Sustainability Statement

Britannia Street Car Park

January 2025

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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	1	Danielle Cawley	Pete Jeavons	Pete Jeavons	January 2025

Report Outline

Contents

Executive Summary

This Sustainability Statement presents the sustainability credentials for a proposed development at Britannia Street Car Park, London, WC1X 9BP.

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.

The proposals are for the redevelopment of an existing brownfield site for Purpose-Built Student Accommodation in addition to community floorspace.

At a strategic level, this is considered sustainable on the basis that it will help alleviate the supply-side housing shortage and assist with the rebalancing of the socio-economic factors. The development is therefore considered to be beneficial to the local community and aligned with socio-economic requirements.

A range of sustainable design features are proposed, and construction will be responsibly managed to ensure minimal impact on the environment and local community.

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.

1. Introduction

Ensphere Group Ltd was commissioned by Curlew Developments London Limited to produce a Sustainability Statement for a proposed development at Britannia Street Car Park, London, WC1X 9BP.

Site and Surroundings

The application site (the 'Site'), which is 0.1 hectares in size, is located in the Kings Cross Ward of the London Borough of Camden, bounded by Britannia Street to the north; the three storey 'Help Musicians Building' and six storey Derby Lodge buildings to the east; Wicklow Street to the south; and by London Underground railway lines (in a cutting) to the west. The Thames Link railway line also runs in a shallow tunnel beneath the western half of the Site.

The Site comprises undeveloped hardstanding in use as a public car park and includes a ventilation shaft linked to the Thames Link railway tunnel running below the Site.

The area surrounding the Site was historically industrial and residential in nature with the Site itself having previously been occupied by a 3-storey warehouse. While the area generally retains its historic built from, forming part of the Kings Cross St Pancras Conservation Area, over time the areas industrial uses have been replaced by office, creative and additional residential uses (including student accommodation).

Building heights in the area generally range from two to six storeys, while the consented redevelopment of the nearby Royal National Throat, Nose and Ear Hospital (located to the south-west of the Site) permits the delivery of building up to 13 storeys tall.

The Site benefits from a high PTAL rating of 6b ('Excellent'), Kings Cross and St Pancras Railway and Underground Stations are located within 370 metres / 7-minute walk from the Site. There are also a number of bus stops within close proximity, with bus stops located at Grays Inn Road and Kings Cross Road.

Given the Sites proximity to various Universities including Central Saint Martins, Aga Khan University Institute, University of London & UCL within short walking and cycling distance of the Site, and its location within the 'Knowledge Quarter', the Site is an ideal location for students.

Proposed Development

The proposals are for the redevelopment of an existing brownfield site for Purpose-Built Student Accommodation in addition to community floorspace.

Report Objective

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

Figure 1.1 – Map Showing the Location of the Proposed Development

2. Assessment Methodology

Sustainability & Sustainable Development

"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.

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).

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.

The term "sustainable development" is often used interchangeably 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".

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

Analysis Methodology

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.

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.

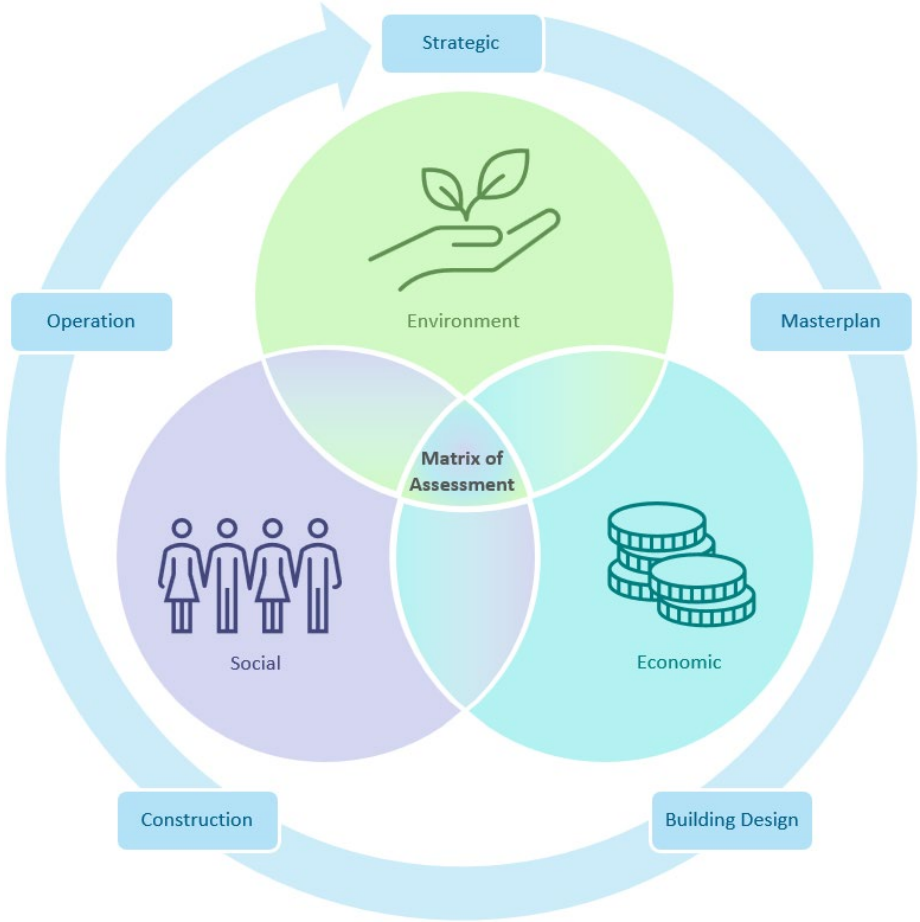

Figure 2.1 – Sustainability Assessment Matrix

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

3. Planning Context

Sustainable development is referenced throughout planning policy, with consideration given to relevant local policies and guidance, as per summarised in this section.

Figure 3.1 – Tiers of Key Relevant Planning Policy

National Context

National Planning Policy Framework (2024)

The National Planning Policy Framework (NPPF) was updated in December 2024. Paragraphs 7, 8 and 10 of the revised NPPF include reference to the following:

> *"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. At a similarly high level, members of the United Nations – including the United Kingdom – have agreed to pursue the 17 Global Goals for Sustainable Development in the period to 2030. These address social progress, economic well-being and environmental protection.*
>
> *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):*
>
> a. *An economic objective - to help build a strong, responsive and competitive economy, by ensuring that sufficient land of the right types is available in the right places and at the right time to support growth, innovation and improved productivity; and by identifying and coordinating the provision of infrastructure;*
>
> b. *A social objective - to support strong, vibrant and healthy communities, by ensuring that a sufficient number and range of homes can be provided to meet the needs of present and future generations; and by fostering well-designed, beautiful and safe places, with accessible services and open spaces that reflect current and future needs and support communities' health, social and cultural well-being; and*
>
> c. *An environmental objective - to protect and enhance our natural, built and historic environment; including making effective use of land, improving biodiversity, using natural resources prudently, minimising waste and pollution, and mitigating and adapting to climate change, including moving to a low carbon economy. […]*
>
> *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 (Updated 2024)

- 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.
- Environmental Impact Assessment – Explains requirements of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. This allows local planning authorities to better consider the environmental effects of a project when granting planning permission.
- Renewable and Low Carbon Energy – Guidance to help local councils in developing policies for renewable and low carbon energy and identifies the planning considerations.
- Flood Risk and Coastal Change – Advises how to take account of and address the risks associated with flooding and coastal change in the planning process.

London Context

London Plan (2021)

The London Plan is the overall strategic plan for London, it sets out an integrated economic, environmental, transport and social framework for development of London over the next 20-25 years. The London Plan is part of the Development Plan and covers a range of planning issues. The presented policies provide a vision for how London should sustainably grow and develop in the future. Policies considered pertinent to this report are presented below:

- Policy D2 (Infrastructure requirements for sustainable densities) – development proposals should be considerate of future planned levels of infrastructure and proportionate to the site's connectivity.
- Policy D3 (Optimising site capacity through the design-led approach) – lists a series of requirements including a requirement for development to aim for high sustainability standards.
- Policy S1 (Developing London's social infrastructure) – Develop proposals that seek to make the best use of land, including the public-sector estate, should be encouraged and supported.
- Policy G1 (Green Infrastructure) – Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.
- Policy G4 (Open Space) – Development proposals should not result in the loss of protected open space; and where possible create areas of publicly accessible open space.
- Policy G5 (Urban Greening) – Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design.
- Policy G6 (Biodiversity and access to nature) – Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain.
- Policy SI 1 (Improving air quality) – Development proposals should not lead to further deterioration of existing poor air quality.
- Policy SI 2 (Minimising greenhouse gas emissions) – Major development should be net zero-carbon and minimise emissions in accordance with the following energy hierarchy: be lean, be clean, be green, be seen. A minimum on site reduction of 35% beyond Building Regulations will be required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Any short fall with the zero-carbon target should be addressed through a carbon offset payment. Development referable to the GLA should also calculate whole life-cycle carbon emissions.
- Policy SI 3 (Energy infrastructure) – Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system.
- Policy SI 4 (Managing heat risk) – Major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems.
- Policy SI 5 (Water infrastructure) – Development proposals should be achieving mains water consumption of 105 litres or less per head per day; and achieve at least the BREEAM excellent standard for the 'Wat 01' water category. Smart metering, water saving, and recycling measures should also be incorporated.
- Policy SI 7 (Reducing waste and supporting the circular economy) – Referable applications should promote circular economy outcomes and aim to be net zero-waste.
- Policy SI 12 (Flood risk management) – Development proposals should ensure that flood risk is minimised and mitigated.
- Policy SI 13 (Sustainable drainage) – Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible.

Energy Assessment Guidance (2022)

This guidance document explains how to prepare an energy assessment to accompany strategic planning applications referred to the Mayor as set out in London Plan Policy SI 2. It states that the purpose of an energy assessment is to demonstrate that the proposed climate change mitigation measures comply with London Plan energy policies, including the energy hierarchy.

Although primarily aimed at strategic planning applications, London boroughs are encouraged to apply the same structure for energy assessments related to non-referable applications and adapt it for relevant scales of development.

Local Context

Camden Local Plan (July 2017)

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.

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. All new residential development will be required to demonstrate a 19% CO_2 reduction below Part L 2013 Building Regulations (in addition to any requirements for renewable energy). The Council will expect developments of five or more dwellings and/or more than 500 sqm of any gross internal floorspace to achieve a 20% reduction in carbon dioxide emissions from on-site renewable energy generation, unless it can be demonstrated that such provision is not feasible.
- 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 and/or five or more dwellings.
- Policy CC3 (Water and flooding) – The Council will seek to ensure that development does not increase flood risk and reduces the risk of flooding where possible. Residential developments will be expected to meet the requirement of 110 litres per person per day (including 5 litres for external water use).
- Policy CC4 (Air quality) – Air Quality Assessments (AQAs) are required where development is likely to expose residents to high levels of air pollution, with recommended measures adopted. In locations of poor air quality, developments that introduce sensitive receptors (i.e. housing, schools) will also need to be designed to mitigate the impact.
- Policy CC5 (Waste) – developments need to include facilities for the storage and collection of waste and recycling, in line with Council waste targets.

Camden Planning Guidance – Energy Efficiency & Adaptation (January 2021)

This document was adopted on 15 January 2021 following statutory consultation and replaces the Energy efficiency and adaptations CPG (March 2019), which replaced the CPG3 Sustainability (July 2015).

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.

Includes requirements concerning credits under certain BREEAM categories (60% energy, 60% water and 40% materials); and reference to a 20% carbon reduction target using renewables.

Where developments are likely to be at risk of overheating applicants will be required to complete dynamic thermal modelling to demonstrate that any risk to overheating has been mitigated.

Assessment tools, such as Passivhaus and Home Quality Mark are "encouraged".

4. Site Context

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

Indices of Multiple Deprivation

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%). 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.

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 in the respective maps (with the colour system used in this report: 1/most deprived – dark purple; 10/least deprived – dark green). Government data (illustrated below) indicates that the area ranks 6,387 out of 32,844; where 1 is the most deprived. The area is therefore considered to have a higher-than-average level of deprivation overall. The table below provides the data for the individual domains:

Table 3.1 - Indices of Multiple Deprivation Ranks and Deciles for the Respective Area

	Rank	Decile
Income	8,029	3
Employment	9,093	3
Education, Skills and Training	16,387	5
Health Deprivation and Disability	13,128	4
Crime	1,972	1
Barriers to Housing and Services	10,827	4
Living Environment Rank	690	1
Index of Multiple Deprivation (IMD)	6,387	2

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

ONS Household Projections

The Office for National Statistics presents data relevant to household projections for England, by region and local authority, mid-2018 to mid-2043 (formerly referred to as live tables on household projections).

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. Nevertheless, data suggests that household numbers in Camden will increase, as per displayed in the figure below.

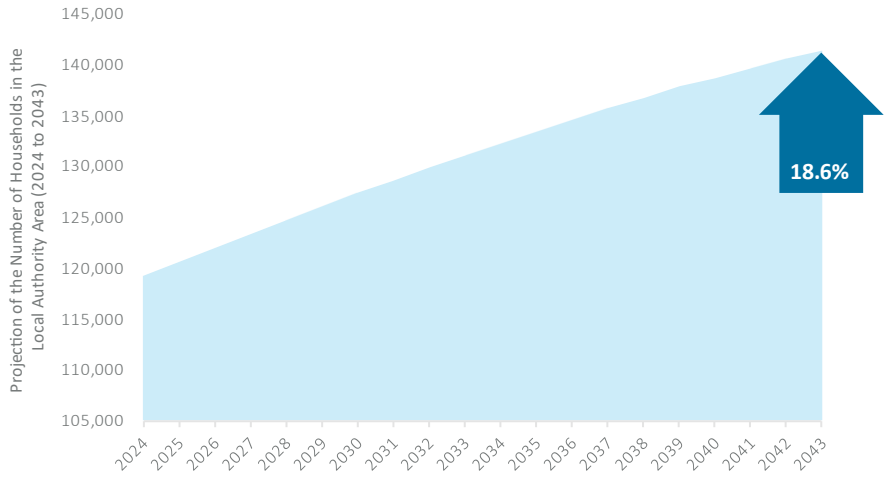

Figure 4.1 - Household Projections for Camden (Source: ONS)

Overcrowding and Under-Occupancy

The Census (2021) dataset from ONS reports household characteristics by occupancy rating (bedrooms), for households with usual residents in England and Wales, with data available a local authority district level. A rating of -1 or less implies that a household's accommodation has fewer bedrooms than required (overcrowded), whereas +1 or more implies that a household's accommodation has more bedrooms than required (under-occupied). This data has been used to understand whether the local area is considered

more overcrowded that at a national level, with the proportional split for each rating shown in the figure below.

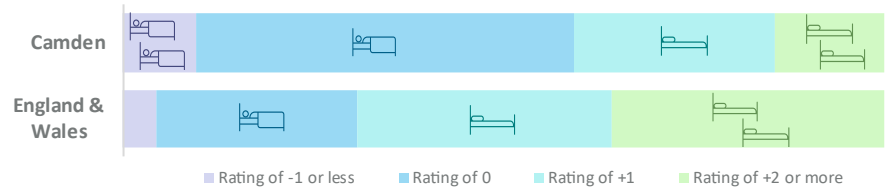

Figure 4.2 – Occupancy Rating (Bedrooms) For England and Wales, and The Local Authority District (Census 2021)

Further Education and Skills Participation

The Office for National Statistics provides further education and skills participation details for local authorities, using data from the Department for Education. The figure below presents data for the 2022 to 2023 period, and shows people aged 19 and above participating in further education and skills learning. Geography is based upon the home postcode of the learner. The number of people in further education and skills learning for Camden equates to circa 6,310 per 100,000 population, which is higher than the England average where the number of people is estimated at around 5,401 per 100,000 population.

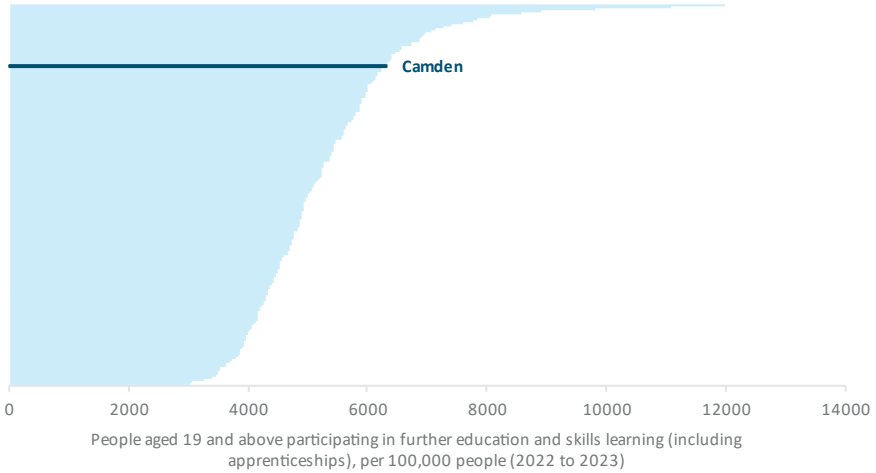

Figure 4.3 - Further Education and Skills Participation for Local Authorities in England (Source: Department for Education)

Environmental Context

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

Land Use

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

Flooding

The site is identified as being in Flood Zone 1 meaning the area has a low probability of flooding from rivers and the sea (according to the UK Government's 'Flood Map for Planning'). The risk of surface water flooding is also shown on the map below. Further details can be found in the accompanying Flood Risk Assessment.

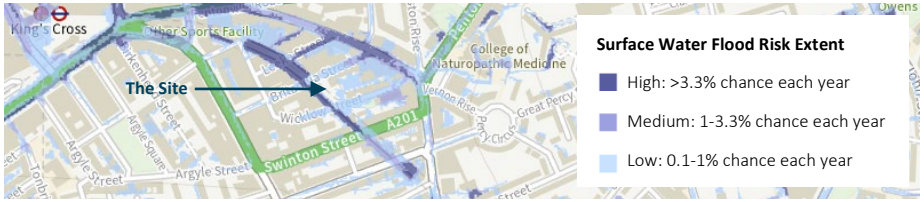

Figure 4.4 - Surface Water Flood Risk Map (Source - https://check-long-term-flood-risk.service.gov.uk/map, Open Government Licence v3.0)

Ecology

The existing site is almost entirely covered by hardstanding and existing structures. The current ecological value is considered negligible. Further details can be found in the accompanying Ecological Appraisal.

Local Amenities & Public Transport

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

The development is situated within a predominantly residential area, but with many services and commercial uses such as a cash machine, hairdresser, cafes, restaurants and convenience stores along King's Cross Road (a ~2-minute walk from the Site).

The Site benefits from a high PTAL rating of 6b ('Excellent'), Kings Cross and St Pancras Railway and Underground Stations are located within 370 metres / 7-minute walk from the Site. There are also a number of bus stops within close proximity, with bus stops located at Grays Inn Road and Kings Cross Road. The Site is located in close proximity to cycle routes C6 (connecting Camden, Islington and Southwark) and C27 (connecting Hammersmith and Fulham, Kensington and Chelsea, Westminster, Camden, Islington, Hackney and Waltham Forest). The closest access points to these routes is Sidmouth Street, approximately 345m south of Britannia Street. A number of Santander Cycle Hire docking stations are in close proximity to the site, including a docking station on St Chad's Street (195m away) and one on Cromer Street (approximately 200m away). Further detail of the transport infrastructure can be found in the Transport Statement produced in support of the planning application.

5. Sustainable Design Proposal

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

Energy & Carbon

Priority will be given to efficiency first, on the basis that it is better to reduce energy demand (and associated carbon emissions and resource requirements) than to generate energy; even using low carbon or renewable technologies.

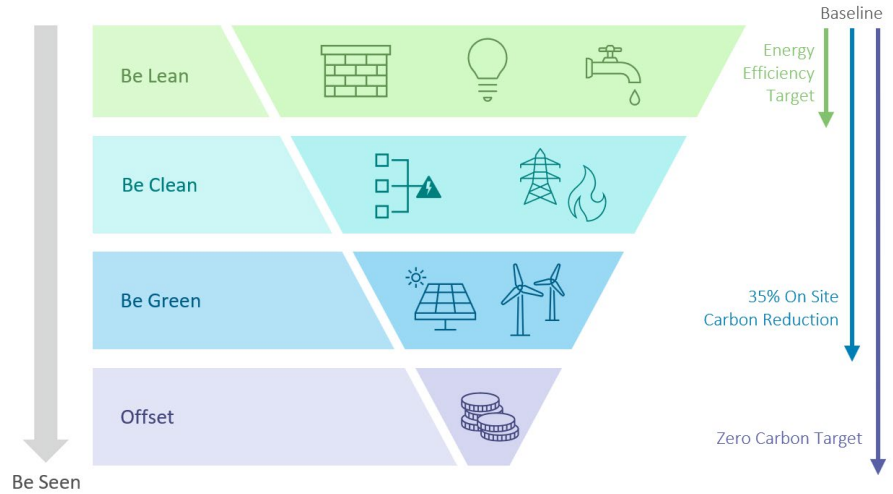

Figure 5.1 – Energy Hierarchy – with the Target Baseline Being Building Regulations (Adapted from the London Plan 2021)

Passive Design

Passive design seeks to maximise the use of natural sources of heating, cooling and ventilation to maintain thermal comfort levels within the building.

Due to the constraints of the site shape, the development has multiple faces orientated in all directions. Where compatible with aesthetic considerations, external features have been included to provide a degree of shading from the sun. It is intended that the building will have the potential to be naturally ventilated (via openable window / vent).

Fabric Efficiency

Fabric efficiency concerns the thermal properties associated with the building fabric and construction.

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).

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, thus preserving the heat within the space and reducing the requirement for mechanical heating.

A high 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.

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.

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.

System Efficiency

Where fans are employed, the specific fan power (SFP) for these systems will be efficient and target a power consumption rate of 0.3W/l/s.

Metering

The major energy uses shall be monitored via separate “smart” energy meters with time and temperature zone control.

Lighting

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.

Mechanical Ventilation

Whilst the units will have the option of natural ventilation, mechanical ventilation (with heat recovery) will also be incorporated into certain areas in order to preserve heat during colder months.

Low Carbon / Renewable Technologies

It is proposed to apply Air Source Heat Pumps (ASHPs) for the main space and hot water heating system. An extent of PV is also proposed at roof level to maximise performance against planning policy targets.

With all proposed systems being electric, coupled with the decarbonisation of the National Grid, the development proposals will be capable of being zero carbon. Further information can be found in the accompanying Energy Statement.

Climate Change

Thermal Comfort

The issue of overheating will be separately assessed; on the basis that, as buildings become progressively better sealed and insulated, the potential for overheating increases. However, given that the building will have openable windows, supported by mechanical ventilation, the risk is considered to be low.

Flood Risk

The Site will incorporate drainage mechanisms throughout the development to minimise run-off and reduce the risk of flooding elsewhere. Further information can be found in the accompanying Drainage Strategy.

Water

The Development would ensure the efficient use of natural resources (including water), including making the most of natural systems both within and around buildings through:

- The provision of water efficient/low flow sanitaryware fittings and fixtures throughout the development, will be specified to reduce potable water consumption and foul flow.
- Landscaping which will predominantly rely on natural precipitation to reduce demands on the potable water supply.

Water saving fittings and appliances shall be installed to achieve overall water consumption levels <105 litres / person / day. The following outlines the proposed maximum flow / consumption rates for each of the proposed installation types:

- Dual flush toilets of 6/3 litres
- Bath capacity to overflow to be ~100 litres
- Shower flow rates to be ~7.75 litres / minute
- Taps to have a flow rate <5litres / minute
- Washing machine to be <9.5litres / kg
- Dishwasher to be <1.25 litres / place setting

Pollution

Heating systems at the site shall also be electrical, avoiding local emissions associated with combustion.

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.

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 and well-being of occupants.

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.

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.

Waste

Waste & Recycling

Suitable waste and recycling facilities will be provided within the Development to collect and segregate wastes generated through the operation of the Site. These will be in convenient locations and for storage of general refuse, recyclables and food waste. Internal and external storage will be considerate of the relevant Building Regulations, British Standards and Council requirements.

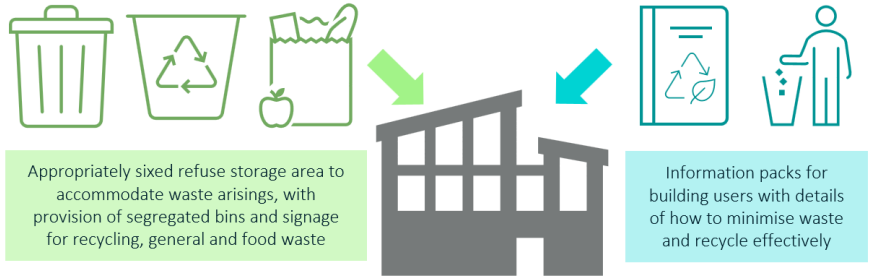

Figure 5.2 – Operational Waste Management Strategy

Materials

Sustainable Sourcing

Selection of sustainably sourced materials with suppliers being used that are able to provide BES6001 certification and ISO14001, where possible.

All timber and timber-based products should be sourced from accredited Forest Stewardship Council (FSC) or Programme for the Endorsement of forestry Certification (PEFC) source.

Whole Lifecycle Carbon Assessment

Whole life-cycle carbon ("WLC") emissions are the carbon emissions resulting from materials, construction and use of a building over its entire life, including its demolition and disposal.

A whole life carbon approach identifies the overall best combined opportunities for reducing lifetime emissions and helps to avoid any unintended consequences of focusing on operational emissions alone.

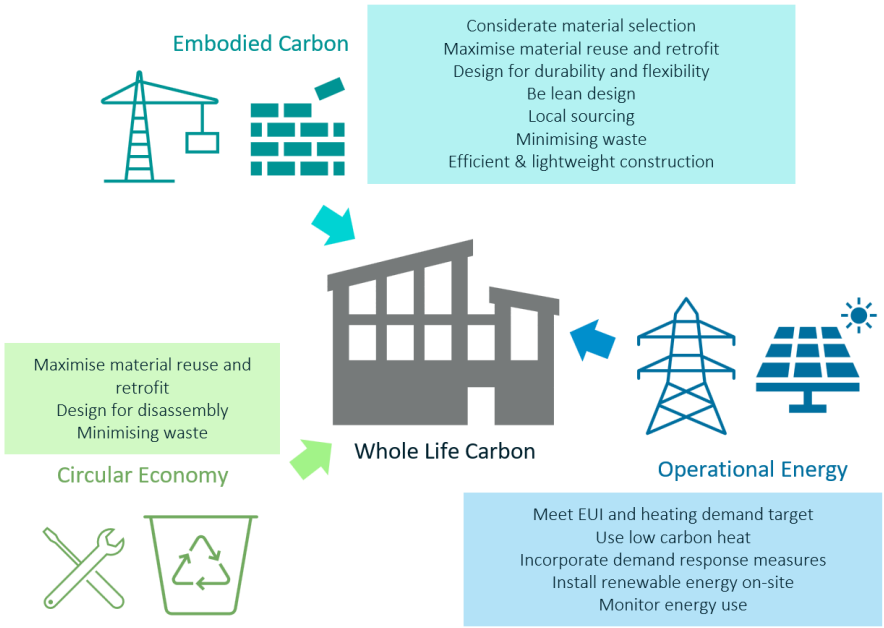

Figure 5.3 – Whole Life Carbon Assessment Approach

The materials strategy for the development shall consider lifecycle environmental impacts, with a view to optimising materials utilisation and safeguarding natural resources. It is intended that most major elements (walls, floors, roof) will have an "A" or "A+" rating according to the BRE's Green Guide Specification.

Circular Economy

Consideration has been given to the most appropriate Circular Economy ("CE") strategic approaches based on the nature and predicted lifespan of the development.

Attention has been given to the planning policy and other requirements and a number of specific goals are proposed for the development. Key commitments include:

- The use of materials that have high durability for longevity; to protect vulnerable parts of the building from damage and exposed parts of the building from material degradation to reduce maintenance and operation costs for the end users.
- Diversion of demolition and construction waste from landfill by converting elements and materials for alternative use.
- Efficient construction and operational waste management via accessible, dedicated areas for segregated waste volumes.

Biodiversity

A series of measures to enhance the biodiversity value of the Site will be incorporated into the Development in order to conserve and increase the ecological value of habitats at the Site in line with planning policy and include:

- The use of native species or species of benefit to wildlife within any proposed landscape scheme to provide foraging opportunities for birds, bats, invertebrates.
- Installation of green roofs, subject to viability and available roof space in the context of other demands (e.g., area required for PV array and plant equipment).
- Additional habitat could be created above ground level such as the provision of bird and bat boxes.

The target for biodiversity net gain is 10%, with the aim for an urban greening factor of 0.4 to be achieved. Further information can be found in the submitted Ecology Assessment.

Transport

Secure cycle storage will be provided to encourage building users to cycle so promoting exercise and helping reduce congestion and emissions. A dedicated cycle store for the PBSA units will be provided along the southern frontage of the site with Wicklow Street, with 93No. spaces proposed. Additionally, 4No. visitor cycle parking spaces are provided, fronting onto Britannia Street.

The scheme has been developed as car free, with the exception of one on-street accessible space, and two pay-by-hour space for local service providers, e.g. plumbers. Further information can be found in the submitted Transport Assessment and Travel Plan.

Sustainable Building Standards

A BREEAM "Excellent" rating will be targeted as a minimum for the student accommodation. The BREEAM Pre-Assessment for the scheme has been appended to this report for reference.

6. Sustainable Construction Proposals

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

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 11 points in each of the three sections shall be set. This represents a high level of performance and a commitment to responsibly manage construction activities.

Environmental Management

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

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.

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

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' (2013), a guide for developers.

Air Pollution

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.
- Sealed storage for cement, sand and fine aggregates.

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

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.

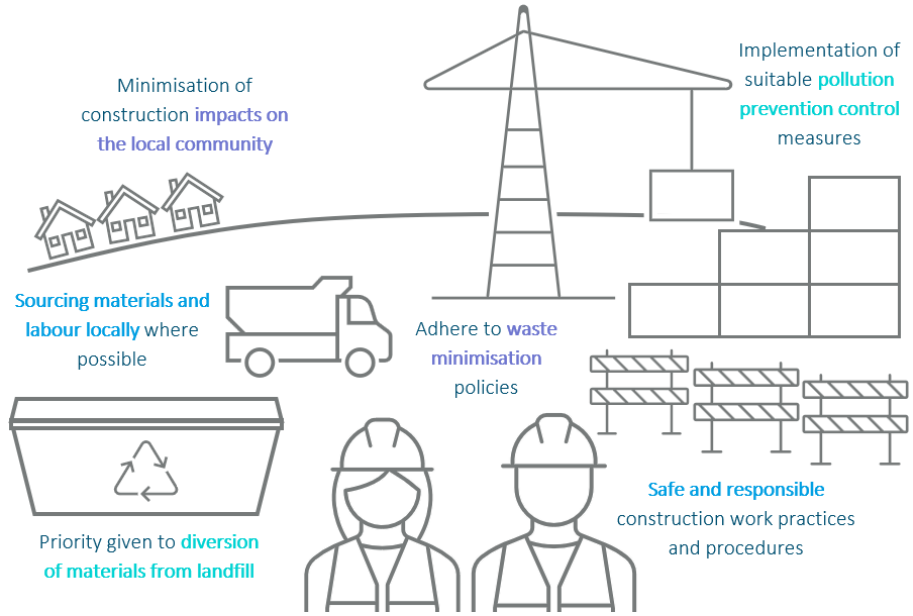

Figure 6.1 – Illustration of Sustainable Construction Practices

7. Summary

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.

The proposals are for the redevelopment of an existing brownfield site for Purpose-Built Student Accommodation in addition to community floorspace.

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 including Policy D1 (Design), Policy CC1 (Climate Change Mitigation) and Policy CC2 (Adapting to Climate Change). Consideration has also been given to the National and London planning policy framework.

Strategic Sustainability

Both nationally and regionally there is a shortfall in housing, which is leading to property prices rising significantly faster than earnings, with implications for affordability and ownership. Local data suggests that these demand pressures are set to continue with ONS data for populations in Camden predicting continued growth over the forthcoming decades.

The lack of access to housing is often most acutely felt by for those people who are not yet on the housing ladder and who have not benefited in the increase in property asset values. Typically, these people will be the younger and those with lower incomes; the consequence being that the supply and demand imbalance is contributing towards intergenerational inequality by compromising the ability of current and future generations in meeting their own housing needs. This is inconsistent with the principles of "sustainable development" as defined by Brundtland; and if not addressed, will have longer term societal and economic implications.

At a local level, the Indices of Multiple Deprivation highlights a higher-than-average level of deprivation in relation to barriers to housing and services. Census data also indicates a higher level of overcrowding than the national average.

With Camden being a hub for education institutions of national and international significance, as well as colleges preparing students for higher education, there is also a constant demand for student accommodation. To meet this demand, Camden Council aims to supply a target of 160 additional places in student housing each year.

A need is therefore considered to exist on the basis that the nature of the proposed development will help relieve anticipated future demand pressures on housing and assist with the rebalancing of the socio-economic factors.

Sustainable Design and Construction

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

- Air Source Heat Pumps for space and hot water heating.
- An extent of PV will be located at roof level.
- Highly thermally efficient building fabric.
- Highly efficient lighting.
- Water saving sanitary fittings and appliances to deliver a water efficient development and achieve overall water consumption levels <105 litres / person / day.
- 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.
- Installation of green roofs, with a 10% target for biodiversity net gain and 0.4 urban greening factor target.
- A BREEAM "Excellent" rating will be targeted for the student accommodation.

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. Proposed Site Plan

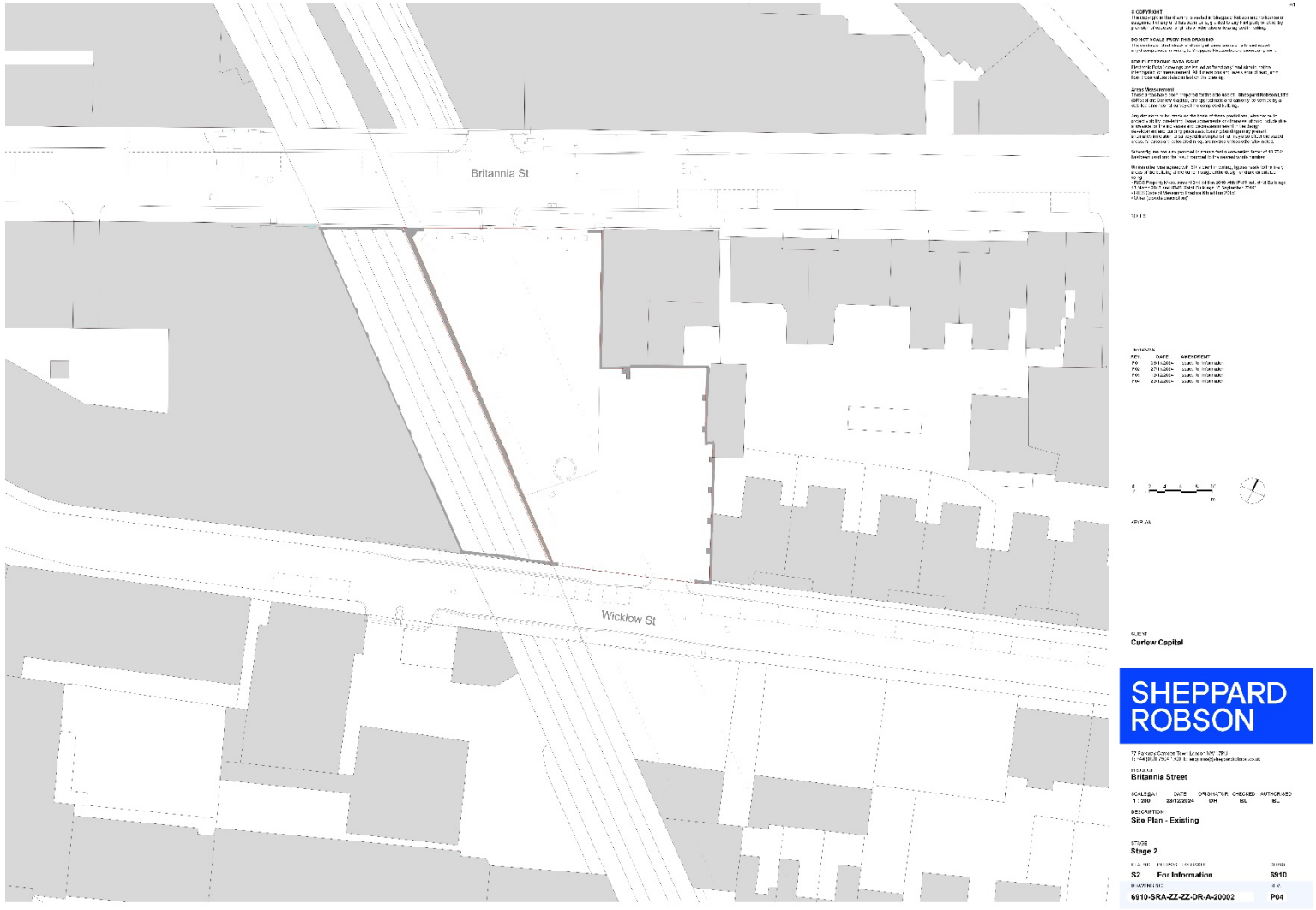

Figure Appendix A.1 – Proposed Site Plan (Provided by Sheppard Robson)

B. Key Local Planning Policy Requirements

London Planning Policy Framework

Table Appendix B.1 – London Plan (2021)

Policy Reference	Details
Policy D2 Infrastructure requirements for sustainable densities	A. The density of development proposals should: 1) consider, and be linked to, the provision of future planned levels of infrastructure rather than existing levels 2) be proportionate to the site's connectivity and accessibility by walking, cycling, and public transport to jobs and services (including both PTAL and access to local services). B. Where there is currently insufficient capacity of existing infrastructure to support proposed densities (including the impact of cumulative development), boroughs should work with applicants and infrastructure providers to ensure that sufficient capacity will exist at the appropriate time. This may mean that if the development is contingent on the provision of new infrastructure, including public transport services, it will be appropriate that the development is phased accordingly. C. When a proposed development is acceptable in terms of use, scale and massing, given the surrounding built form, uses and character, but it exceeds the capacity identified in a site allocation or the site is not allocated, and the borough considers the planned infrastructure capacity will be exceeded, additional infrastructure proportionate to the development should be delivered through the development. This will be identified through an infrastructure assessment during the planning application process, which will have regard to the local infrastructure delivery plan or programme, and the CIL contribution that the development will make. Where additional required infrastructure cannot be delivered, the scale of the development should be reconsidered to reflect the capacity of current or future planned supporting infrastructure.
Policy D3 Optimising site capacity through the design-led approach	<u>The design-led approach</u> A. All development must make the best use of land by following a design-led approach that optimises the capacity of sites, including site allocations. Optimising site capacity means ensuring that development is of the most appropriate form and land use for the site. The design-led approach requires consideration of design options to determine the most appropriate form of development that responds to a site's context and capacity for growth, and existing and planned supporting infrastructure capacity (as set out in Policy D2 Infrastructure requirements for sustainable densities), and that best delivers the requirements set out in Part D. B. Higher density developments should generally be promoted in locations that are well connected to jobs, services, infrastructure and amenities by public transport, walking and cycling, in accordance with Policy D2 Infrastructure requirements for sustainable densities. Where these locations have existing areas of high density buildings, expansion of the areas should be positively considered by Boroughs where appropriate. This could also include expanding Opportunity Area boundaries where appropriate. C. In other areas, incremental densification should be actively encouraged by Boroughs to achieve a change in densities in the most appropriate way. This should be interpreted in the context of Policy H2. D. Development proposals should: <u>Form and layout</u> 1) enhance local context by delivering buildings and spaces that positively respond to local distinctiveness through their layout, orientation, scale, appearance, and shape, with due regard to existing and emerging street hierarchy, building types, forms and proportions 2) encourage and facilitate active travel with convenient and inclusive pedestrian and cycling routes, crossing points, cycle parking, and legible entrances to buildings, that are aligned with peoples' movement patterns and desire lines in the area 3) be street-based with clearly defined public and private environments 4) facilitate efficient servicing and maintenance of buildings and the public realm, as well as deliveries, that minimise negative impacts on the environment, public realm and vulnerable road users <u>Experience</u> 5) achieve safe, secure, and inclusive environments 6) provide active frontages and positive reciprocal relationships between what happens inside the buildings and outside in the public realm to generate liveliness and interest 7) deliver appropriate outlook, privacy, and amenity 8) provide conveniently located green and open spaces for social interaction, play, relaxation and physical activity 9) help prevent or mitigate the impacts of noise and poor air quality 10) achieve indoor and outdoor environments that are comfortable and inviting for people to use <u>Quality and Character</u> 11) respond to the existing character of a place by identifying the special and valued features and characteristics that are unique to the locality and respect, enhance and utilise the heritage assets and architectural features that contribute towards the local character 12) be of high quality, with architecture that pays attention to detail, and gives thorough consideration to the practicality of use, flexibility, safety and building lifespan through appropriate construction methods and the use of attractive, robust materials which weather and mature well 13) aim for high sustainability standards (with reference to the policies within London Plan Chapters 8 and 9) and take into account the principles of the circular economy 14) provide spaces and buildings that maximise opportunities for urban greening to create attractive resilient places that can also help the management of surface water.

	E. Where development parameters for allocated sites have been set out in a Development Plan, development proposals that do not accord with the site capacity in a site allocation can be refused for this reason.
Policy S1 Developing London's social infrastructure	a. When preparing Development Plans, boroughs should ensure the social infrastructure needs of London's diverse communities are met, informed by a needs assessment of social infrastructure. Assessments should consider the need for cross-borough collaboration where appropriate and involve relevant stakeholders, including the local community. b. In areas of major new development and regeneration, social infrastructure needs should be addressed via area-based planning such as Opportunity Area Planning Frameworks, Area Action Plans, Development Infrastructure Funding Studies, Neighbourhood Plans or master plans. c. Development proposals that provide high quality, inclusive social infrastructure that addresses a local or strategic need and supports service delivery strategies should be supported. d. Development proposals that seek to make best use of land, including the public-sector estate, should be encouraged and supported. This includes the co-location of different forms of social infrastructure and the rationalisation or sharing of facilities. e. New facilities should be easily accessible by public transport, cycling and walking and should be encouraged in high streets and town centres. f. Development proposals that would result in a loss of social infrastructure in an area of defined need as identified in the borough's social infrastructure needs assessment required under Part A should only be permitted where: 1) there are realistic proposals for re-provision that continue to serve the needs of the neighbourhood and wider community, or; 2) the loss is part of a wider public service transformation plan which requires investment in modern, fit for purpose infrastructure and facilities to meet future population needs or to sustain and improve services. g. Redundant social infrastructure should be considered for full or partial use as other forms of social infrastructure before alternative developments are considered, unless this loss is part of a wider public service transformation plan (see Part F2).
Policy G1 Green Infrastructure [extract]	[…] D. Development proposals should incorporate appropriate elements of green infrastructure that are integrated into London's wider green infrastructure network.
Policy G4 Open Space [extract]	[…] B. Development proposals should: 1) not result in the loss of protected open space 2) where possible create areas of publicly accessible open space, particularly in areas of deficiency.
Policy G5 Urban Greening	A. Major development proposals should contribute to the greening of London by including urban greening as a fundamental element of site and building design, and by incorporating measures such as high-quality landscaping (including trees), green roofs, green walls and nature-based sustainable drainage. B. Boroughs should develop an Urban Greening Factor (UGF) to identify the appropriate amount of urban greening required in new developments. The UGF should be based on the factors set out in Table 8.2, but tailored to local circumstances. In the interim, the Mayor recommends a target score of 0.4 for developments that are predominately residential, and a target score of 0.3 for predominately commercial development (excluding B2 and B8 uses). C. Existing green cover retained on site should count towards developments meeting the interim target scores set out in (B) based on the factors set out in Table 8.2.
Policy G6 Biodiversity and access to nature [extract]	[…] D. Development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain. This should be informed by the best available ecological information and addressed from the start of the development process. E. Proposals which reduce deficiencies in access to nature should be considered positively.
Policy SI 1 Improving air quality [extract]	[…] B. To tackle poor air quality, protect health and meet legal obligations the following criteria should be addressed: 1) Development proposals should not: a) lead to further deterioration of existing poor air quality b) create any new areas that exceed air quality limits, or delay the date at which compliance will be achieved in areas that are currently in exceedance of legal limits c) create unacceptable risk of high levels of exposure to poor air quality. 2) In order to meet the requirements in Part 1, as a minimum: a) development proposals must be at least Air Quality Neutral b) development proposals should use design solutions to prevent or minimise increased exposure to existing air pollution and make provision to address local problems of air quality in preference to post-design or retro-fitted mitigation measures c) major development proposals must be submitted with an Air Quality Assessment. Air quality assessments should show how the development will meet the requirements of B1 d) development proposals in Air Quality Focus Areas or that are likely to be used by large numbers of people particularly vulnerable to poor air quality, such as children or older people should demonstrate that design measures have been used to minimise exposure. […]
Policy SI 2 Minimising greenhouse gas emissions	A. Major development should be net zero-carbon. This means reducing greenhouse gas emissions in operation and minimising both annual and peak energy demand in accordance with the following energy hierarchy: 1) be lean: use less energy and manage demand during operation

	2) be clean: exploit local energy resources (such as secondary heat) and supply energy efficiently and cleanly 3) be green: maximise opportunities for renewable energy by producing, storing and using renewable energy on-site 4) be seen: monitor, verify and report on energy performance. B. Major development proposals should include a detailed energy strategy to demonstrate how the zero-carbon target will be met within the framework of the energy hierarchy. C. A minimum on-site reduction of at least 35 per cent beyond Building Regulations is required for major development. Residential development should achieve 10 per cent, and non-residential development should achieve 15 per cent through energy efficiency measures. Where it is clearly demonstrated that the zero-carbon target cannot be fully achieved on-site, any shortfall should be provided, in agreement with the borough, either: 1) through a cash in lieu contribution to the borough's carbon offset fund, or 2) off-site provided that an alternative proposal is identified and delivery is certain. D. Boroughs must establish and administer a carbon offset fund. Offset fund payments must be ring-fenced to implement projects that deliver carbon reductions. The operation of offset funds should be monitored and reported on annually. E. Major development proposals should calculate and minimise carbon emissions from any other part of the development, including plant or equipment, that are not covered by Building Regulations, i.e. unregulated emissions. F. Development proposals referable to the Mayor should calculate whole life-cycle carbon emissions through a nationally recognised Whole Life-Cycle Carbon Assessment and demonstrate actions taken to reduce life-cycle carbon emissions.
Policy SI3 Energy infrastructure	A. Boroughs and developers should engage at an early stage with relevant energy companies and bodies to establish the future energy and infrastructure requirements arising from large-scale development proposals such as Opportunity Areas, Town Centres, other growth areas or clusters of significant new development. B. Energy masterplans should be developed for large-scale development locations (such as those outlined in Part A and other opportunities) which establish the most effective energy supply options. Energy masterplans should identify: 1) major heat loads (including anchor heat loads, with particular reference to sites such as universities, hospitals and social housing) 2) heat loads from existing buildings that can be connected to future phases of a heat network 3) major heat supply plant including opportunities to utilise heat from energy from waste plants 4) secondary heat sources, including both environmental and waste heat 5) opportunities for low and ambient temperature heat networks 6) possible land for energy centres and/or energy storage 7) possible heating and cooling network routes 8) opportunities for futureproofing utility infrastructure networks to minimise the impact from road works 9) infrastructure and land requirements for electricity and gas supplies 10) implementation options for delivering feasible projects, considering issues of procurement, funding and risk, and the role of the public sector 11) opportunities to maximise renewable electricity generation and incorporate demand-side response measures. C. Development Plans should: 1) identify the need for, and suitable sites for, any necessary energy infrastructure requirements including energy centres, energy storage and upgrades to existing infrastructure 2) identify existing heating and cooling networks, identify proposed locations for future heating and cooling networks and identify opportunities for expanding and inter-connecting existing networks as well as establishing new networks. D. Major development proposals within Heat Network Priority Areas should have a communal low-temperature heating system: 1) the heat source for the communal heating system should be selected in accordance with the following heating hierarchy: a) connect to local existing or planned heat networks b) use zero-emission or local secondary heat sources (in conjunction with heat pump, if required) c) use low-emission combined heat and power (CHP) (only where there is a case for CHP to enable the delivery of an area-wide heat network, meet the development's electricity demand and provide demand response to the local electricity network) d) use ultra-low NOx gas boilers 2) CHP and ultra-low NOx gas boiler communal or district heating systems should be designed to ensure that they meet the requirements in Part B of Policy SI 1 Improving air quality 3) where a heat network is planned but not yet in existence the development should be designed to allow for the cost-effective connection at a later date. E. Heat networks should achieve good practice design and specification standards for primary, secondary and tertiary systems comparable to those set out in the CIBSE/ADE Code of Practice CP1 or equivalent.
Policy SI 4 Managing heat risk	A. Development proposals should minimise adverse impacts on the urban heat island through design, layout, orientation, materials and the incorporation of green infrastructure. B. Major development proposals should demonstrate through an energy strategy how they will reduce the potential for internal overheating and reliance on air conditioning systems in accordance with the following cooling hierarchy: 1) reduce the amount of heat entering a building through orientation, shading, high albedo materials, fenestration, insulation and the provision of green infrastructure

	2) minimise internal heat generation through energy efficient design 3) manage the heat within the building through exposed internal thermal mass and high ceilings 4) provide passive ventilation 5) provide mechanical ventilation 6) provide active cooling systems.
Policy SI 5 Water infrastructure [extract]	[…] C. Development proposals should: 1) through the use of Planning Conditions minimise the use of mains water in line with the Optional Requirement of the Building Regulations (residential development), achieving mains water consumption of 105 litres or less per head per day (excluding allowance of up to five litres for external water consumption) 2) achieve at least the BREEAM excellent standard for the 'Wat 01' water category or equivalent (commercial development) 3) incorporate measures such as smart metering, water saving and recycling measures, including retrofitting, to help to achieve lower water consumption rates and to maximise future-proofing.
Policy SI 7 Reducing waste and supporting the circular economy	A. Resource conservation, waste reduction, increases in material reuse and recycling, and reductions in waste going for disposal will be achieved by the Mayor, waste planning authorities and industry working in collaboration to: 1) promote a more circular economy that improves resource efficiency and innovation to keep products and materials at their highest use for as long as possible 2) encourage waste minimisation and waste prevention through the reuse of materials and using fewer resources in the production and distribution of products 3) ensure that there is zero biodegradable or recyclable waste to landfill by 2026 4) meet or exceed the municipal waste recycling target of 65 per cent by 2030 5) meet or exceed the targets for each of the following waste and material streams: 6) construction and demolition – 95 per cent reuse/recycling/recovery 7) excavation – 95 per cent beneficial use 8) design developments with adequate, flexible, and easily accessible storage space and collection systems that support, as a minimum, the separate collection of dry recyclables (at least card, paper, mixed plastics, metals, glass) and food. B. Referable applications should promote circular economy outcomes and aim to be net zero-waste. A Circular Economy Statement should be submitted, to demonstrate: 1) how all materials arising from demolition and remediation works will be re-used and/or recycled
	2) how the proposal's design and construction will reduce material demands and enable building materials, components and products to be disassembled and re-used at the end of their useful life 3) opportunities for managing as much waste as possible on site 4) adequate and easily accessible storage space and collection systems to support recycling and re-use 5) how much waste the proposal is expected to generate, and how and where the waste will be managed in accordance with the waste hierarchy 6) how performance will be monitored and reported. C. Development Plans that apply circular economy principles and set local lower thresholds for the application of Circular Economy Statements for development proposals are supported.
Policy SI 12 Flood risk management [extract]	[…] C. Development proposals should ensure that flood risk is minimised and mitigated, and that residual risk is addressed. This should include, where possible, making space for water and aiming for development to be set back from the banks of watercourses. […]
Policy SI 13 Sustainable drainage [extract]	[…] B. Development proposals should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible. There should also be a preference for green over grey features, in line with the following drainage hierarchy: 1) rainwater use as a resource (for example rainwater harvesting, blue roofs for irrigation) 2) rainwater infiltration to ground at or close to source 3) rainwater attenuation in green infrastructure features for gradual release (for example green roofs, rain gardens) 4) rainwater discharge direct to a watercourse (unless not appropriate) 5) controlled rainwater discharge to a surface water sewer or drain 6) controlled rainwater discharge to a combined sewer. C. Development proposals for impermeable surfacing should normally be resisted unless they can be shown to be unavoidable, including on small surfaces such as front gardens and driveways. D. Drainage should be designed and implemented in ways that promote multiple benefits including increased water use efficiency, improved water quality, and enhanced biodiversity, urban greening, amenity and recreation.

Local Policy

Table Appendix B.2 – Camden Local Plan (July 2017)

Policy Reference	Details
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: […] a. respects local context and character; b. preserves or enhances the historic environment and heritage assets in accordance with Policy D2 Heritage; c. is sustainable in design and construction, incorporating best practice in resource management and climate change mitigation and adaptation; d. is of sustainable and durable construction and adaptable to different activities and land uses; e. comprises details and materials that are of high quality and complement the local character; f. integrates well with the surrounding streets and open spaces, improving movement through the site and wider area with direct, accessible and easily recognisable routes and contributes positively to the street frontage; g. is inclusive and accessible for all; h. promotes health; i. is secure and designed to minimise crime and antisocial behaviour; j. responds to natural features and preserves gardens and other open space; k. incorporates high quality landscape design (including public art, where appropriate) and maximises opportunities for greening for example through planting of trees and other soft landscaping, l. incorporates outdoor amenity space; m. preserves strategic and local views; n. for housing, provides a high standard of accommodation; and o. carefully integrates building services equipment.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. Encouraging conversions and extensions of 500 sqm 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 CC3 Water and flooding	The Council will seek to ensure that development does not increase flood risk and reduces the risk of flooding where possible. We will require development to: a. incorporate water efficiency measures; b. avoid harm to the water environment and improve water quality; c. consider the impact of development in areas at risk of flooding (including drainage); d. incorporate flood resilient measures in areas prone to flooding; e. utilise Sustainable Drainage Systems (SuDS) in line with the drainage hierarchy to achieve a greenfield run-off rate where feasible; and f. not locate vulnerable development in flood-prone areas. Where an assessment of flood risk is required, developments should consider surface water flooding in detail and groundwater flooding where applicable. The Council will protect the borough's existing drinking water and foul water infrastructure, including the reservoirs at Barrow Hill, Hampstead Heath, Highgate and Kidderpore
Policy CC4 Air quality	The Council will ensure that the impact of development on air quality is mitigated and ensure that exposure to poor air quality is reduced in the borough. The Council will take into account the impact of air quality when assessing development proposals, through the consideration of both the exposure of occupants to air pollution and the effect of the development on air quality. Consideration must be taken to the actions identified in the Council's Air Quality Action Plan. Air Quality Assessments (AQAs) are required where development is likely to expose residents to high levels of air pollution. Where the AQA shows that a development would cause harm to air quality, the Council will not grant planning permission unless measures are adopted to mitigate the impact. Similarly, developments that introduce sensitive receptors (i.e. housing, schools) in locations of poor air quality will not be acceptable unless designed to mitigate the impact.
	Development that involves significant demolition, construction or earthworks will also be required to assess the risk of dust and emissions impacts in an AQA and include appropriate mitigation measures to be secured in a Construction Management Plan.
Policy CC5 Waste	The Council will seek to make Camden a low waste borough. We will: a. aim to reduce the amount of waste produced in the borough and increase recycling and the reuse of materials to meet the London Plan targets of 50% of household waste recycled/composted by 2020 and aspiring to achieve 60% by 2031; b. deal with North London's waste by working with our partner boroughs in North London to produce a Waste Plan, which will ensure that sufficient land is allocated to manage the amount of waste apportioned to the area in the London Plan; c. safeguard Camden's existing waste site at Regis Road unless a suitable compensatory waste site is provided that replaces the maximum throughput achievable at the existing site; and d. make sure that developments include facilities for the storage and collection of waste and recycling..

C. BREEAM Pre-Assessment

Ensphere BREEAM Pre-Assessment

The target rating for the development is BREEAM "Excellent". This equates to a score of ≥70%.

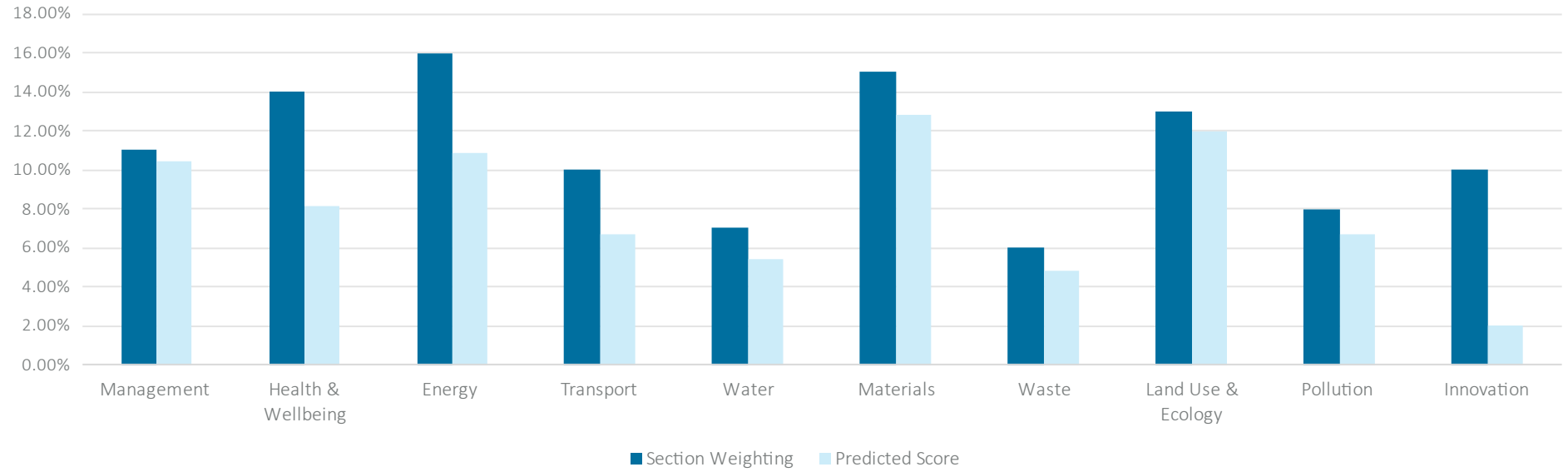

Figure Appendix C.1 – Targeted Weighting Across Assessment Sections

Table Appendix C.1 – Design Stage Targeted Credit Summary

Issue ID	Description/Aim	Available Credits	Predicted Credits	Contingency Credits	Available Score	Predicted Score	Contingency Credits	RIBA Stage - Critical
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	0	2.10%	2.10%	0.00%	Early Action RIBA Stage 2
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	0	2.10%	2.10%	0.00%	Early Action RIBA Stage 2

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	0	3.14%	3.14%	0.00%	
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	1	2.10%	1.57%	0.52%	
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	0	1.57%	1.57%	0.00%	
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.	5	3	2	3.68%	2.21%	1.47%	
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	2	2	2.95%	1.47%	1.47%	Early Action RIBA Stage 2
Hea03	Safe containment in laboratories This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.	0	0	0	0.00%	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	0	2.21%	2.21%	0.00%	
Hea05	Acoustic performance Enabling occupants to experience best practice acoustic performance levels appropriate to the functional activities in occupied spaces.	4	0	1	2.95%	0.00%	0.74%	
Hea06	Security Designing the building to consider and take into account security needs to ensure occupants safety and wellbeing.	1	1	0	0.74%	0.74%	0.00%	Early Action RIBA Stage 2
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	2	0	1.47%	1.47%	0.00%	
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	10	1	9.45%	7.27%	0.73%	Early Action RIBA Stage 2

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.	1	1	0	0.73%	0.73%	0.00%	
Ene03	External lighting Reducing the building's energy consumption through the specification of energy efficient external lighting.	1	1	0	0.73%	0.73%	0.00%	
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	2	2.18%	0.73%	1.45%	Early Action RIBA Stage 2
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.	0	0	0	0.00%	0.00%	0.00%	
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	0	1.45%	1.45%	0.00%	
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	0.00%	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	0	0	1.45%	0.00%	0.00%	
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	0	1.67%	1.67%	0.00%	Early Action RIBA Stage 2
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	6	4	8.33%	5.00%	3.33%	
Wat01	Water consumption Reducing the demand for potable water through the provision of efficient sanitary fittings, rainwater collection and water recycling systems.	5	3	1	3.89%	2.33%	0.78%	
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	0.78%	0.78%	0.00%	
Wat03	Water leak detection Reducing the unintended water consumption due to leaks by installing leak detection systems and flow control devices.	2	2	0	1.56%	1.56%	0.00%	
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.	1	1	0	0.78%	0.78%	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	0	7.50%	7.50%	0.00%	Early Action RIBA Stage 2
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	0	1.07%	1.07%	0.00%	
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	3	1	4.29%	3.21%	1.07%	Early Action RIBA Stage 2
Mat04	Insulation This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.	0	0	0	0.00%	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	0	1.07%	1.07%	0.00%	
Mat 06	Material efficiency Encouraging the reduction of environmental impacts through optimising the use of materials during all stages of the project.	1	0	1	1.07%	0.00%	1.07%	Early Action RIBA Stage 1/2
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	4	1	3.00%	2.40%	0.60%	Early Action RIBA Stage 2
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	1	0.60%	0.00%	0.60%	
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	0.60%	0.60%	0.00%	
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	0.00%	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	0.60%	0.60%	0.00%	Early Action RIBA Stage 2
Wst06	Design for disassembly and adaptability Encouraging consideration and implementation of measures design options related to	2	2	0	1.20%	1.20%	0.00%	Early Action RIBA Stage 2

	adaptability and disassembly, which can accommodate future changes to the use of the building and its systems over its lifespan.							
LE01	Site selection Recognising the reuse of previously developed and contaminated land where appropriate remediation has taken place.	2	1	1	2.00%	1.00%	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	0	2.00%	2.00%	0.00%	Early Action RIBA Stage 1
LE03	Managing negative impacts on ecology Recognition of steps taken to avoid impacts on existing site ecology as far as possible.	3	3	0	3.00%	3.00%	0.00%	Early Action RIBA Stage 1
LE04	Change and enhancement of ecological value Recognition of steps taken to enhance site ecology.	4	4	0	4.00%	4.00%	0.00%	
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	0	2.00%	2.00%	0.00%	
Pol01	Impact of refrigerants Rewarding buildings that reduce the impact of refrigerant gas emissions.	3	1	2	2.00%	0.67%	1.33%	
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	2	0	1.33%	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	5	0	3.33%	3.33%	0.00%	
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	0.67%	0.67%	0.00%	
Pol05	Reduction of noise pollution Avoiding or reducing the impact of external noise from the building.	1	1	0	0.67%	0.67%	0.00%	
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	2	1	10.00%	2.00%	1.00%	
Total						**79.93%**	**17.18%**	

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.

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