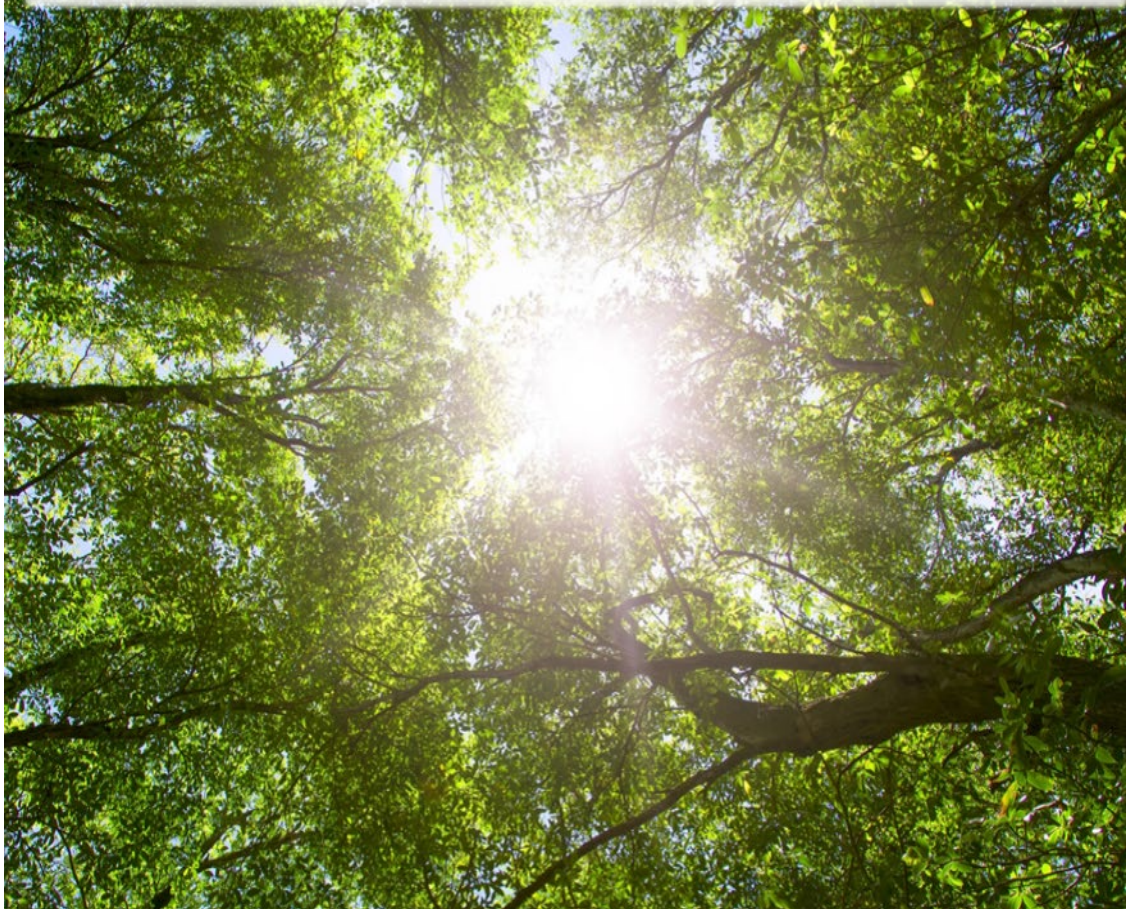
8-10 Southampton Row & 1 Fisher Street, Holborn

Sustainability Statement

Ensphere Group Ltd on behalf of
Idé Real Estate



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8-10 Southampton Row & Fisher Street

Sustainability Statement

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This document has been prepared and checked in accordance with Ensphere Group Ltd's Quality Management System.

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Final	V2	Pete Jeavons	Pete Jeavons	May 2019

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Contents

1. Executive Summary

1.1 This Sustainability Statement presents the sustainability credentials for a proposed scheme at 8-10 Southampton Row & 1 Fisher Street, Holborn, WC1B 4AE.

1.2 The proposed scheme is for the refurbishment and extension of 8-10 Southampton Row to facilitate the redevelopment of the site as a new 'boutique' hotel and small apartment block.

1.3 At a strategic level, the redevelopment of the site in line with its historical use is considered sympathetic to the local character of the area and will likely enhance the living environment. Furthermore, demand for hotel accommodation is likely to increase in line with the direction of historical trends and as a result of forthcoming new transport infrastructure (e.g. Cross Rail).

1.4 The inclusion of residential apartments as part of the development proposals will assist with addressing the supply side housing shortages and will improve affordability. The development is considered to be beneficial to the local community and aligned with socio-economic requirements.

1.5 A range 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".

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 Idé Real Estate to produce a Sustainability Statement for a proposed development at 8-10 Southampton Row & Fisher Street, Holborn, WC1B 4AE.

Site and Surroundings

Site

2.2 The Application Site ("the Site") is located in central London in the London Borough of Camden sitting on Southampton Row and bounded by Fisher Street to the north and Catton Street to the south. Access to the site is via Southampton Row to the west. An existing commercial structure lies to the immediate east.

2.3 It has an irregular shape and is currently made up of two clear parts: a Grade II Listed Edwardian building dating from 1905 on the west side, and a Crossrail "head-house" structure that has only just been completed.

Surroundings

2.4 Opposite, to the west, is the Grade II listed 15-23 Southampton Row (within the Bloomsbury Conservation Area) and to the south is the Grade II listed Baptist Church House. To the north is the Grade II listed Central St Martin's College of Art and Design. The Kingsway Tram Subway is also Grade II listed and forms the only underground tunnel in London specifically designed for trams. This part of the tunnel is no longer in use but the tunnel further south along Kingsway has been adapted for buses.

2.5 The Southampton Row townscape is an example of early 20th century commercial architecture on a comprehensive scale. Most of the ground floors are commercial with offices above.

2.6 The wider area is diverse, and whilst predominantly office and residential in nature; other cultural and commercial (including hotels) are apparent. The site is located in close proximity to numerous major transport nodes; with Holborn Tube Station being the closest and approximately 1-minute walk to the south of the site. A variety of other emblematic places are located within a 20-minute walk, including the British Museum, Somerset House, Sir John Soane's Museum, Covent Garden, Conwall Hall and the Royal Opera House.

Proposed Development

2.7 Development proposals are for the refurbishment and extension of 8-10 Southampton Row to facilitate the redevelopment of the site as a 'boutique' hotel and small apartment block.

Report Objective

2.1 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.

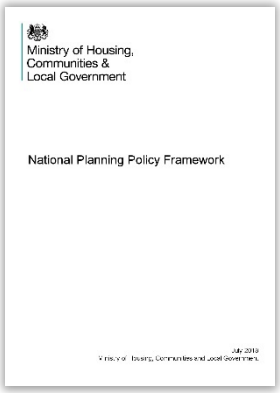
3.9 The emphasis is therefore case specific, and the assessment sections of this report seek to highlight the relevant factors in a suitably balanced manner.

4. Planning Context

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

National Context

National Planning Policy Framework (2018)



4.2 The National Planning Policy Framework (NPPF) was updated in July 2018. Paragraph 7 of the revised NPPF states that:

"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".

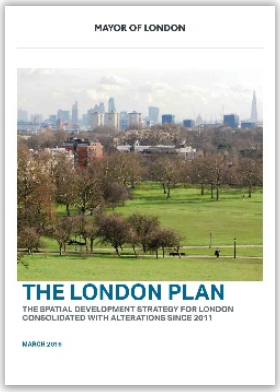
4.3 The NPPF goes on to establish a "presumption" in favour of sustainable development.

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.
- Renewable and Low Carbon Energy - The guidance is intended to assist local councils in developing policies for renewable energy in local plans, and identifies the planning considerations for a range of renewable sources.

London Context

The London Plan Consolidated with Alterations Since 2011 (2016)



4.4 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)

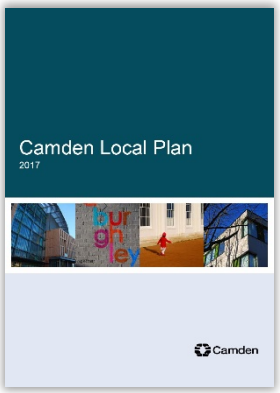
4.5 This SPG aims to support developers, local planning authorities and neighbourhoods to achieve sustainable development. It provides guidance on to how to achieve the London Plan objectives effectively, supporting the Mayor's aims for growth, including the delivery of housing and infrastructure.

4.6 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.

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 – Sustainability (CPG3) (July 2015)

4.9 The guidance provides information on ways to achieve carbon reductions and more sustainable developments.

4.10 It highlights the Council's requirements and guidelines in support of policies CS13, DP22 and DP23.

4.11 Includes requirements concerning credits under certain BREEAM categories (60% energy, 60% water and 40% materials).

5. Site Context

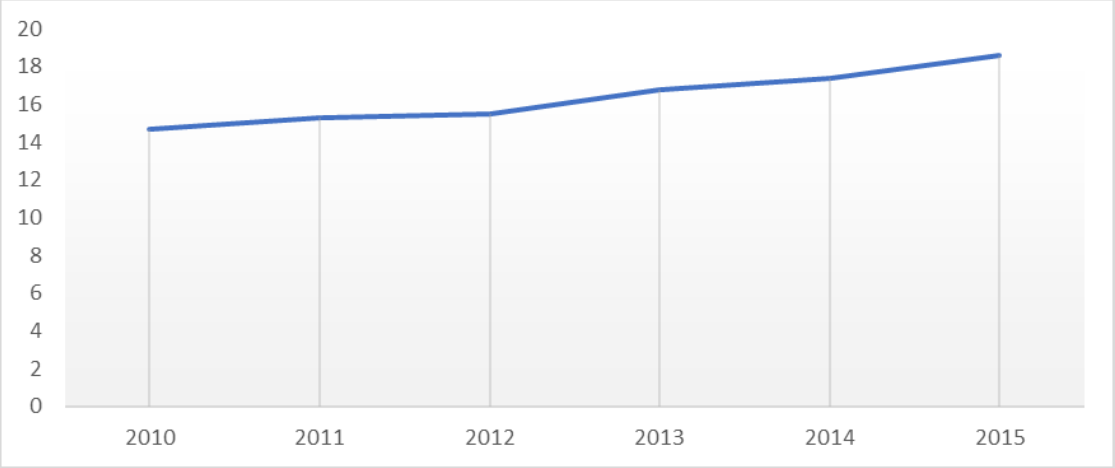
5.1 In line with the "three pillars" of sustainability discussed within the methodology section, the site context has been considered with regard to its economic, social and environmental context; acknowledging that interrelationships exist between many of these issues.

Socio Economic Context

Tourism

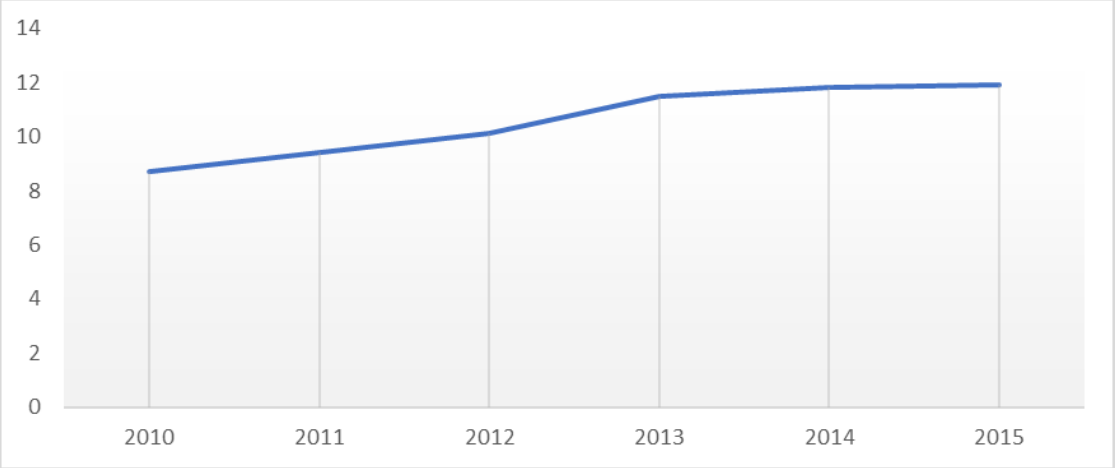
5.2 Data is available from London & Partners, a not-for-profit public-private partnership, funded by the Mayor of London and various commercial partners.

Figure 5.1 Overnight Visits in London from Overseas Visitors (millions)



Source: ONS Data

Figure 5.2 Expenditure Spend in London from Overseas Visitors (£ billion)



Source: ONS Data

5.3 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.

ONS Household Projections

5.4 The Office for National Statistics presents data relevant to household projections for England, by region and local authority, mid-2016 to mid-2041 (formerly referred to as live tables on household projections).

5.5 The assumptions underlying national household and population projections are based on demographic trends. They are not forecasts as, for example, they do not attempt to predict the impact of future Government policies, changing economic circumstances or other factors that might influence household growth. The projections show the household numbers that would result if the assumptions based in previous demographic trends in the population and rates of household formation were to be realised in practice.

5.6 Nevertheless, data suggests that household numbers in Camden will increase from circa 110,000 in 2019 to around 136,000 by 2041; a 19.5% increase over the period.

Output Area Classifications

5.7 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.

5.8 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.

5.9 Data from the 2011 Census has been released identifying the site as having an Output Area Code of E00004554 and classified as “Cosmopolitans” (Supergroup Code 2), “Inner City Students” (Group Code 2b) and “Multicultural Student Neighbourhoods” (Subgroup Code 2b2).

5.10 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.

5.11 The data indicates higher than average occupancy of flatted accommodation, higher levels of social renting and overcrowding and a high reliance on public transport.

Indices of Multiple Deprivation

5.12 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%).

5.13 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.

5.14 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 16,853 out of 32,844; where 1 is the most deprived. The area is therefore considered to have an average level of deprivation overall.

5.15 The table below provides the data for the individual domains:

Table 5.1 IMD Domain Scores

Domain	Score
Income Rank	19,061
Employment Rank	22,776
Education, Skills and Training Rank	27,560
Health Deprivation and Disability Rank	27,115
Crime Rank	20,505
Barriers to Housing and Services Rank	18,090
Living Environment Rank	92
Rank of IMD Score	**16,853**

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

Environmental Context

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

Land Use

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

5.18 A Phase 1 Land Contamination Assessment has been undertaken by WSP (re: 7002533; April 2019), which identified ground conditions beneath the Site and surrounding area as comprising Made Ground, the Lynch Hill Gravel Member (River Terrace Deposits), London Clay Formation, Lambeth Group, Thanet Sand Formation and Chalk. Alluvium and Langley Silt have been identified in some locations overlying the River Terrace Deposits. WSP confirmed that the Environment Agency (EA) has classified the Lynch Hill Gravel Member and the Lambeth Group

as Secondary (A) aquifers, the London Clay Formation as Unproductive Strata and the Thanet Sand Formation and Chalk as Principal aquifers. Perched and superficial aquifers at the Site are likely to be highly modified and groundwater flow interrupted by significant below-ground structures.

5.19 The majority of the eastern half of the Site was noted to have been excavated for the construction of the Crossrail Fisher Street shaft. Therefore, it was considered that any Made Ground (and associated contamination) in this area had been removed and would thereby not pose a risk to future site users or the underlying Secondary (A) aquifer.

5.20 In addition, WSP also identified that the entire Site will be occupied by the footprint of the building and hardstand cover, restricting infiltration rates and limiting exposure of site users to potentially contaminated soils.

5.21 A full ground investigation and generic quantitative risk assessment for the Site were not considered necessary.

Flooding

5.22 The size of the Site is less than 1ha, is located in Flood Zone 1 (low probability of flooding) and is not within a critical drainage area. Therefore, a Flood Risk Assessment (FRA) is not required based on the guidance within the National Planning Policy Framework (NPPF) and local policy.

Ecological Value

5.23 An Ecological Impact Assessment has been undertaken by Royal HaskoningDHV (ref: I&BPB6071R001F03; March 2019). The report identified the site to be entirely covered by hardstanding and existing structures. The current ecological value was considered negligible.

Local Amenities & Public Transport

5.24 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.

5.25 Therefore, the accessibility of the proposed scheme to local amenities is a relevant consideration in determining whether the site represents a sustainable location.

5.26 According to the Transport for London mapping resource, the site has excellent access to public transport and has a PTAL rating of 6b (Best). In addition, transport links will be further enhanced through the provision of Cross Rail into central London.

5.27 Further detail of the transport infrastructure can be found in the accompanying Transport Statement.

6. Sustainable Design Proposals

6.1 This section presents an overview of the proposed sustainable design features for the scheme and is considerate of Camden Planning Guidance CPG3 (*Sustainability*).

Environmental Standards

6.2 It is proposed to undertake a BREEAM assessment of the hotel and a rating of "Excellent" will be targeted.

Energy & Carbon

6.3 Further detail on energy matters and carbon reduction are presented in the Energy Statement, produced by Renewable Environmental Services (ref: 8031; May 2019) and submitted in support of the application.

6.4 The assessment methodology follows the Energy Hierarchy, on the basis that it is preferable to firstly minimise carbon dioxide emissions through reduced energy demand; prior to considering low carbon and renewable energy supply options.

6.5 The tiers of the Energy Hierarchy are:

- Be Lean Demand Reduction
- Be Clean Use Energy More Efficiently
- Be Green Use Renewable Energy

6.6 Where opportunities to improve the efficiency of the design have been maximised, consideration is then given to the second principle whereby priority is given to the efficient use of energy. This is on the basis that low carbon technologies can be cost-effective and provide significant carbon savings when compared to conventional technologies.

6.7 The third principle of the hierarchy promotes the use of renewable technologies. Whilst these technologies can be relatively expensive to install, they do offer the potential to significantly reduce carbon emissions.

Demand Reduction

6.8 Heat Transfer Coefficients, otherwise referred to as U-Values, are a measure of the rate of heat transfer through a building element over a given area, under standardised conditions (i.e. the rate at which heat is lost or gained through a fabric).

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

6.10 Noting that much of the building fabric is to be retained, an improved level of air tightness is proposed, meaning that air infiltration between the internal and the external environment will be largely controlled, and space heating demand further reduced.

6.11 Thermal bridging is the penetration of the insulation layer by a highly conductive non-insulating material allowing rapid heat transfer from an interior to exterior environment (and vice versa). In well insulated buildings, as much as 30% of heat loss can occur through thermal bridges.

6.12 The building fabric shall be constructed so that there are no reasonably avoidable thermal bridges in the insulation layers caused by gaps within the various elements.

6.13 At this stage, detailed lighting design calculations have not yet been undertaken, but lighting design is intended to be highly efficient and in excess of Building Standards requirements.

Use Energy More Efficiently

6.14 The Energy Strategy has concluded that the connection of the Southampton Row development to a district heat network is not viable due to the distance of the Site to the nearest network.

6.15 Nevertheless, the Site was considered suitable for centralised Combined Heat & Power (CHP), with this technology being proposed for the domestic hot water heating.

Use Renewable Energy

6.16 Options for renewable energy were also assessed as part of the Energy Strategy and it is proposed to incorporate:

- Air Source Heat Pumps (ASHPs) for the hotel area on the basis that it provides high efficiency heating and cooling (when in reverse mode) to all conditioned spaces; and
- Photovoltaics (PV) are proposed for the available roof areas of the development.

Overheating

6.17 The proposed scheme has been subjected to an assessment of Thermal Comfort in line with CIBSE TM52:2013 *The Limits of Thermal Comfort: Avoiding Overheating in European Buildings*; CIBSE TM59:2017 *Design Methodology for the Assessment of Overheating Risk in Homes*, CIBSE TM49:2014 *Design Summer Years for London*. This report is submitted in support of the application.

Water Conservation, Water Quality and Flooding

Water Conservation

6.18 Water saving fittings and appliances shall be installed and the following outlines the proposed maximum flow / consumption rates for each of the proposed installation types:

- WCs — Dual flush 6 litre / 3 litre;

- Taps (excluding kitchen & external): Flow rate 5 litres / minute;
- Showers 8 litres / minute;

6.19 It is proposed to reduce consumption levels in the residential part of the site to <105 litres / person / day.

Drainage

6.20 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.

6.21 An Outline Drainage Strategy Report has been undertaken by WSP (ref: 70025363-RP-ODS-001; March 2019) and submitted in support of the Application. The report confirmed that the proposed drainage network has been designed for the 1 in 100 year plus 40% climate change event, in accordance with the latest EA guidance on climate change.

6.22 Due the levels of the proposed development it is proposed to introduce a pump system to discharge into the combine sewer. In accordance with best practice, the design discharge rate has been limited to 2.0 l/s following typical acceptable discharge rates from product manufactures.

6.23 It was not considered feasible to reduce discharge rates down the pre-development greenfield rate of 0.31 l/s as this is a very low discharge rate however rates have been reduced as far as reasonably practicable in accordance with best practice and product manufacturer recommendations.

6.24 It is proposed to attenuate surface water generated within the site within a storage tank, located within basement level 1 at the north-east corner of the site. A series of rainwater pipes and external gullies and channels will collect runoff and be conveyed through the tank, where a pump will be provided with a rate restricted to 2 l/s.

6.25 The pump will discharge to a private surface water manhole where it will transition to gravity flow, prior to entering the sewer.

6.26 WSP concluded that the Proposed Development will not have a negative impact on surface water flooding offsite. In fact, existing discharge rates will be significantly reduced in comparison to the anticipated existing arrangement which would help alleviate the existing capacity issues in the area and support the strategic reduction of flood risk. Furthermore, the proposed inclusion of a green roof would reduce the run-off when compared to the existing situation.

Materials & Waste

Materials

6.27 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 include:

- The majority of major elements (walls, floors, roof) have been subjected to an IMPACT compliant Life Cycle Assessment (LCA) to assess embodied carbon in line with BREEAM 2018 and the requirements of the Mat01 *Environmental impacts from construction products – Building life cycle assessment (LCA)* issue. Detail design will further consider options for reducing impacts;
- 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.

Operational Waste

6.28 A Waste Assessment Report was produced by Royal Haskoning DHV (ref: PB9205-RHD-ZZ-XX-R-Z-016; March 2019) to provide an assessment of the wastes generated during the operational phases of the Proposed Development.

6.29 Effective waste management in the proposed hotel and restaurant facilities would be achieved where the design incorporates the allocation of appropriate space to store dry-recyclable and non-recyclable waste bins; and management of food waste. The Report highlighted that the design includes a proposed refuse storage area at street level, with direct street access. It was recommended that separate receptacles should be provided for dry recyclables (particularly glass and metal cans) and food; to minimise residual waste. Collection frequencies should be designed as appropriate to minimise storage time.

6.30 The Applicant has therefore committed to implement the proposals in line with the Building Regulations and Council requirements.

Pollution

Air Quality

6.31 Where conventional backup gas-fired boilers are required for periods of peak demand, these will be selected to achieve a NO_X rating of <40mgNO_X/kWh. The Combined Heat and Power (CHP) unit will be selected in consideration of the GLA and Council air quality requirements.

6.32 Transport emissions shall be minimal, as the site offers excellent connections to public transport services and a wide range of amenities at walking distance.

6.33 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.

6.34 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.

Nuisance

6.35 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.

6.36 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.

Biodiversity Enhancements

6.37 The ecological value of the proposed development will be greater than the existing development.

6.38 Specialist advice is currently being provided by a suitably qualified ecologist and the developer is committed to implement their recommendations to enhance the ecological value. It is anticipated that measures may include the incorporation of bird / bat boxes and species recommendations for planting the green roof.

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.

7.2 A Construction Management Plan pro forma and Site Waste Management Plan (SWMP) have been submitted in support of the application.

Responsible Construction Practices

Impacts on Neighbours, Pedestrians, Road Users and Workforce

7.3 The scheme will be registered 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

7.4 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

7.5 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. 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 CPG3 (*Sustainability*) as well as to the National and London planning policy framework.

8.3 Development proposals include the refurbishment and extension of 8-10 Southampton Row to facilitate the redevelopment of the site as a 'boutique' hotel and small apartment block. Tourism, both nationally and in London, has grown over recent years both in terms of number of visits, nights stayed and expenditure. Furthermore, demand for hotel accommodation is likely to increase in line with the direction of historical trends.

8.4 The development is considered to be beneficial to the local community and aligned with socio-economic requirements. The inclusion of residential apartments as part of the development proposals will assist with addressing the supply side housing shortages and will improve affordability.

8.5 Locally, the indices of Multiple Deprivation suggest an average level of deprivation overall - the individual indices highlights Living Environment as being particularly poor.

8.6 A range of sustainable design and construction features are proposed including:

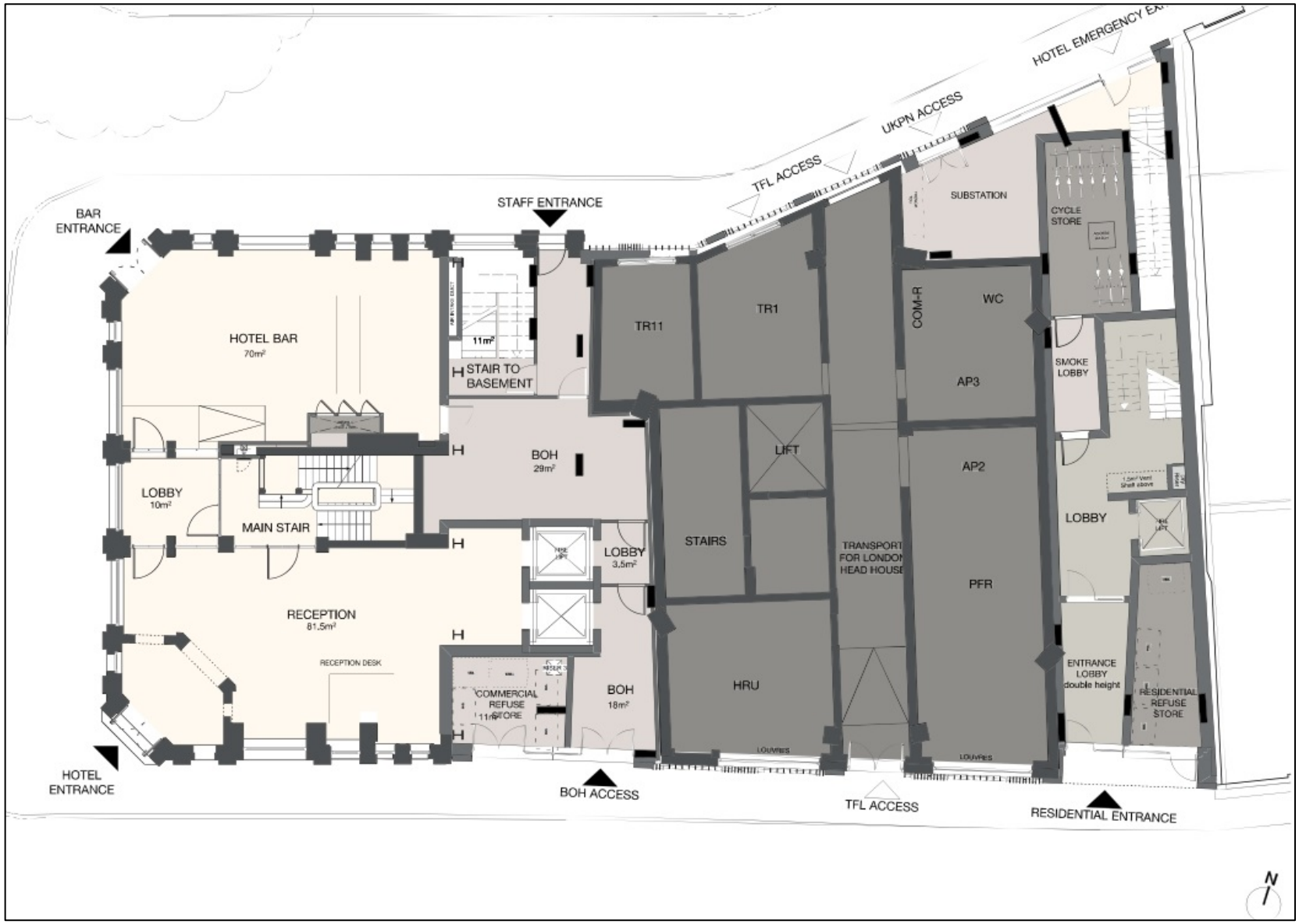
- Highly thermally efficient building fabric;
- Combined Heat and Power (CHP) to provide hot water;
- Air Source Heat Pumps (ASHPs) for space heating in the hotel;
- Photovoltaics (PV) at roof level;
- Highly efficient lighting;
- Water saving sanitary fittings and appliances to deliver a water efficient development;
- The use of materials with a low lifecycle environmental impact and embodied energy;
- Consideration of the principles of Secured by Design;

- Efficient construction and operational waste management;

8.7 It is proposed to assess the scheme against BREEAM with a target rating of “Excellent”. 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 Plan


BAR ENTRANCE
STAFF ENTRANCE
TFL ACCESS
UKPN ACCESS
HOTEL EMERGENCY EX
SUBSTATION
CYCLE STORE
HOTEL BAR
70m²
11m²
STAIR TO BASEMENT
TR11
TR1
COM-R
WC
AP3
SMOKE LOBBY
BOH
29m²
LIFT
AP2
LOBBY
10m²
MAIN STAIR
STAIRS
LOBBY
3.5m²
TRANSPORT FOR LONDON HEAD HOUSE
PFR
LOBBY
RECEPTION
81.5m²
RECEPTION DESK
COMMERCIAL REFUSE STORE
11m²
BOH
18m²
HRU
ENTRANCE LOBBY double height
RESIDENTIAL REFUSE STORE
LOUVRES
LOUVRES
HOTEL ENTRANCE
BOH ACCESS
TFL ACCESS
RESIDENTIAL ENTRANCE
N

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 developer 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) Developer 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, finding 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 development 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.

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:

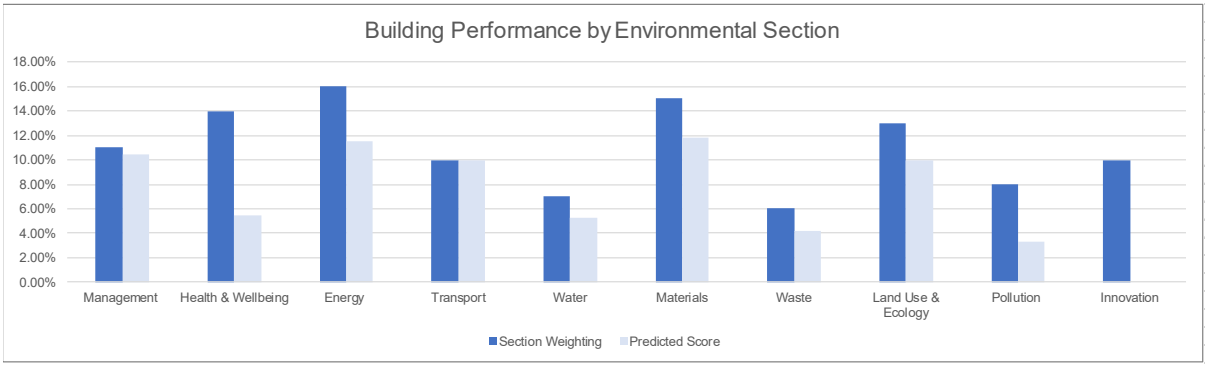
i. Support sustainable development;

C. BREEAM Pre-Assessment

Issue ID	Description	Aim	Available Credits	Predicted Credits	Available Score	Predicted Score
Man01	Project brief and design	Encouraging an integrated design process and considering BREEAM performance targets early to influence decision-making and optimise building performance, while avoiding unnecessary costs.	4	4	2.10%	2.10%
Man02	Life cycle cost and service life planning	Promoting the business case for sustainable buildings through the enhanced understanding of capital cost. Improving design, specification, maintenance and operation, by encouraging the use of life cycle costing.	4	4	2.10%	2.10%
Man03	Responsible Construction Practices	Encouraging construction sites to be managed in an environmentally and socially considerate and responsible manner. Monitoring to encourage continuous improvements and utility consumption reduction.	6	6	3.14%	3.14%
Man04	Commissioning and handover	Encouraging a well-managed handover and commissioning process, which will ensure building services and fabric defects are identified and rectified. Ensuring that the building responds to the needs of the occupants.	4	3	2.10%	1.57%
Man05	Aftercare	Encouraging aftercare support during the first year of the building operation, to ensure the building operates in accordance with the design intent and in response to the building occupants' needs.	3	3	1.57%	1.57%
Hea01	Visual comfort	Providing occupants with the conditions that facilitate good visual comfort by designing out the potential for glare, achieving good practice daylight factors and having an adequate view out. Designing internal and external lighting systems to provide appropriate illuminance (lux) levels, thereby giving a more comfortable environment for occupants Internal lighting is zoned to allow for occupant control.	4	2	3.11%	1.56%
Hea02	Indoor air quality	Facilitating good indoor air quality by considering indoor air pollution early in the design process so that a mitigation strategy can be put in place. Managing harmful emissions from construction products by specifying finishes and products that have been tested in accordance with the appropriate standards. Specifying an appropriate ventilation strategy that maintains good indoor air quality.	4	0	3.11%	0.00%
Hea03	Safe containment in laboratories	This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.	0	0	0.00%	0.00%
Hea04	Thermal comfort	Thermal modelling informs the building design to provide a comfortable thermal environment that considers current climatic conditions, and projected climate change scenario conditions. Giving occupants control over their environment through appropriate temperature control strategies and thermal zoning.	3	3	2.33%	2.33%
Hea05	Acoustic performance	Enabling occupants to experience best practice acoustic performance levels appropriate to the functional activities in occupied spaces.	4	0	3.11%	0.00%
Hea06	Security	Designing the building to consider and take into account security needs to ensure occupants safety and wellbeing.	1	1	0.78%	0.78%
Hea07	Safe and healthy surroundings	Providing external site areas that are safe for occupant use. Enhancing the wellbeing of building users by giving access to an outdoor space.	2	1	1.56%	0.78%
Ene 01	Reduction of energy use and carbon emissions	Encouraging the design of energy efficient buildings with energy performance above national building regulations. Encouraging the accurate modelling of operational energy consumption.	13	8	8.32%	5.12%
Ene02	Energy monitoring	Helping to identify and reduce high energy demands where possible by accurate measurement of the energy consumption of the building by end use.	2	2	1.28%	1.28%
Ene03	External lighting	Reducing the building's energy consumption through the specification of energy efficient external lighting.	1	1	0.64%	0.64%
Ene04	Low carbon design	Reducing the building's energy consumption through the adoption of passive design solutions, free cooling and low or zero carbon (LZC) energy sources.	3	1	1.92%	0.64%
Ene05	Energy efficient cold storage	Reducing the building's operational greenhouse gas emissions (CO_2-eq) through the design, installation and commissioning of energy efficient refrigeration systems.	2	2	1.28%	1.28%
Ene06	Energy efficient transportation systems	Reducing the building's energy consumption by specifying the optimum number and size of energy efficient transportation systems.	2	2	1.28%	1.28%
Ene07	Energy efficient laboratory systems	Reducing the building's operational greenhouse gas emissions (CO_2-eq) by specifying best practice energy efficient laboratory equipment.	0	0	0.00%	0.00%
Ene08	Energy efficient equipment	Demonstrating a meaningful reduction in the total unregulated energy demand of the building by using energy efficient equipment.	2	2	1.28%	1.28%
Tra01	Transport assessment and travel plan	Recognising developments in proximity to good public transport networks, thereby helping to reduce transport-related pollution and congestion.	2	2	1.67%	1.67%
Tra02	Sustainable transport measures	Recognising developments in close proximity of, and accessible to, local amenities which are likely to be frequently required and used by building occupants.	10	10	8.33%	8.33%
Wat01	Water consumption	Reducing the demand for potable water through the provision of efficient sanitary fittings, rainwater collection and water recycling systems.	5	3	4.38%	2.63%
Wat02	Water monitoring	Specification of water meters to allow for management and monitoring of water use in the building. This encourages reductions in water use by identifying areas of high usage and investigating potential causes.	1	1	0.88%	0.88%
Wat03	Water leak detection	Reducing the unintended water consumption due to leaks by installing leak detection systems and flow control devices.	2	2	1.75%	1.75%
Wat04	Water efficient equipment	Reducing water consumption for non-domestic scale, non-sanitary water uses by specifying efficient systems and improving the design efficiency of any water-using processes.	0	0	0.00%	0.00%
Mat01	Environmental impacts from construction products - Building life cycle assessment (LCA)	Reducing buildings' environmental life cycle impacts through conducting Life Cycle Assessment and integrating its outcomes in the design decision-making process.	7	7	7.50%	7.50%
Mat02	Environmental impacts from construction products - Environmental Product Declarations (EPD)	To encourage availability of robust and comparable data on the impacts of construction products by rewarding the specification of products with environmental products declarations.	1	1	1.07%	1.07%
Mat03	Responsible sourcing of construction products	Recognising and encouraging responsible sourcing of construction products. This includes the source of products and the intermediary companies processing and transporting the product to site.	4	1	4.29%	1.07%
Mat04	Insulation	This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.	0	0	0.00%	0.00%
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.	1	1	1.07%	1.07%
Mat 06	Material efficiency	Encouraging the reduction of environmental impacts through optimising the use of materials during all stages of the project.	1	1	1.07%	1.07%

Wst01	Construction waste management	Improving resource efficiency through developing a pre-demolition audit and a Resource Management Plan, maximising the recovery of material during demolition and diverting non-hazardous waste from landfill.	5	3	3.00%	1.80%
Wst02	Use of recycled and sustainably sourced aggregates	Encouraging the use of recycled or secondary aggregate or aggregate types with lower environmental impact to reduce waste and optimise material efficiency.	1	0	0.60%	0.00%
Wst03	Operational Waste	Encouraging the diversion of operational waste form landfill through the provision of space and facilities allowing the segregation and storage of recyclable waste.	1	1	0.60%	0.60%
Wst04	Speculative finishes (Offices only)	Specification of floor and ceiling finishes only where agreed with the occupant or, for tenanted areas where the future occupant is unknown, installation in a show area only, to reduce wastage.	0	0	0.00%	0.00%
Wst05	Adaptation to climate change	Encouraging consideration and implementation of measures to mitigate the impact of more extreme weather conditions arising from climate change over the lifespan of the building.	1	1	0.60%	0.60%
Wst06	Design for disassembly and adaptability	Encouraging consideration and implementation of measures design options related to adaptability and disassembly, which can accommodate future changes to the use of the building and its systems over its lifespan.	2	2	1.20%	1.20%
LE01	Site selection	Recognising the reuse of previously developed and contaminated land where appropriate remediation has taken place.	2	1	2.00%	1.00%
LE02	Identifying and understanding the risks and opportunities for the project	Identifying and understanding the ecological risks and opportunities associated with the site to inform the determination of the strategic outcome for the site.	2	2	2.00%	2.00%
LE03	Managing negative impacts on ecology	Recognition of steps taken to avoid impacts on existing site ecology as far as possible.	3	3	3.00%	3.00%
LE04	Change and enhancement of ecological value	Recognition of steps taken to enhance site ecology.	4	2	4.00%	2.00%
LE05	Long term ecology management and maintenance	Encouraging the long term maintenance and management of ecology on site to ensure both new and existing ecological features continue to thrive.	2	2	2.00%	2.00%
Pol01	Impact of refrigerants	Rewarding buildings that reduce the impact of refrigerant gas emissions.	3	1	2.00%	0.67%
Pol02	Local air quality	Recognising buildings which limit their impact on local air quality, by consideration of the combustion plant and fuel used on site.	2	0	1.33%	0.00%
Pol03	Flood and surface water management	Rewarding buildings and their sites that limit on-site and off-site local flooding and hence the damage this can cause.	5	2	3.33%	1.33%
Pol04	Reduction of night time light pollution	Avoiding or reducing the impact of night time light pollution, through careful design and specification of light sources.	1	1	0.67%	0.67%
Pol05	Reduction of noise pollution	Avoiding or reducing the impact of external noise from the building.	1	1	0.67%	0.67%
Inn01	Innovation	Test out new ideas which, if successful, could change the status quo of the industry. Allow the industry to explore new opportunities and evolve its processes.	10	0	10.00%	0.00%

BREEAM Rating **Excellent**
Total Score **72.01%**



	Available Score	Predicted Score	Section Weighting	Predicted Score
Management	21	20	11.00%	10.48%
Health & Wellbeing	18	7	14.00%	5.44%
Energy	25	18	16.00%	11.52%
Transport	12	12	10.00%	10.00%
Water	8	6	7.00%	5.25%
Materials	14	11	15.00%	11.79%
Waste	10	7	6.00%	4.20%
Land Use & Ecology	13	10	13.00%	10.00%
Pollution	12	5	8.00%	3.33%
Innovation	10	0	10.00%	0.00%

D. 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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