 and zero carbon non-domestic buildings from 2019.

Residential Buildings:

Year	Improvement in 2010 Building Regs
2010-2013	25% (Code Level 4)
2013-2016	40%
2016-2031	Zero Carbon

Non-Residential Buildings:

Year	Improvement in 2010 Building Regs
2010-2013	25%
2013-2016	40%
2016-2019	As per building regulations requirements
2019-2031	Zero Carbon

- C) Major development proposals should include a detailed energy assessment to demonstrate how the targets for carbon dioxide emission reduction outlined above are to be met within the framework of the energy hierarchy.
- D) As a minimum, energy assessments should include the following details:
- a) Calculations of the energy demand and carbon dioxide emissions covered by the Building Regulations and, separately, the energy demand and carbon dioxide emissions from any other part of the development, including

plant or equipment, that are not covered by the Building Regulations (see paragraph 5.22) at each stage of the hierarchy;

- b) Proposals to reduce carbon dioxide emissions through the energy efficient design of the site, buildings and services;
- c) Proposals to reduce carbon dioxide emissions through the use of decentralised energy where feasible, such as district heating and cooling and combined heat and power (CHP);
- d) Proposals to further reduce carbon dioxide emissions through the use of on-site renewable energy technologies.

The carbon dioxide reduction targets should be met on-site. Where it is clearly demonstrated that the specific targets cannot be fully achieved on-site, any shortfall may be provided off-site or through a cash in lieu contribution to the relevant borough to be ring fenced to secure delivery of carbon dioxide savings elsewhere.

Policy 5.3 – Sustainable Design & Construction

Strategic

- A) The highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments and to adapt to the effects of climate change over their lifetime.

Planning Decisions

- B) Development proposals should demonstrate that sustainable design standards are integral to the proposals, including its construction and operation, and ensure that they are considered at the beginning of the design process.
- C) Major development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance and this should be clearly demonstrated within a design and access statement. The standards include measures to achieve other policies in this Plan and the following sustainable design principles apply:
 - a) Minimising carbon dioxide emissions across the site, including the building and services (such as heating and cooling systems);
 - b) Avoiding internal overheating and contributing to the urban heat island effect;
 - c) Efficient use of natural resources (including water), including making the most of natural systems both within and around buildings;
 - d) Minimising pollution (including noise, air and urban run-off);
 - e) Minimising the generation of waste and maximising reuse or recycling;
 - f) Avoiding impacts from natural hazards (including flooding);
 - g) Ensuring developments are comfortable and secure for users, including avoiding the creation of adverse local climatic conditions;
 - h) Securing sustainable procurement of materials, using local supplies where feasible; and
 - i) Promoting and protecting biodiversity and green infrastructure.

Within LDFs boroughs should consider the need to develop more detailed policies and proposals based on the sustainable design principles outlined above and those which are outlined in the Mayor's supplementary planning guidance that are specific to their local circumstances.

Policy 5.5 – Decentralised Energy Networks

Strategic

- A) The Mayor expects 25 per cent of the heat and power used in London to be generated through the use of localised decentralised energy systems by 2025. In order to achieve this target the Mayor prioritises the development of decentralised heating and cooling networks at the development and area wide levels, including larger scale heat transmission networks.

LDF Preparation

- B) Within LDFs boroughs should develop policies and proposals to identify and establish decentralised energy network opportunities. Boroughs may choose to develop this as a supplementary planning document and work jointly with neighbouring boroughs to realise wider decentralised energy network opportunities. As a minimum, boroughs should:
- a) Identify and safeguard existing heating and cooling networks;
 - b) Identify opportunities for expanding existing networks and establishing new networks. Boroughs should use the London Heat Map tool and consider any new developments, planned major infrastructure works and energy supply opportunities which may arise;
 - c) Develop energy master plans for specific decentralised energy opportunities which identify;
 - Major heat loads (including anchor heat loads, with particular reference to sites such as universities, hospitals and social housing);
 - Major heat supply plant;
 - Possible opportunities to utilise energy from waste;
 - Possible heating and cooling network routes;
 - Implementation options for delivering feasible projects, considering issues of procurement, funding and risk in the role of the public sector.

Require developers to prioritise connection to existing or planned decentralised energy networks where feasible.

Policy 5.6 – Decentralised Energy in Development Proposals

Planning Decisions

- A) Development proposals should evaluate the feasibility of Combined Heat and Power (CHP) systems, and where a new CHP system is appropriate also examine opportunities to extend the system beyond the site boundary to adjacent sites.
- B) Major development proposals should select energy systems in accordance with the following hierarchy:
- 1) Connection to existing heating or cooling networks;
 - 2) Site wide CHP network;
 - 3) Communal heating and cooling.

Potential opportunities to meet the first priority in this hierarchy are outlined in the London Heat Map tool. Where future network opportunities are identified, proposals should be designed to connect to these networks.

Policy 5.7 – Renewable Energy

Strategic

- A) The Mayor seeks to increase the proportion of energy generated from renewable sources, and expects that the projections for installed renewable energy capacity outlined in the Climate Change Mitigation and Energy Strategy and in supplementary planning guidance will be achieved in London.

Planning Decisions

- B) Within the framework of the energy hierarchy (see Policy 5.2), major development proposals should provide a reduction in expected carbon dioxide through the use of on-site renewable energy generation, where feasible.

LDF Preparation

- C) Within LDFs boroughs should, and other agencies may wish to develop more detailed policies and proposals to support the development of renewable energy in London – in particular, to identify broad areas where specific renewable energy technologies, including large scale systems and the large scale deployment of small scale systems, are appropriate. The identification of areas should be consistent with any guidelines and criteria outlined by the Mayor.

All renewable energy systems should be located and designed to minimise any potential adverse impacts on biodiversity, the natural environment and historical assets, and to avoid any adverse impacts on air quality.

Policy 5.9 – Overheating and Cooling

Strategic

- A) The Mayor seeks to reduce the impact of the urban heat island effect in London and encourages the design of places and spaces to avoid overheating and excessive heat generation, and to reduce overheating due to the impacts of climate change and the urban heat island effect on an area wide basis.

Planning Decisions

- B) Major development proposals should reduce potential overheating and reliance on air conditioning systems and demonstrate this is in accordance with the following cooling hierarchy:
- 1) Minimise internal heat generation through energy efficient design;
 - 2) Reduce the amount of heat entering a building in summer through orientation, shading, albedo, fenestration, insulation and green roofs and walls;
 - 3) Manage the heat within the building through exposed internal thermal mass and high ceilings;
 - 4) Passive ventilation;
 - 5) Mechanical ventilation;
 - 6) Active cooling.
- C) Major development proposals should demonstrate how the design, materials, construction and operation of the development would minimise overheating and also meet its cooling needs. New development in London should also be designed to avoid the need for energy intensive air conditioning systems as much as possible. Further details and guidance regarding overheating and cooling are outlined in the London Climate Change Adaptation Strategy.

LDF Preparations

Within LDFs boroughs should develop more detailed policies and proposals to support the avoidance of overheating and to support the cooling hierarchy.

Policy 5.10 – Urban Greening

Strategic

- A) The Mayor will promote and support urban greening, such as new planting in the public realm (including streets, squares and plazas) and multifunctional green infrastructure, to contribute to the adaptation to, and reduction of, the effects of climate change.
- B) The Mayor seeks to increase the amount of surface area greened in the Central Activities Zone by at least five per cent by 2030, and a further five per cent by 2050.

Planning Decisions

- C) Development proposals should integrate green infrastructure from the beginning of the design process to contribute to urban greening, including the public realm. Elements that can contribute to this include tree planting, green roofs and walls, and soft landscaping. Major development proposals within the Central Activities Zone should demonstrate how green infrastructure has been incorporated.

LDF Preparation

- D) Boroughs should identify areas where urban greening and green infrastructure can make a particular contribution to mitigating the effects of climate change, such as the urban heat island.

Policy 5.11 – Green Roof and Development Site Environs

Planning Decisions

- A) Major development proposals should be designed to include roof, wall and site planting, especially green roofs and walls where feasible, to deliver as many of the following objectives as possible:
 - a) adaptation to climate change (i.e. aiding cooling);
 - b) sustainable urban drainage;
 - c) mitigation of climate change (i.e. aiding energy efficiency);
 - d) enhancement of biodiversity;
 - e) accessible roof space;
 - f) improvements to appearance and resilience of the building;
 - g) growing food.

LDF Preparation

- B) Within LDFs boroughs may wish to develop more detailed policies and proposals to support the development of green roofs and the greening of development sites. Boroughs should also promote the use of green roofs in smaller developments, renovations and extensions where feasible.

Policy 5.12 – Flood Risk Management

Strategic

- A) The Mayor will work with all relevant agencies including the Environment Agency to address current and future flood issues and minimise risks in a sustainable and cost effective way.

Planning Decisions

- B) Development proposals must comply with the flood risk assessment and management requirements set out in the NPPF and the associated technical Guidance on flood risk¹ over the lifetime of the development and have regard to measures proposed in Thames Estuary 2100 (TE2100 – see paragraph 5.55) and Catchment Flood Management Plans.
- C) Developments which are required to pass the Exceptions Test set out in the NPPF and the Technical Guidance will need to address flood resilient design and emergency planning by demonstrating that:
- a) the development will remain safe and operational under flood conditions;
 - b) a strategy of either safe evacuation and/or safely remaining in the building is followed under flood conditions
 - c) key services including electricity, water etc will continue to be provided under flood conditions
 - d) buildings are designed for quick recovery following a flood.
- D) Development adjacent to flood defences will be required to protect the integrity of existing flood defences and wherever possible should aim to be set back from the banks of watercourses and those defences to allow their management, maintenance and upgrading to be undertaken in a sustainable and cost effective way.

LDF Preparation

- E) In line with the NPPF and the Technical Guidance, boroughs should, when preparing LDFs, utilise Strategic Flood Risk Assessments to identify areas where particular flood risk issues exist and develop actions and policy approaches aimed at reducing these risks, particularly through redevelopment of sites at risk of flooding and identifying specific opportunities for flood risk management measures.

Policy 5.13 – Sustainable Drainage

Planning Design

- A) Development should utilise sustainable urban drainage systems (SUDS) unless there are practical reasons for not doing so, and should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible in line with the following drainage hierarchy:
- 1) store rainwater for later use;
 - 2) use infiltration techniques, such as porous surfaces in non-clay areas;
 - 3) attenuate rainwater in ponds or open water features for gradual release;
 - 4) attenuate rainwater by storing in tanks or sealed water features for gradual release
 - 5) discharge rainwater direct to a watercourse
 - 6) discharge rainwater to a surface water sewer/drain

- 7) discharge rainwater to the combined sewer.

Drainage should be designed and implemented in ways that deliver other policy objectives of this Plan, including water use efficiency and quality, biodiversity, amenity and recreation.

LDF Preparation

- B) Within LDFs boroughs should, in line with the Flood and Water Management Act 2010, utilise Surface Water Management Plans to identify areas where there are particular surface water management issues and develop actions and policy approaches aimed at reducing these risks.

Policy 5.15 – Water Use and Supplies

Strategic

- A) The Mayor will work in partnership with appropriate agencies within London and adjoining regional and local planning authorities to protect and conserve water supplies and resources in order to secure London's needs in a sustainable manner by:
- a) minimising use of mains water;
 - b) reaching cost-effective minimum leakage levels;
 - c) in conjunction with demand side measures, promoting the provision of additional sustainable water resources in a timely and efficient manner, reducing the water supply deficit and achieving security of supply in London;
 - d) minimising the amount of energy consumed in water supply
 - e) promoting the use of rainwater harvesting and using dual potable and grey water recycling systems, where they are energy and cost effective
 - f) maintaining and upgrading water supply infrastructure
 - g) ensuring the water supplied will not give rise to likely significant adverse effects to the environment particularly designated sites of European importance for nature conservation.

Planning Decisions

- B) Development should minimise the use of mains water by:
- a) incorporating water saving measures and equipment
 - b) designing residential development so that mains water consumption would meet a target of 105 litres or less per head per day
- C) New development for sustainable water supply infrastructure, which has been selected within water companies' Water Resource Management Plans, will be supported.

Policy 5.17 – Waste Capacity [extract]

Planning Decisions

- E) Suitable waste and recycling storage facilities are required in all new developments.

Local Planning Policy Framework

Camden Local Plan (June 2017)

The Local Plan was adopted by Council on 3 July 2017 and has replaced the Core Strategy and Camden Development Policies documents as the basis for planning decisions and future development in the borough. Policies relevant to this report are presented below:

Policy G1 Delivery and Location of Growth [extract]

The Council will create the conditions for growth to deliver the homes, jobs, infrastructure and facilities to meet Camden's identified needs and harness the benefits for those who live and work in the borough.

Delivery of Growth

The Council will deliver growth by securing high quality development and promoting the most efficient use of land and buildings in Camden by:

- a) Supporting development that makes best use of its site, taking into account quality of design, its surroundings, sustainability, amenity, heritage, transport accessibility and any other considerations relevant to the site;
- [...]

Policy D1 Design [extract]

The Council will seek to secure high quality design in development. The Council will require that development:

[...]

- c) Is sustainable in design and construction, incorporating best practice in resource management and climate change mitigation and adaptation; is of sustainable and durable construction and adaptable to different activities and land uses;
- [...]

Policy CC1 Climate Change Mitigation

The Council will require all development to minimise the effects of climate change and encourage all developments to meet the highest feasible environmental standards that are financially viable during construction and occupation.

We will:

- a) Promote zero carbon development and require all development to reduce carbon dioxide emissions through following the steps in the energy hierarchy;
- b) Require all major development to demonstrate how London Plan targets for carbon dioxide have been met;
- c) Ensure that the location of the development and mix of land uses minimise the need to travel by car and help to support decentralised energy networks;
- d) Support and encourage sensitive energy efficiency improvements to existing buildings;

- e) Require all proposals that involve substantial demolition to demonstrate that it is not possible to retain and improve the existing building; and
- f) Expect all developments to optimise resource efficiency.

For decentralised energy networks, we will promote decentralised energy by:

- g) Working with local organisations and developers to implement decentralised energy networks in the parts of Camden most likely to support them;
- h) Protecting existing decentralised energy networks (e.g. at Gower Street Bloomsbury, Kings Cross, Gospel Oak, and Somers Town) and safeguarding potential network routes; and
- i) Requiring all major developments to assess the feasibility of connecting to an existing decentralised energy network, or where this is not possible establishing a new network.

To ensure that the Council can monitor the effectiveness of renewable and low carbon technologies, major developments will be required to install appropriate monitoring equipment.

Policy CC2 Adapting to Climate Change

The Council will require development to be resilient to climate change.

All development should adopt appropriate climate change adaptation measures such as:

- a) The protection of existing green spaces and promoting new appropriate green infrastructure;
- b) Not increasing, and wherever possible reducing, surface water run-off through increasing permeable surfaces and use of Sustainable Drainage Systems;
- c) Incorporating bio-diverse roofs, combination green and blue roofs and green walls where appropriate; and
- d) Measures to reduce the impact of urban and dwelling overheating, including application of the cooling hierarchy.

Any development involving 5 or more residential units of 500sqm or more of any additional floorspace is required to demonstrate the above in a Sustainability Statement.

Sustainable Design and Construction Measures

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

- e) Ensuring development schemes demonstrate how adaptation measures and sustainable development principles have been incorporated into the design and proposed implementation;
- f) Encourage new build residential development to use the Home Quality Mark and Passivhaus design standards;
- g) Expecting developments (conversions / extensions) of 500sqm of residential floorspace or above or five or more dwellings to achieve “excellent” in BREEAM domestic refurbishment; and
- h) Expecting non-domestic developments of 500sqm of floorspace or above to achieve “excellent” in BREEAM assessments and encouraging zero carbon in new developments from 2019.

Policy DM1 Delivery and Monitoring [extract]

The Council will deliver the vision, objectives and policies of the Local Plan by:

[...]

d) Using planning contributions where appropriate to:

i. Support sustainable development;

C. BREEAM Pre-Assessment (Hotel)

Issue ID	Issue ID/ Description/Aim	Credit Requirements	Available Credits	Predicted Credits	Contingency Credits	Available Score	Predicted Score	Contingency Credits	RIBA Stage - Critical	Responsibilities/Comments
Man01	Project brief and design To recognise and encourage an integrated design process that optimises building performance.	Stakeholder Consultation (Project Delivery) (1 Credit) 1. Responsibilities Matrix 2. Project directory and project brief 3. Design and Access Statement 4. Key meeting minutes Stakeholder Consultation (third party) (1 Credit) 1. Copy of the consultation plan 2. Meeting Minutes/Consultation report summary 3. List of design changes as a result of consultation Sustainability Champion (design) (1 Credit) 1. BREEAM pre-assessment + any additional sustainability targets and requirements 2. Meeting minutes BREEAM AP demonstrating regular attendance to DTM (monthly) Sustainability Champion (Monitoring Process) (1 Credit)	4	4	0	2.29%	2.29%	0.00%	Early Action RIBA Stage 2	Responsibilities Client Project Manager Architect BREEAM AP Comments Early actions required Ensphere to provide letter template
Man02	Life cycle cost and service life planning To deliver whole life value by encouraging the use of life cycle costing to improve design, specification, through-life maintenance and operation, and through the dissemination of capital cost reporting promote economic sustainability.	Elemental Life Cycle Cost (LCC) (2 Credits) 1. A copy of Elemental Life Cycle Cost Report 2. List of design changes as a result of the LCC Component Level LCC Option Appraisal (1 Credit) 1. A copy of component Life Cycle Cost Report 2. List of design changes as a result of the LCC Capital Cost Reporting (1 Credit) 1. Predicted Capital Cost report	4	4	0	2.29%	2.29%	0.00%	Early Action RIBA Stage 2	Responsibilities Client Contractor Comments Early actions required
Man03	Responsible Construction Practices To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.	Pre-requisite 1. All specification containing timber products to have the relevant timber requirements Environmental Management (1 Credit) 1. Copy of EMS certificates from Principal contractor and completed PPG6 Sustainability Champion (construction) (1 Credit) 1. Appointment of AP for construction and a copy of agreed targets during construction Considerate Construction (Up to 2 credits) 1. A copy of Environmental Management Plan 2. Template of environment site inspection that will be used during construction Monitoring of Construction Site Impacts (1 Credit) 1. Commitment to monitor, record energy and water consumption Monitoring of Construction Site Impacts - Transport of construction materials & waste (1 Credit) 1. Target and commitment to monitor, record CO2e emissions associated with material and waste transport	6	6	0	3.43%	3.43%	0.00%		Responsibilities Contractor Comments Ensphere to provide letter templates
Man04	Commissioning and handover To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	Pre-Requisite 1. Commitment letter from client to produce two BUGs. Commissioning - Testing Schedule and Responsibilities (1 Credit) 1. Appointment letter for commissioning manager. Commissioning - Building Services (1 Credit) 1. Appointment letter for commissioning manager at RIBA stage 2/3. 2. Meeting minutes from commissioning manager showing input during design stage. Evidence the commissioning manager has the relevant qualification Testing and Inspecting Building Fabric (1 Credit) 1. Commitment letter from client to undertake thermographic survey and rectify any issues Handover (1 Credit) Commitment letter from client to undertake two BUGs and corresponding trainings	4	3	1	2.29%	1.71%	0.57%		Responsibilities Commissioning Manager M&E Client Comments Ensphere to provide letter templates Draft commissioning schedule is sufficient – or commissioning to be incorporated within the project programme.

Man05	Aftercare To provide post-handover aftercare to the building owner/occupants during the first year of occupation to ensure the building operates and adapts, where relevant, in accordance with the design intent and operational demands.	Aftercare Support (1 Credit) 1. Commitment letter from client to provide appropriate aftercare support Seasonal Commissioning (1 Credit) 1. Commitment letter from client to provide the following seasonal commissioning activities Post Occupancy Evaluation (1 Credit) 1. Commitment letter from client/building occupier to undertake POE	3	3	0	1.71%	1.71%	0.00%		Responsibilities Client Building Occupier Comments Ensphere to provide letter templates
Hea01	Visual comfort To ensure daylighting, artificial lighting and occupant controls are considered at the design stage to ensure best practice in visual performance and comfort for building occupants.	Glare Control (1 Credit) 1. Copy of the glare strategy covering areas deemed at risk and measures to minimise/avoid glare. Daylighting (building type dependent) (1 credit) 1. Report from specialist confirming the targeted daylight ratio View Out (1 Credit) 1. Drawings confirming view out calculations. Internal Lighting, External Lighting and Zoning and Occupant Control (1 Credit) 1. Internal lighting strategy and modelling demonstrating compliance with the different standards 1. Light fittings schedule 2. Product datasheet confirming luminance of light fittings install 1. Zoning and control strategy - drawing showing it	4	2	0	3.33%	1.67%	0.00%		Responsibilities Daylight Consultant Architect M&E Comments Ensphere to provide letter template Daylighting unlikely to be achieved due to location in basement.
Hea02	Indoor air quality To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.	Indoor Air Quality (IAQ) plan (1 Credit) 1. Indoor Air Quality Plan Ventilation (1 Credit) 1. Drawings confirming calculations Emissions from Construction Products (Up to 2 Credits) 1. Relevant specifications Post-construction Indoor Air Quality Measurement (1 Credit) 1. Commitment letter from client to undertake post-construction air quality test	5	1	1	4.17%	0.83%	0.83%	Early Action RIBA Stage 2	Responsibilities Air Quality Consultant M&E Architect Contractor Comments Ensphere to provide letter template
Hea03	Safe containment in laboratories To recognise and encourage a healthy internal environment through the safe containment and removal of pollutants.	NA	0	0	0	0.00%	0.00%	0.00%		
Hea04	Thermal comfort To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.	Thermal Modelling (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis Adaptability - for a projected climate change scenario (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis Thermal Zoning and Controls (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis	3	3	0	2.50%	2.50%	0.00%		Responsibilities M&E Comments The openable window area is the geometric free ventilation area created when the window is open, and not the glazed part of the window that is openable.
Hea05	Acoustic performance To ensure the building's acoustic performance including sound insulation meet the appropriate standards for its purpose.	Acoustic Performance (Up to 4 Credits) 1. Acoustic report	4	3	1	3.33%	2.50%	0.83%		Responsibilities Acoustician
Hea06	Safety and Security To recognise and encourage effective measures that promote safe and secure use and access to and from the building.	Safe Access (1 Credit) 1. Construction drawings showing cycle and pedestrian paths Security of Site and Building (1 Credit) 1. Meeting minutes with SQSS 2. Drawings, technical memos showing that the recommendations have been incorporated	2	2	0	1.67%	1.67%	0.00%	Early Action RIBA Stage 2	Responsibilities Security Specialist Architect Comments Early actions required
Ene 01	Reduction of energy use and carbon emissions To recognise and encourage buildings designed to minimise operational energy demand, primary energy consumption and CO2 emissions.	Energy Performance (Up to 12 Credits) 1. RIBA stage 4 BRUKL 2. Energy statement	12	8	1	8.18%	5.45%	0.68%	Early Action RIBA Stage 2	Responsibilities Energy Specialist Comments Early actions required

Ene02	Energy monitoring To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.	Sub-metering of Major Energy Consuming Systems (1 Credit) 1. Schematics showing metering of space heating, cooling, ventilation, lighting, small power etc. 2. Table Ene 02 filled out Sub-metering of High Energy Load and Tenancy Areas (1 Credit) 1. Schematics showing metering of space heating, cooling, ventilation, lighting, small power etc. 2. Table Ene 02 filled out	1	1	0	0.68%	0.68%	0.00%		Responsibilities M&E Comments
Ene03	External lighting To recognise and encourage the specification of energy efficient light fittings for external areas of the development.	External Lighting (1 Credit) 1. Product datasheet confirming that the product specified achieves 70 luminaire lumens per circuit Watt 2. Specification confirming control (e.g. daylight, movement etc..) installed for external lighting	1	1	0	0.68%	0.68%	0.00%		Responsibilities M&E
Ene04	Low carbon design To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.	Passive Design Analysis (PDA) (1 Credit) 1. Passive design analysis (PDA) 2. Thermal modelling and BRUKL with passive design measures 3. Evidence that a suitably qualified energy specialist has quantified the CO2e reduction Free Cooling (1 Credit) 1. Passive design analysis with cooling analysis 2. Evidence for suitably qualified energy specialist 3. Dynamic simulation model demonstrating that the cooling demand can be met by free cooling Low and Zero Carbon Technologies (1 Credit) 1. LZC analysis and BRUKL Report 2. Evidence for suitably qualified energy specialist	3	1	2	2.05%	0.68%	1.36%	Early Action RIBA Stage 2	Responsibilities M&E Comments Early actions required
Ene05	Energy efficient cold storage To recognise and encourage the installation of energy efficient refrigeration systems, therefore reducing operational greenhouse gas emissions resulting from the system's energy use.	Refrigeration Energy Consumption (1 Credit) 1. Product data sheets for the refrigeration system 2. Written commitment that Commissioning of the refrigeration system will take place Indirect Greenhouse Gas Emissions (1 Credit) 1. Demonstration of savings in indirect greenhouse gas emissions	0	0	0	0.00%	0.00%	0.00%		Responsibilities M&E
Ene06	Energy efficient transportation systems To recognise and encourage the specification of energy efficient transportation systems.	Energy Consumption (1 Credit) 1. Lift analysis that meet BREEAM requirements Energy Efficient Features (2 Credits) 1. Lift specification with corresponding datasheet that confirm the requirements are met	3	3	0	2.05%	2.05%	0.00%		Responsibilities Lift Consultant
Ene07	Energy efficient laboratory systems To recognise and encourage laboratory areas that are designed to be energy efficient and minimise the CO2 emissions associated with their operational energy consumption.	Design Specification (1 Credit) 1. Minutes of meetings to confirm consultation with relevant stakeholders 2. Project brief that includes laboratory performance criteria Best Practice Energy Efficient Features (Up to 4 Credits) 1. Energy Demand Assessment 2. Laboratory system specification and drawings	0	0	0	0.00%	0.00%	0.00%		Responsibilities M&E
Ene08	Energy efficient equipment To recognise and encourage procurement of energy efficient equipment to ensure optimum performance and energy savings in operation.	Energy Efficient Equipment (2 Credits) 1. Fill in energy 08 table 2. Specification confirming targeted requirements.	2	2	0	1.36%	1.36%	0.00%		Responsibilities M&E Comments Ensphere to issue main table
Ene09	Drying space To provide a reduced energy means of drying clothes.	Provision of Suitable Internal/External Drying Space (1 Credit) 1. Construction drawings showing drying areas	0	0	0	0.00%	0.00%	0.00%		Responsibilities Architect
Tra01	Public transport accessibility To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion.	Accessibility Index (Up to 5 Credits) 1. Accessibility Index 2. Completed Tra01 calculator	5	5	0	4.09%	4.09%	0.00%		Responsibilities BREEAM Assessor Comments
Tra02	Proximity to amenities To encourage and reward a building location that facilitates easy access to local services and so reduces the environmental, social and economic impacts resulting from multiple or extended building user journeys, including transport-related emissions and traffic congestion.	Proximity of amenities (1 Credit) 1. Completed Transport 2 Amenities report detailing accessibility and proximity to site.	1	1	0	0.82%	0.82%	0.00%		Responsibilities BREEAM Assessor

Tra04	Maximum car parking capacity To encourage the use of alternative means of transport other than the private car to and from the building, thereby helping to reduce transport-related emissions and traffic congestion associated with the building's operation.	Car Parking Capacity (Up to 2 Credits) 1. Drawings confirming the number of car parking spaces	2	2	0	1.93%	1.93%	0.00%		Responsibilities Architect
Tra05	Travel plan To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of reliance on forms of travel that have the highest environmental impact.	Travel Plan (1 Credit) 1. A travel plan has been drafted including a site specific travel assessment	1	1	0	1.06%	1.06%	0.00%		Responsibilities Transport Consultant Comments
Wat01	Water consumption To reduce the consumption of potable water for sanitary use in new buildings from all sources through the use of water efficient components and water recycling systems.	Water Consumption (Up to 5 Credits) 1. Water 01 Calculator 2. Specifications 3. Product data sheet confirming flow rates	5	3	2	3.89%	2.33%	1.56%		Responsibilities BREEAM Assessor Architect
Wat02	Water monitoring To ensure water consumption can be monitored and managed, and therefore encourage reductions.	Water Monitoring (1 Credit) 1. Schematics showing sub metering 2. Specification and corresponding product datasheet of the product 3. Specification highlighting connection to BMS or ability to be connected	1	1	0	0.78%	0.78%	0.00%		Responsibilities M&E
Wat03	Water leak detection To reduce the impact of water leaks that may otherwise go undetected.	Leak Detection System (1 Credit) 1. Specification detailing leak detection system 2. Product datasheet for the leak detection system Flow Control Devices (1 Credit) 1. Mechanical Specification 2. Drawings to show the location if the flow control systems	2	2	0	1.56%	1.56%	0.00%		Responsibilities M&E
Wat04	Water efficient equipment To reduce unregulated water consumption by encouraging specification of water efficient equipment.	Unregulated Water Demand (1 Credit) 1. Letter template	1	0	1	0.78%	0.00%	0.78%		Responsibilities Contractor Comments Ensphere to provide a letter template
Mat01	Life cycle impacts To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building.	Life Cycle Impacts (Up to 6 Credits) 1. Specifications including Green Guide Ratings 2. Completion of BREEAM Mat 01 calculator	6	4	1	5.79%	3.86%	0.96%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer LCA modeller BREEAM Assessor Comments Early actions required Ensphere to issue spreadsheet template.
Mat02	Hard landscaping and boundary protection To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking into account of the full life cycle of materials used.	Hard landscaping (1 Credit) 1. Specification of materials 2. Drawings for hard landscaping	1	0	1	0.96%	0.00%	0.96%		Responsibilities Architect Structural Engineer Building Services Comments Ensphere to issue spreadsheet template.

Mat03	Responsible sourcing of materials To recognise and encourage the specification and procurement of responsibly sourced materials for key building elements.	Pre-requisite 1. All relevant specification susceptible to contain timber products to have the relevant timber requirements. Sustainable Procurement Plan (1 Credit) 1. Procurement plan in place by RIBA stage 2 Responsible Sourcing of materials (Up to 3 Credits) 2. Responsible Sourcing of materials	4	2	1	3.86%	1.93%	0.96%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required Ensphere to issue spreadsheet template once Mat01 credit is fully secured.
Mat04	Insulation Recognising and encouraging the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties	Embodied Impact (1 Credit) 1. Specifications 2. Mat04 calculator	1	1	0	0.96%	0.96%	0.00%		Responsibilities Architect Structural Engineer Building Services BREEAM Assessor Comments Ensphere to issue spreadsheet template.
Mat05	Designing for durability and resilience Increasing the lifespan of the building through designing for durability and protection from degradation and specifying appropriate construction products.	Protecting Vulnerable Parts of the Building from Damage (0.5 Credit) 1. Marked up drawings Protecting Exposed Parts of the Building from Material Degradation (0.5 Credit) 1. Completed Mat 05 spreadsheet and supporting drawings	1	1	0	0.96%	0.96%	0.00%		Responsibilities Architect Comments Ensphere to issue spreadsheet template.
Mat 06	Material efficiency To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste.	Material Efficiency (1 Credit) 1. Material efficiency technical memo/report (must include quantities of materials saved)	1	0	1	0.96%	0.00%	0.96%	Early Action RIBA Stage 1/2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
Wst01	Construction waste management To promote resource efficiency via the effective management and reduction of construction waste.	Construction Resource Efficiency (Up to 3 Credits) 1. Site Waste Management Plan 2. Pre-demolition Audit Diversion of Resources from Landfill (1 Credit) 1. Site Waste Management Plan	4	2	2	4.25%	2.13%	2.13%	Early Action RIBA Stage 2	Responsibilities Waste Consultant Contractor Comments Early actions required Potential gain if no more than 7.5m3 or 6.5 tonnes of waste produced. Pre-demo audit will be required too.
Wst02	Recycled aggregates To recognise and encourage the use of recycled and secondary aggregates, thereby reducing the demand for virgin material and optimising material efficiency in construction.	Recycled Aggregate (1 Credit) 1. Recycled content calculator 2. Specification 3. Letter of commitment from Contractor	1	0	1	1.06%	0.00%	1.06%		Responsibilities Structural Engineer Contractor
Wst03	Operational Waste To recognise and encourage the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that this waste is diverted from landfill or incineration.	Construction Resource Efficiency (1 Credit) 1. Drawings/Specifications to demonstrate the location of the operational waste facility 2. Confirmation for the likely waste streams for the site.	1	1	0	1.06%	1.06%	0.00%		Responsibilities Architect Waste Consultant
Wst04	Speculative Finishes (Offices only) To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials.	Speculative Floor and Ceiling Finishes (1 Credit) 1. Drawings showing that floor and ceiling finishes have been installed in a show area only.	0	0	0	0.00%	0.00%	0.00%		Responsibilities Architect

Wst05	Adaptation to Climate Change To recognise and encourage measures taken to mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building.	Resilience of Structure, Fabric, Building Services and Renewables Installation (1 Credit) 1. Climate Change Adaptation Strategy 2. Appraisal or Structural and fabric resilience 3. Systematic risk assessment	1	1	0	1.06%	1.06%	0.00%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
Wst06	Functional adaptability To recognise and encourage measures taken to accommodate future changes of use of the building over its lifespan.	Functional Adaptability (1 Credit) 1. Building-specific functional adaption strategy providing recommendations 2. Functional adaption measures have been adopted	1	1	0	1.06%	1.06%	0.00%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
LE01	Site selection To encourage the use of previously occupied and/or contaminated land and avoid land which has not been previously disturbed.	Previously Occupied Land (1 Credit) 1. Photograph/Exiting site plan of the site or Design and Access Statement describing the previous use Contaminated Land (1 Credit) 1. Contaminated site investigation and risk assessment/report 2. Commitment letter from the contractor that the remediation strategy will be implemented	2	1	1	2.00%	1.00%	1.00%		Responsibilities Client Contractor Contaminated land consultant
LE02	Ecological value of site and protection of ecological features To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.	Ecological Value of Site (1 Credit) 1. Completed BREEAM checklist OR 2. Appointment of Suitably Qualified Ecologist (SQE) Protection of Ecological Features (1 Credit) 1. Letter confirming protection of existing ecology as per BS42020:2013	2	2	0	2.00%	2.00%	0.00%	Early Action RIBA Stage 1	Responsibilities Ecologist Selected team member Comments Early actions required Ensphere to issue letter template.
LE03	Minimising impact on existing site ecology To minimise the impact of a building development on existing site ecology.	Change in Ecological Value (2 Credits) 1. Completed Le03/Le04 calculator by the SQE	2	2	0	2.00%	2.00%	0.00%	Early Action RIBA Stage 1	Responsibilities Ecologist Selected team member Comments Early actions required
LE04	Enhancing site ecology To encourage actions taken to enhance the ecological value of the site as a result of development.	Ecologist's report and recommendations (1 Credit) 1. Ecology Report Increase in Ecological Value (1 Credit) 1. Confirmation that the project team have implemented local ecological solutions and measures to enhance the site	2	1	1	2.00%	1.00%	1.00%		Responsibilities Ecologist Selected team member
LE05	Long term ecology management and maintenance To minimise the long term impact of the development on the site and the surrounding area's biodiversity.	Long term impact on biodiversity (2 Credits) 1. Ecology report 2. Confirmation of additional measures 3. Confirm Ecology and Biodiversity section in Building User Guide 4. Landscape and Ecology Plan	2	2	0	2.00%	2.00%	0.00%		Responsibilities Ecologist Selected team member Client
Pol01	Impact of refrigerants To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.	No refrigerant use (3 Credits) 1. Letter stating no use of refrigerants Pre-requisite 1. Specification and/or manufacturer's literature to confirm compliance with BS EN 378:2008 Impact of Refrigerants (Up to 2 Credits) 1. Specification and/or manufacturer's literature to confirm the design/type of system to be installed 2. Drawings to show the positioning of the units Leak Detection (1 Credit) 1. Specification and/or manufacturer's literature to confirm the design/type of system to be installed 2. Drawings to show the positioning of the units	3	1	0	2.31%	0.77%	0.00%		Responsibilities M&E
Pol02	Nox emissions To contribute to a reduction in national NOx emission levels through the use of low emission heat sources in the building.	NOx emission level (Up to 3 Credits) 1. Specification and/or manufacturer's literature showing the NOx emission levels for heating and hot water.	3	0	3	2.31%	0.00%	2.31%		Responsibilities M&E

Pol03	Surface water run-off To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on and off-site, watercourse pollution and other environmental damage.	Flood Resilience (Up to 2 Credits) 1. Site Specific Flood Risk Assessment Surface Water Run-off (2 Credits) 1. Calculations and Drainage Plan Minimising Water Course Pollution (1 Credit) 1. Drainage Plan	5	4	1	3.85%	3.08%	0.77%	Responsibilities Flood Risk Consultant Drainage Engineer Comments Where the man-made impermeable area draining to the watercourse has decreased or remains unchanged post development, the credits will be met by default.
Pol04	Reduction of night time light pollution To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.	Night Time Light Pollution (1 Credit) 1. Completed letter template 2. Drawings to show the location of the external lighting, time switches and photo-cells	1	1	0	0.77%	0.77%	0.00%	Responsibilities M&E Comments Ensphere to issue spreadsheet template.
Pol05	Reduction of noise pollution To reduce the likelihood of noise arising from fixed installations on the new development affecting nearby noise-sensitive buildings.	Reduction of Noise Pollution (1 Credit) 1. Noise Impact Assessment	1	1	0	0.77%	0.77%	0.00%	Responsibilities Acoustician
Inn01	Innovation To support innovation within the construction industry through the recognition of sustainability related benefits which are not rewarded by standard BREEM issues.	Up to 10 Credits 1. CCS score 40 plus (1 Credit) 2. Mat01 Exemplary (1 Credit)	10	1	1	10.00%	1.00%	1.00%	Man 05 - Aftercare commitment for 3 years
Total							73.48%	19.74%	

D. BREEAM Pre-Assessment (Office)

Issue ID	Issue ID/Description/Aim	Credit Requirements	Available Credits	Predicted Credits	Contingency Credits	Available Score	Predicted Score	Contingency Credits	RIBA Stage - Critical	Responsibilities/Comments
Man01	Project brief and design To recognise and encourage an integrated design process that optimises building performance.	Stakeholder Consultation (Project Delivery) (1 Credit) 1. Responsibilities Matrix 2. Project directory and project brief 3. Design and Access Statement 4. Key meeting minutes Stakeholder Consultation (third party) (1 Credit) 1. Copy of the consultation plan 2. Meeting Minutes/Consultation report summary 3. List of design changes as a result of consultation Sustainability Champion (design) (1 Credit) 1. BREEAM pre-assessment + any additional sustainability targets and requirements 2. Meeting minutes BREEAM AP demonstrating regular attendance to DTM (monthly) Sustainability Champion (Monitoring Process) (1 Credit)	4	4	0	2.29%	2.29%	0.00%	Early Action RIBA Stage 2	Responsibilities Client Project Manager Architect BREEAM AP Comments Early actions required Ensphere to provide letter template
Man02	Life cycle cost and service life planning To deliver whole life value by encouraging the use of life cycle costing to improve design, specification, through-life maintenance and operation, and through the dissemination of capital cost reporting promote economic sustainability.	Elemental Life Cycle Cost (LCC) (2 Credits) 1. A copy of Elemental Life Cycle Cost Report 2. List of design changes as a result of the LCC Component Level LCC Option Appraisal (1 Credit) 1. A copy of component Life Cycle Cost Report 2. List of design changes as a result of the LCC Capital Cost Reporting (1 Credit) 1. Predicted Capital Cost report	4	4	0	2.29%	2.29%	0.00%	Early Action RIBA Stage 2	Responsibilities Client Contractor Comments Early actions required
Man03	Responsible Construction Practices To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.	Pre-requisite 1. All specification containing timber products to have the relevant timber requirements Environmental Management (1 Credit) 1. Copy of EMS certificates from Principal contractor and completed PPG6 Sustainability Champion (construction) (1 Credit) 1. Appointment of AP for construction and a copy of agreed targets during construction Considerate Construction (Up to 2 credits) 1. A copy of Environmental Management Plan 2. Template of environment site inspection that will be used during construction Monitoring of Construction Site Impacts (1 Credit) 1. Commitment to monitor, record energy and water consumption Monitoring of Construction Site Impacts - Transport of construction materials & waste (1 Credit) 1. Target and commitment to monitor, record CO2e emissions associated with material and waste transport	6	6	0	3.43%	3.43%	0.00%		Responsibilities Contractor Comments Ensphere to provide letter templates
Man04	Commissioning and handover To encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.	Pre-Requisite 1. Commitment letter from client to produce two BUGs. Commissioning - Testing Schedule and Responsibilities (1 Credit) 1. Appointment letter for commissioning manager. Commissioning - Building Services (1 Credit) 1. Appointment letter for commissioning manager at RIBA stage 2/3. 2. Meeting minutes from commissioning manager showing input during design stage. Evidence the commissioning manager has the relevant qualification Testing and Inspecting Building Fabric (1 Credit) 1. Commitment letter from client to undertake thermographic survey and rectify any issues Handover (1 Credit) Commitment letter from client to undertake two BUGs and corresponding trainings	4	3	1	2.29%	1.71%	0.57%		Responsibilities Commissioning Manager M&E Client Comments Ensphere to provide letter templates Draft commissioning schedule is sufficient – or commissioning to be incorporated within the project programme.

Man05	Aftercare To provide post-handover aftercare to the building owner/occupants during the first year of occupation to ensure the building operates and adapts, where relevant, in accordance with the design intent and operational demands.	Aftercare Support (1 Credit) 1. Commitment letter from client to provide appropriate aftercare support Seasonal Commissioning (1 Credit) 1. Commitment letter from client to provide the following seasonal commissioning activities Post Occupancy Evaluation (1 Credit) 1. Commitment letter from client/building occupier to undertake POE	3	3	0	1.71%	1.71%	0.00%		Responsibilities Client Building Occupier Comments Ensphere to provide letter templates
Hea01	Visual comfort To ensure daylighting, artificial lighting and occupant controls are considered at the design stage to ensure best practice in visual performance and comfort for building occupants.	Glare Control (1 Credit) 1. Copy of the glare strategy covering areas deemed at risk and measures to minimise/avoid glare. Daylighting (building type dependent) (1 credit) 1. Report from specialist confirming the targeted daylight ratio View Out (1 Credit) 1. Drawings confirming view out calculations. Internal Lighting, External Lighting and Zoning and Occupant Control (1 Credit) 1. Internal lighting strategy and modelling demonstrating compliance with the different standards 1. Light fittings schedule 2. Product datasheet confirming luminance of light fittings install 1. Zoning and control strategy - drawing showing it	4	2	0	3.33%	1.67%	0.00%		Responsibilities Daylight Consultant Architect M&E Comments Ensphere to provide letter template Daylighting unlikely to be achieved due to location in basement.
Hea02	Indoor air quality To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.	Indoor Air Quality (IAQ) plan (1 Credit) 1. Indoor Air Quality Plan Ventilation (1 Credit) 1. Drawings confirming calculations Emissions from Construction Products (Up to 2 Credits) 1. Relevant specifications Post-construction Indoor Air Quality Measurement (1 Credit) 1. Commitment letter from client to undertake post-construction air quality test	5	1	1	4.17%	0.83%	0.83%	Early Action RIBA Stage 2	Responsibilities Air Quality Consultant M&E Architect Contractor Comments Ensphere to provide letter template
Hea03	Safe containment in laboratories To recognise and encourage a healthy internal environment through the safe containment and removal of pollutants.	NA	0	0	0	0.00%	0.00%	0.00%		
Hea04	Thermal comfort To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.	Thermal Modelling (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis Adaptability - for a projected climate change scenario (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis Thermal Zoning and Controls (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis	3	3	0	2.50%	2.50%	0.00%		Responsibilities M&E Comments The openable window area is the geometric free ventilation area created when the window is open, and not the glazed part of the window that is openable.
Hea05	Acoustic performance To ensure the building's acoustic performance including sound insulation meet the appropriate standards for its purpose.	Acoustic Performance (Up to 4 Credits) 1. Acoustic report	4	3	1	3.33%	2.50%	0.83%		Responsibilities Acoustician
Hea06	Safety and Security To recognise and encourage effective measures that promote safe and secure use and access to and from the building.	Safe Access (1 Credit) 1. Construction drawings showing cycle and pedestrian paths Security of Site and Building (1 Credit) 1. Meeting minutes with SQSS 2. Drawings, technical memos showing that the recommendations have been incorporated	2	2	0	1.67%	1.67%	0.00%	Early Action RIBA Stage 2	Responsibilities Security Specialist Architect Comments Early actions required
Ene 01	Reduction of energy use and carbon emissions To recognise and encourage buildings designed to minimise operational energy demand, primary energy consumption and CO2 emissions.	Energy Performance (Up to 12 Credits) 1. RIBA stage 4 BRUKL 2. Energy statement	12	8	1	7.83%	5.22%	0.65%	Early Action RIBA Stage 2	Responsibilities Energy Specialist Comments Early actions required

Ene02	Energy monitoring To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.	Sub-metering of Major Energy Consuming Systems (1 Credit) 1. Schematics showing metering of space heating, cooling, ventilation, lighting, small power etc. 2. Table Ene 02 filled out Sub-metering of High Energy Load and Tenancy Areas (1 Credit) 1. Schematics showing metering of space heating, cooling, ventilation, lighting, small power etc. 2. Table Ene 02 filled out	2	1	0	1.30%	0.65%	0.00%		Responsibilities M&E Comments
Ene03	External lighting To recognise and encourage the specification of energy efficient light fittings for external areas of the development.	External Lighting (1 Credit) 1. Product datasheet confirming that the product specified achieves 70 luminaire lumens per circuit Watt 2. Specification confirming control (e.g. daylight, movement etc..) installed for external lighting	1	1	0	0.65%	0.65%	0.00%		Responsibilities M&E
Ene04	Low carbon design To encourage the adoption of design measures, which reduce building energy consumption and associated carbon emissions and minimise reliance on active building services systems.	Passive Design Analysis (PDA) (1 Credit) 1. Passive design analysis (PDA) 2. Thermal modelling and BRUKL with passive design measures 3. Evidence that a suitably qualified energy specialist has quantified the CO2e reduction Free Cooling (1 Credit) 1. Passive design analysis with cooling analysis 2. Evidence for suitably qualified energy specialist 3. Dynamic simulation model demonstrating that the cooling demand can be met by free cooling Low and Zero Carbon Technologies (1 Credit) 1. LZC analysis and BRUKL Report 2. Evidence for suitably qualified energy specialist	3	1	2	1.96%	0.65%	1.30%	Early Action RIBA Stage 2	Responsibilities M&E Comments Early actions required
Ene05	Energy efficient cold storage To recognise and encourage the installation of energy efficient refrigeration systems, therefore reducing operational greenhouse gas emissions resulting from the system's energy use.	Refrigeration Energy Consumption (1 Credit) 1. Product data sheets for the refrigeration system 2. Written commitment that Commissioning of the refrigeration system will take place Indirect Greenhouse Gas Emissions (1 Credit) 1. Demonstration of savings in indirect greenhouse gas emissions	0	0	0	0.00%	0.00%	0.00%		Responsibilities M&E
Ene06	Energy efficient transportation systems To recognise and encourage the specification of energy efficient transportation systems.	Energy Consumption (1 Credit) 1. Lift analysis that meet BREEAM requirements Energy Efficient Features (2 Credits) 1. Lift specification with corresponding datasheet that confirm the requirements are met	3	3	0	1.96%	1.96%	0.00%		Responsibilities Lift Consultant
Ene07	Energy efficient laboratory systems To recognise and encourage laboratory areas that are designed to be energy efficient and minimise the CO2 emissions associated with their operational energy consumption.	Design Specification (1 Credit) 1. Minutes of meetings to confirm consultation with relevant stakeholders 2. Project brief that includes laboratory performance criteria Best Practice Energy Efficient Features (Up to 4 Credits) 1. Energy Demand Assessment 2. Laboratory system specification and drawings	0	0	0	0.00%	0.00%	0.00%		Responsibilities M&E
Ene08	Energy efficient equipment To recognise and encourage procurement of energy efficient equipment to ensure optimum performance and energy savings in operation.	Energy Efficient Equipment (2 Credits) 1. Fill in energy 08 table 2. Specification confirming targeted requirements.	2	2	0	1.30%	1.30%	0.00%		Responsibilities M&E Comments Ensphere to issue main table
Ene09	Drying space To provide a reduced energy means of drying clothes.	Provision of Suitable Internal/External Drying Space (1 Credit) 1. Construction drawings showing drying areas	0	0	0	0.00%	0.00%	0.00%		Responsibilities Architect
Tra01	Public transport accessibility To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion.	Accessibility Index (Up to 5 Credits) 1. Accessibility Index 2. Completed Tra01 calculator	3	3	0	3.00%	3.00%	0.00%		Responsibilities BREEAM Assessor Comments FTAL (AI) Rating = 40.14
Tra02	Proximity to amenities To encourage and reward a building location that facilitates easy access to local services and so reduces the environmental, social and economic impacts resulting from multiple or extended building user journeys, including transport-related emissions and traffic congestion.	Proximity of amenities (1 Credit) 1. Completed Transport 2 Amenities report detailing accessibility and proximity to site.	1	1	0	1.00%	1.00%	0.00%		Responsibilities BREEAM Assessor

Tra03	Cyclist facilities To encourage building users to cycle, so promoting exercise and helping reduce congestion and emissions, by ensuring adequate provision of cyclist facilities.	Cycle Storage (1 Credit) 1. Drawings confirming number of compliant cycle storage spaces Cyclist facilities (1 Credit) 1. Drawings confirming the provision of appropriate facilities	2	2	0	2.00%	2.00%	0.00%		Responsibilities Architect Comments Second credit now targeted
Tra04	Maximum car parking capacity To encourage the use of alternative means of transport other than the private car to and from the building, thereby helping to reduce transport-related emissions and traffic congestion associated with the building's operation.	Car Parking Capacity (Up to 2 Credits) 1. Drawings confirming the number of car parking spaces	2	2	0	2.08%	2.08%	0.00%		Responsibilities Architect
Tra05	Travel plan To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of reliance on forms of travel that have the highest environmental impact.	Travel Plan (1 Credit) 1. A travel plan has been drafted including a site specific travel assessment	1	1	0	0.94%	0.94%	0.00%		Responsibilities Transport Consultant Comments
Wat01	Water consumption To reduce the consumption of potable water for sanitary use in new buildings from all sources through the use of water efficient components and water recycling systems.	Water Consumption (Up to 5 Credits) 1. Water 01 Calculator 2. Specifications 3. Product data sheet confirming flow rates	5	3	2	3.89%	2.33%	1.56%		Responsibilities BREEAM Assessor Architect
Wat02	Water monitoring To ensure water consumption can be monitored and managed, and therefore encourage reductions.	Water Monitoring (1 Credit) 1. Schematics showing sub metering 2. Specification and corresponding product datasheet of the product 3. Specification highlighting connection to BMS or ability to be connected	1	1	0	0.78%	0.78%	0.00%		Responsibilities M&E
Wat03	Water leak detection To reduce the impact of water leaks that may otherwise go undetected.	Leak Detection System (1 Credit) 1. Specification detailing leak detection system 2. Product datasheet for the leak detection system Flow Control Devices (1 Credit) 1. Mechanical Specification 2. Drawings to show the location if the flow control systems	2	2	0	1.56%	1.56%	0.00%		Responsibilities M&E
Wat04	Water efficient equipment To reduce unregulated water consumption by encouraging specification of water efficient equipment.	Unregulated Water Demand (1 Credit) 1. Letter template	1	0	1	0.78%	0.00%	0.78%		Responsibilities Contractor Comments Ensphere to provide a letter template
Mat01	Life cycle impacts To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building.	Life Cycle Impacts (Up to 5 Credits) 1. Specifications including Green Guide Ratings 2. Completion of BREEAM Mat 01 calculator	5	4	1	5.19%	4.15%	1.04%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer LCA modeller BREEAM Assessor Comments Early actions required Ensphere to issue spreadsheet template.
Mat02	Hard landscaping and boundary protection To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking into account of the full life cycle of materials used.	Hard landscaping (1 Credit) 1. Specification of materials 2. Drawings for hard landscaping	1	0	1	1.04%	0.00%	1.04%		Responsibilities Architect Structural Engineer Building Services Comments Ensphere to issue spreadsheet template.

Mat03	Responsible sourcing of materials To recognise and encourage the specification and procurement of responsibly sourced materials for key building elements.	Pre-requisite 1. All relevant specification susceptible to contain timber products to have the relevant timber requirements. Sustainable Procurement Plan (1 Credit) 1. Procurement plan in place by RIBA stage 2 Responsible Sourcing of materials (Up to 3 Credits) 2. Responsible Sourcing of materials	4	2	1	4.15%	2.08%	1.04%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required Ensphere to issue spreadsheet template once Mat01 credit is fully secured.
Mat04	Insulation Recognising and encouraging the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties	Embodied Impact (1 Credit) 1. Specifications 2. Mat04 calculator	1	1	0	1.04%	1.04%	0.00%		Responsibilities Architect Structural Engineer Building Services BREEAM Assessor Comments Ensphere to issue spreadsheet template.
Mat05	Designing for durability and resilience Increasing the lifespan of the building through designing for durability and protection from degradation and specifying appropriate construction products.	Protecting Vulnerable Parts of the Building from Damage (0.5 Credit) 1. Marked up drawings Protecting Exposed Parts of the Building from Material Degradation (0.5 Credit) 1. Completed Mat 05 spreadsheet and supporting drawings	1	1	0	1.04%	1.04%	0.00%		Responsibilities Architect Comments Ensphere to issue spreadsheet template.
Mat 06	Material efficiency To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste.	Material Efficiency (1 Credit) 1. Material efficiency technical memo/report (must include quantities of materials saved)	1	0	1	1.04%	0.00%	1.04%	Early Action RIBA Stage 1/2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
Wst01	Construction waste management To promote resource efficiency via the effective management and reduction of construction waste.	Construction Resource Efficiency (Up to 3 Credits) 1. Site Waste Management Plan 2. Pre-demolition Audit Diversion of Resources from Landfill (1 Credit) 1. Site Waste Management Plan	4	2	2	3.78%	1.89%	1.89%	Early Action RIBA Stage 2	Responsibilities Waste Consultant Contractor Comments Early actions required Potential gain if no more than 7.5m3 or 6.5 tonnes of waste produced. Pre-demo audit will be required too.
Wst02	Recycled aggregates To recognise and encourage the use of recycled and secondary aggregates, thereby reducing the demand for virgin material and optimising material efficiency in construction.	Recycled Aggregate (1 Credit) 1. Recycled content calculator 2. Specification 3. Letter of commitment from Contractor	1	0	1	0.94%	0.00%	0.94%		Responsibilities Structural Engineer Contractor
Wst03	Operational Waste To recognise and encourage the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that this waste is diverted from landfill or incineration.	Construction Resource Efficiency (1 Credit) 1. Drawings/Specifications to demonstrate the location of the operational waste facility 2. Confirmation for the likely waste streams for the site.	1	1	0	0.94%	0.94%	0.00%		Responsibilities Architect Waste Consultant
Wst04	Speculative Finishes (Offices only) To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials.	Speculative Floor and Ceiling Finishes (1 Credit) 1. Drawings showing that floor and ceiling finishes have been installed in a show area only.	1	0	1	0.94%	0.00%	0.94%		Responsibilities Architect

Wst05	Adaptation to Climate Change To recognise and encourage measures taken to mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building.	Resilience of Structure, Fabric, Building Services and Renewables Installation (1 Credit) 1. Climate Change Adaptation Strategy 2. Appraisal or Structural and fabric resilience 3. Systematic risk assessment	1	1	0	0.94%	0.94%	0.00%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
Wst06	Functional adaptability To recognise and encourage measures taken to accommodate future changes of use of the building over its lifespan.	Functional Adaptability (1 Credit) 1. Building-specific functional adaption strategy providing recommendations 2. Functional adaption measures have been adopted	1	1	0	0.94%	0.94%	0.00%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
LE01	Site selection To encourage the use of previously occupied and/or contaminated land and avoid land which has not been previously disturbed.	Previously Occupied Land (1 Credit) 1. Photograph/Exiting site plan of the site or Design and Access Statement describing the previous use Contaminated Land (1 Credit) 1. Contaminated site investigation and risk assessment/report 2. Commitment letter from the contractor that the remediation strategy will be implemented	2	1	1	2.00%	1.00%	1.00%		Responsibilities Client Contractor Contaminated land consultant
LE02	Ecological value of site and protection of ecological features To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.	Ecological Value of Site (1 Credit) 1. Completed BREEAM checklist OR 2. Appointment of Suitably Qualified Ecologist (SQE) Protection of Ecological Features (1 Credit) 1. Letter confirming protection of existing ecology as per BS42020:2013	2	2	0	2.00%	2.00%	0.00%	Early Action RIBA Stage 1	Responsibilities Ecologist Selected team member Comments Early actions required Ensphere to issue letter template.
LE03	Minimising impact on existing site ecology To minimise the impact of a building development on existing site ecology.	Change in Ecological Value (2 Credits) 1. Completed Le03/Le04 calculator by the SQE	2	2	0	2.00%	2.00%	0.00%	Early Action RIBA Stage 1	Responsibilities Ecologist Selected team member Comments Early actions required
LE04	Enhancing site ecology To encourage actions taken to enhance the ecological value of the site as a result of development.	Ecologist's report and recommendations (1 Credit) 1. Ecology Report Increase in Ecological Value (1 Credit) 1. Confirmation that the project team have implemented local ecological solutions and measures to enhance the site	2	1	1	2.00%	1.00%	1.00%		Responsibilities Ecologist Selected team member
LE05	Long term ecology management and maintenance To minimise the long term impact of the development on the site and the surrounding area's biodiversity.	Long term impact on biodiversity (2 Credits) 1. Ecology report 2. Confirmation of additional measures 3. Confirm Ecology and Biodiversity section in Building User Guide 4. Landscape and Ecology Plan	2	2	0	2.00%	2.00%	0.00%		Responsibilities Ecologist Selected team member Client
Pol01	Impact of refrigerants To reduce the level of greenhouse gas emissions arising from the leakage of refrigerants from building systems.	No refrigerant use (3 Credits) 1. Letter stating no use of refrigerants Pre-requisite 1. Specification and/or manufacturer's literature to confirm compliance with BS EN 378:2008 Impact of Refrigerants (Up to 2 Credits) 1. Specification and/or manufacturer's literature to confirm the design/type of system to be installed 2. Drawings to show the positioning of the units Leak Detection (1 Credit) 1. Specification and/or manufacturer's literature to confirm the design/type of system to be installed 2. Drawings to show the positioning of the units	3	1	0	2.31%	0.77%	0.00%		Responsibilities M&E
Pol02	Nox emissions To contribute to a reduction in national NOx emission levels through the use of low emission heat sources in the building.	NOx emission level (Up to 3 Credits) 1. Specification and/or manufacturer's literature showing the NOx emission levels for heating and hot water.	3	0	3	2.31%	0.00%	2.31%		Responsibilities M&E

Pol03	Surface water run-off To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on and off-site, watercourse pollution and other environmental damage.	Flood Resilience (Up to 2 Credits) 1. Site Specific Flood Risk Assessment Surface Water Run-off (2 Credits) 1. Calculations and Drainage Plan Minimising Water Course Pollution (1 Credit) 1. Drainage Plan	5	4	1	3.85%	3.08%	0.77%	Responsibilities Flood Risk Consultant Drainage Engineer Comments Where the man-made impermeable area draining to the watercourse has decreased or remains unchanged post development, the credits will be met by default.
Pol04	Reduction of night time light pollution To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.	Night Time Light Pollution (1 Credit) 1. Completed letter template 2. Drawings to show the location of the external lighting, time switches and photo-cells	1	1	0	0.77%	0.77%	0.00%	Responsibilities M&E Comments Ensphere to issue spreadsheet template.
Pol05	Reduction of noise pollution To reduce the likelihood of noise arising from fixed installations on the new development affecting nearby noise-sensitive buildings.	Reduction of Noise Pollution (1 Credit) 1. Noise Impact Assessment	1	1	0	0.77%	0.77%	0.00%	Responsibilities Acoustician
Inn01	Innovation To support innovation within the construction industry through the recognition of sustainability related benefits which are not rewarded by standard BREEAM issues.	Up to 10 Credits 1. CCS score 40 plus (1 Credit) 2. Mat01 Materials LCA (1 Credit)	10	1	1	10.00%	1.00%	1.00%	Man 05 - Aftercare commitment for 3 years
Total							72.13%	20.54%	

E. General Notes

The report is based on information available at the time of the writing and discussions with the client during any project meetings. Where any data supplied by the client or from other sources have been used it has been assumed that the information is correct. No responsibility can be accepted by Ensphere Group Ltd for inaccuracies in the data supplied by any other party.

The review of planning policy and other requirements does not constitute a detailed review. Its purpose is as a guide to provide the context for the development and to determine the likely requirements of the Local Authority.

No site visits have been carried out, unless otherwise specified.

This report is prepared and written in the context of an agreed scope of work and should not be used in a different context. Furthermore, new information, improved practices and changes in guidance may necessitate a re-interpretation of the report in whole or in part after its original submission.

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