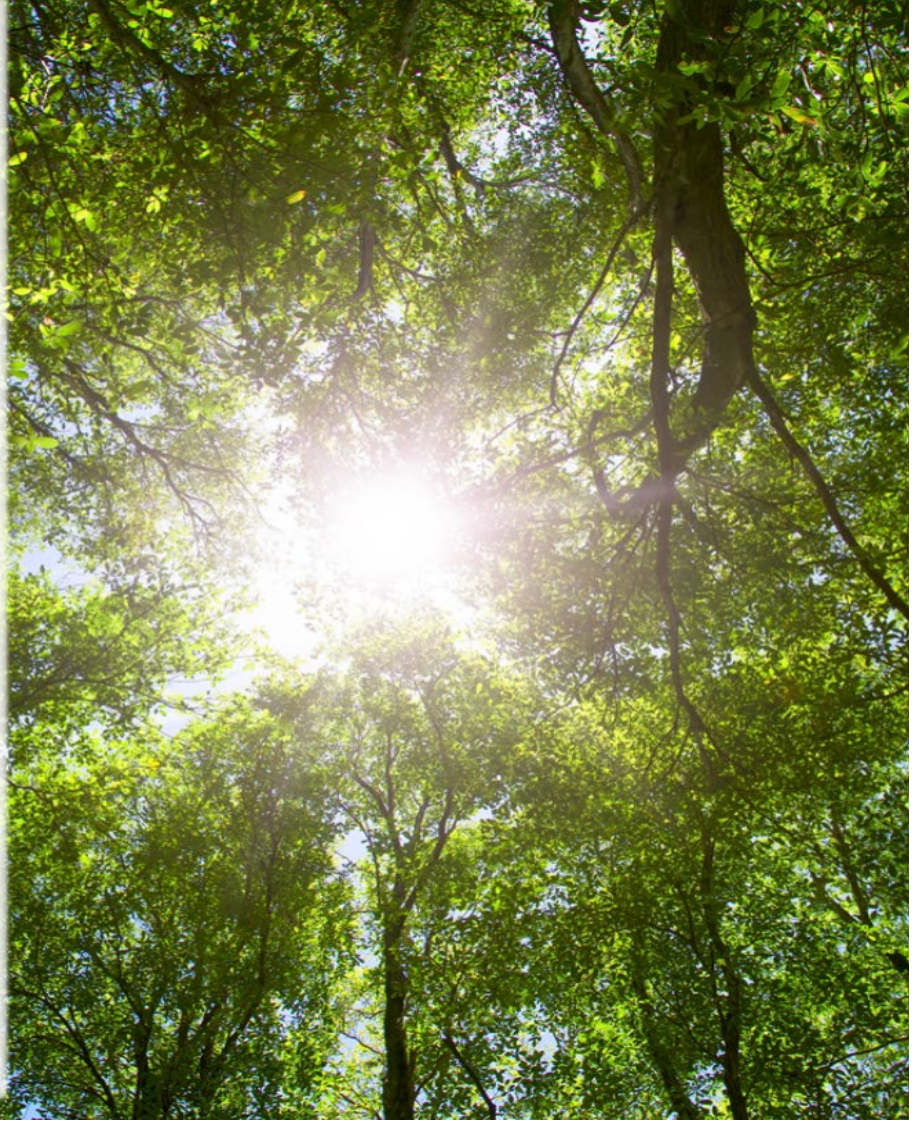


**74 Oldfield Road, Hampton**

**Sustainability Statement**

**Ensphere Group Ltd on behalf of  
Shurgard UK Ltd**



Ensphere Group Ltd  
55A Catherine Place  
London, SW1E 6DY  
+44 (0) 20 7846 9040  
[www.enspheregroup.com](http://www.enspheregroup.com)



# 74 Oldfield Road, Hampton

## Sustainability Statement

**Client Name:** Shurgard UK Ltd  
**Document Reference:** 23-E093-003  
**Project Number:** 23-E093

## Quality Assurance Approval Status

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

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Sustainability	Energy	Climate Change	Socio-Economic
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# 1. Executive Summary

- 1.1 This Sustainability Statement presents the sustainability credentials for a proposed development at 74 Oldfield Road, Hampton, TW12 2HR.
- 1.2 Consideration has primarily been given to planning policy and other requirements prior to a review of sustainability in the context of the wider community, design and construction.
- 1.3 The proposal is the demolition and redevelopment of the site to provide a storage and warehouse distribution facility (Use Class B8) and business centre (Use Class E) with associated car and cycle parking, and landscaping.
- 1.4 At a strategic level, the creation new industrial space will enhance employment for local people, improve the local economy, increase the wealth and lifestyle of employed individuals and contribute to local business rates. 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. A BREEAM “Excellent” rating will be targeted as a minimum.
- 1.6 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 Shurgard UK Ltd to produce a Sustainability Statement for a proposed development at 74 Oldfield Road, Hampton, TW12 2HR.

### Site and Surroundings

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- 2.2 The application site (the 'Site') is located on the north side of Oldfield Road, just west of Percy Road, falling under the jurisdiction of London Borough of Richmond upon Thames.
- 2.3 The Site is approximately 0.31 hectares and currently comprises a distribution warehouse and a hardstanding carpark / access road. Oldfield Road borders the Site to the south and a railway line marks the northern edge.
- 2.4 The surrounding uses are predominately residential, with some supermarkets and other amenities to the east and southeast of the proposed development.
- 2.5 In terms of transport, there are multiple bus stops located within a mile of the Site serving routes including the 111 and 216. The closest train station is Hampton Train Station, which is less than 300 meters from the Site, which operates the Southwestern Railway service, providing access to the South West of England and surrounding regions.

### Proposed Development

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- 2.6 The demolition and redevelopment of the site to provide a storage and warehouse distribution facility (Use Class B8) and business centre (Use Class E) with associated car and cycle parking, and landscaping.

### Report Objective

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- 2.7 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

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- 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 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”.*

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

### Analysis Methodology

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- 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.

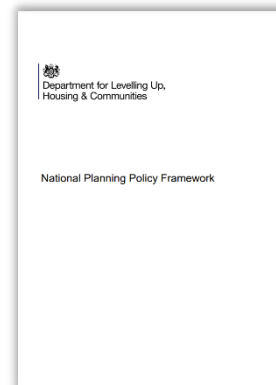
## 4. Planning Context

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

### National Context

#### National Planning Policy Framework (2023)

4.2 The National Planning Policy Framework (NPPF) was updated in December 2023. Paragraphs 7, 8 and 10 of the revised NPPF include reference to the following:



7. *“The purpose of the planning system is to contribute to the achievement of sustainable development, including the provision of homes, commercial development, and supporting infrastructure in a sustainable manner. 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”.*

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

- *An economic objective - 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;*
- *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*
- *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.”*

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



### Planning Practice Guidance (2016; updated 2023)

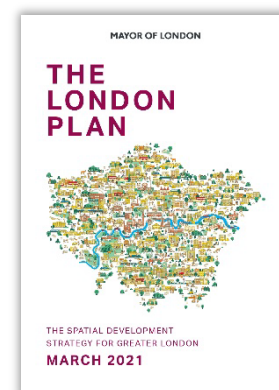
- Climate Change - Advises how planning can identify suitable mitigation and adaptation measures in plan-making and the application process to address the potential for climate change.
- Design - Design affects how people interact with places and can affect a range of economic, social and environmental 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

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#### London Plan (2021)

4.4 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*) - Development proposals that seek to make 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)

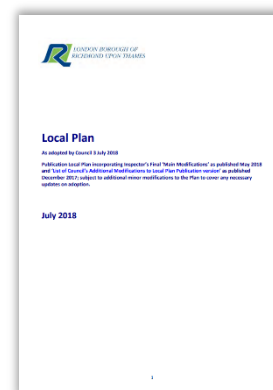
- 4.5 This guidance document explains how to prepare an energy assessment to accompany strategic planning applications referred to the Mayor as set out in London Plan Policy SI 2. It states that the purpose of an energy assessment is to demonstrate that the proposed climate change mitigation measures comply with London Plan energy policies, including the energy hierarchy.
- 4.6 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

#### Richmond upon Thames' Local Plan (2018)

- 4.7 The Local Plan sets out the key planning policies for the future development of the borough up to 2033 and acts as the central document in the Borough's Development Plan.
- 4.8 The following policies are considered pertinent to this report:

- Policy LP1 (*Local Character and Design Quality*) – requires proposals to consider sustainable design and construction, including adaptability.
- Policy LP10 (*Local Environmental Impacts, Pollution and Land Contamination*) – seeks to ensure that local environmental impacts of all development proposals do not lead to detrimental effects on the health, safety and the amenity of existing and new users or occupiers of the development site, or the surrounding land.
- Policy LP17 (*Green Roofs and Walls*) – encourages the incorporation of a green and/or brown roof into any major developments with roof plates of 100sqm or more. It sets an aim of 70% of any potential roof plate area to be a green or brown roof.
- Policy LP20 (*Climate Change Adaptation*) – requires energy efficient design, reduced need for cooling and encourages climate change resilience.
- Policy LP21 (*Flood Risk and Sustainable Design*) – All developments should avoid, or minimise, contributing to all sources of flooding, particularly with the consideration of climate change and without increasing flood risk elsewhere.
- Policy LP22 (*Sustainable Design and Construction*) – development of 1 dwelling or more or 100sqm or more of non-residential will be required to complete the Sustainable Construction Checklist. Includes carbon reduction targets and requires consideration of the



Energy Hierarchy. New non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard.

- Policy LP30 (*Health and Wellbeing*) – promotes and supports healthy and active lifestyles, including sustainable modes of travel.
- Policy LP44 (*Sustainable Travel Choices*) – promotes safe, sustainable, and accessible transport solutions, which minimise the impacts of the development including in relation to congestion, air pollution, and carbon dioxide emissions. Sustainable transport solutions include walking, cycling and public transport over private car usage.

**Richmond upon Thames' Sustainable Construction Checklist Guidance Document – (June 2020)**

- 4.9 The Sustainable Construction Checklist SPD forms part of the assessment for planning applications for new build, conversion and retrofit properties within the London Borough of Richmond upon Thames.
- 4.10 Checklist issues include Minimum Compliance (energy assessment, BREEAM, water usage); Energy Use & Pollution; Transport; Biodiversity; Flooding & Drainage; Improving Resource Efficiency; Accessibility.
- 4.11 The Checklist allows for performance against these issues to be scored; with an overall score indicating the level of sustainability of the development.
- 4.12 This has been completed and has been submitted separately to this statement.

**Draft Local Plan (2024/2025)**

- 4.13 A draft Local Plan is currently in development due to be submitted between 2023 and 2024 for examination with an expected adoption date for winter 2024/2025. This new plan will set out updated planning policy to shape developments and guide decisions on the amount, type and location of new developments in Richmond. The new plan will replace the current Local Plan (2018) and the Twickenham Area Action Plan.

## 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.

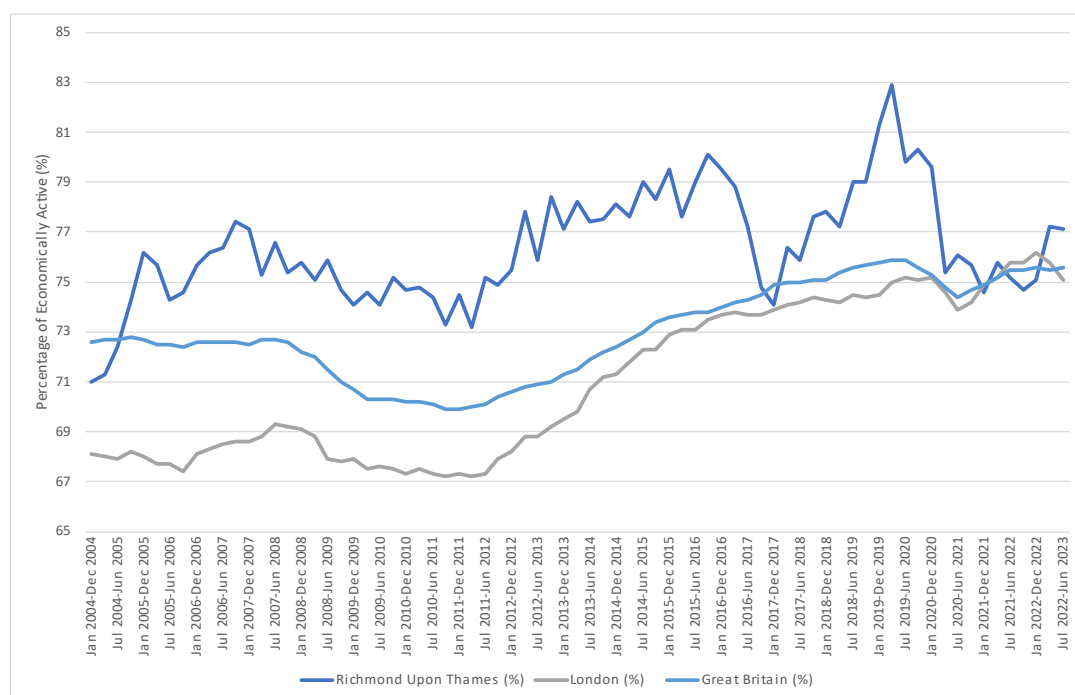
### Socio Economic Context

#### Labour Market

5.2 Nomis is a service provided by the Office for National Statistics, providing local labour market profiles. It provides data on the percentage of economically active residents in an area in groups from January 2004 – December 2004 to July 2022 – June 2023.

5.3 The percentage of economically active residents in employment in Richmond upon Thames has historically been higher than for London and Great Britain; however, more recently it has aligned (and at times fallen below) the regional and national trends.

**Figure 5.1 Economically Active – In Employment**



Note: Percentage figures are for those of aged 16-64.

#### Output Area Classifications

5.4 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.

5.5 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.

- 5.6 Data from the 2021 Census has been released identifying the site as covering an OAC area with OAC Code E00019232 which is classified as “Baseline UK” (Supergroup Code 6), “Multicultural Inner Suburbs” (Group Code 6c) and “Semi-Detached Family Renters” (Subgroup Code 6c2).
- 5.7 In this Supergroup (Code 6) employment in intermediate or low-skilled occupations are prevalent. However, this Supergroup is also characterised by above average levels of unemployment and lower levels of use of English as the main language. The Subgroup (Code 6c2) is further characterised by students and university graduates being slightly less common than the Group (Code 6c) average, while those with GCSE and apprenticeship qualifications are more common. Employment is often as machine operatives, skilled traders.

#### Indices of Multiple Deprivation

- 5.8 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%).
- 5.9 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.
- 5.10 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 12,129 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.
- 5.11 The table below provides the data for the individual domains:

**Table 5.1**      **IMD Domain Scores**

Domain	Score
Income Rank	9,291
Employment Rank	8,017
Education, Skills and Training Rank	16,483
Health Deprivation and Disability Rank	13,223
Crime Rank	15,171

Barriers to Housing and Services Rank	18,623
Living Environment Rank	14,225
<b>Rank of IMD Score</b>	<b>12,129</b>

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

## Environmental Context

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

### Land Use

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

### Flooding

- 5.14 The site is identified as being in Flood Zone 1 meaning the area is at a low probability for flooding. Further details can be found in the accompanying Flood Risk Assessment.

### Ecology

- 5.15 The existing site is almost entirely covered by hardstanding and existing structures. The current ecological value is considered negligible.

### Local Amenities & Public Transport

- 5.16 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.
- 5.17 The Site has a PTAL rating of 2, with the closest station being Hampton Train Station located within 0.2 miles from the Site serving South Western Railway services, thus providing access across the South West of England. Several bus stops are located less than a mile from the Site serving routes 111, 216, and R70.
- 5.18 Further detail of the transport infrastructure can be found in the Transport Statement produced in support of the planning application.

## 6. Sustainable Design Proposals

- 6.1 This section presents an overview of the proposed sustainable design features for the scheme. Consideration has been given to Richmond upon Thames' Sustainable Construction Checklist and Guidance Document.

### Energy & Carbon

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- 6.2 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.

### Passive Design

- 6.3 Passive design seeks to maximise the use of natural sources of heating, cooling and ventilation to maintain thermal comfort levels within the building.
- 6.4 Where compatible with aesthetic considerations, external features have been included to provide a degree of shading from the sun.

### Fabric Efficiency

- 6.5 Fabric efficiency concerns the thermal properties associated with the building fabric and construction.
- 6.6 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).
- 6.7 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.
- 6.8 A high level of air tightness is proposed is targeted, meaning that air infiltration between the internal and the external environment will be largely controlled, and space heating demand further reduced.
- 6.9 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.
- 6.10 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**

- 6.11 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**

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

### **Lighting**

- 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. In the warehouse components it is intended that lighting efficacy shall be in excess of 130 lumens/circuit Watt, with 120 lumens/circuit Watt elsewhere in the shop/reception area.

### **Mechanical Ventilation**

- 6.14 It is anticipated that mechanical ventilation heat recovery will be included to ensure that energy is used efficiently in cooler months.

### **Low Carbon / Renewable Technologies**

- 6.15 Where space heating is required (e.g. reception/shop areas), this will be provided predominantly by Air Source Heat Pump (ASHP). An extent of roof mounted PV will also be included to satisfy the planning policy targets.
- 6.16 With all proposed systems being electric, coupled with the decarbonisation of the national grid, the development proposals will be capable of being zero carbon.
- 6.17 Further information can be found in the accompanying Energy Statement.

## **Climate Change**

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### **Thermal Comfort**

- 6.18 The issue of overheating is being separately assessed as part of the BREEAM; on the basis that, as buildings become progressively better sealed and insulated, the potential for overheating increases. Nevertheless, the Cooling Hierarchy was followed for the development, with the aim of mitigating overheating and reducing cooling demand.
- 6.19 It was not possible to provide passive ventilation through the use of openable windows, in line with the cooling hierarchy, due to security reasons of the storage facility. This meant the windows needed to be kept closed and the small retail/front of house space will likely overheat. Modelling mechanical ventilation for a similar Shurgard development showed that it was not sufficient in maintaining thermal comfort levels in the space and thus comfort cooling was introduced into small retail/front of house space which allowed it to pass the various weather scenarios.

### Flood Risk

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- 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 The Site will incorporate SuDS throughout the development to minimise run-off and reduce the risk of flooding elsewhere. Soft landscaping is also included in the proposals to improve drainage across the site. Further information can be found in the accompanying Drainage Strategy.

### Water

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- 6.22 The Development would ensure the efficient use of natural resources (including water), including making the most of natural systems both within and around buildings by:
- 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.
  - The Development would include a pulsed output water meter on the mains incoming water supply with associated major leak detection system.
  - Landscaping will predominantly rely on natural precipitation to reduce demands on the potable water supply.

### Pollution

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- 6.23 Heating systems at the site shall also be electrical, avoiding local emissions associated with combustion.
- 6.24 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.
- 6.25 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.
- 6.26 The external lighting strategy shall be designed to minimise light spillage and night time light pollution in line with the ILP's Guidance notes for the reduction of obtrusive light; low illuminance levels, fittings and controls shall be employed accordingly.
- 6.27 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

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### Waste & Recycling

- 6.28 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.

## Construction

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### Circular Economy

- 6.29 Consideration has been given to the most appropriate Circular Economy (“CE”) strategic approaches based on the nature and predicted lifespan of the development.
- 6.30 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.

### 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

- 6.31 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.

- 6.32 Consideration will be given to the carbon emissions resulting from the construction and use of the building over its entire life as part of the selection process.

### **Biodiversity**

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- 6.33 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. These are anticipated to 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;
- Additional habitat could be created above ground level such as the provision of bird and bat boxes.

### **Transport**

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- 6.34 The following is also proposed:

- Improving pedestrian amenity around the Site.
- Secure cycle storage will be provided to encourage building users to cycle so promoting exercise and helping reduce congestion and emissions.
- Electric Vehicle (EV) charging points.

### **Sustainable Building Standards**

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- 6.35 A BREEAM “Excellent” rating will be targeted as a minimum.

## 7. Sustainable Construction Proposals

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

### Responsible Construction Practices

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#### Impacts on Neighbours, Pedestrians, Road Users and Workforce

- 7.2 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

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

### Materials Optimisation and Waste

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- 7.4 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.
- 7.5 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

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#### Pollution Prevention Guidelines

- 7.6 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**

7.7 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.

7.8 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**

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7.9 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 the London Borough of Richmond upon Thames' planning policies has identified a number of requirements relating to sustainable development. Of these, Local Plan Policies LP1 (*Local Character and Design Quality*), LP20 (*Climate Change Adaptation*) and LP22 (*Sustainable Design and Construction*) are considered of greatest relevance. Consideration has also been given to the Sustainable Construction Checklist SPD, as well as the National and London planning policy framework.

### Strategic Sustainability

8.3 At a strategic level, the development of industrial uses will help maintain employment for local people, improve the local economy, increase the wealth and lifestyle of employed individuals and contribute to local business rates. The development is considered to be beneficial to the local community and aligned with socio-economic requirements.

### Sustainable Design and Construction

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

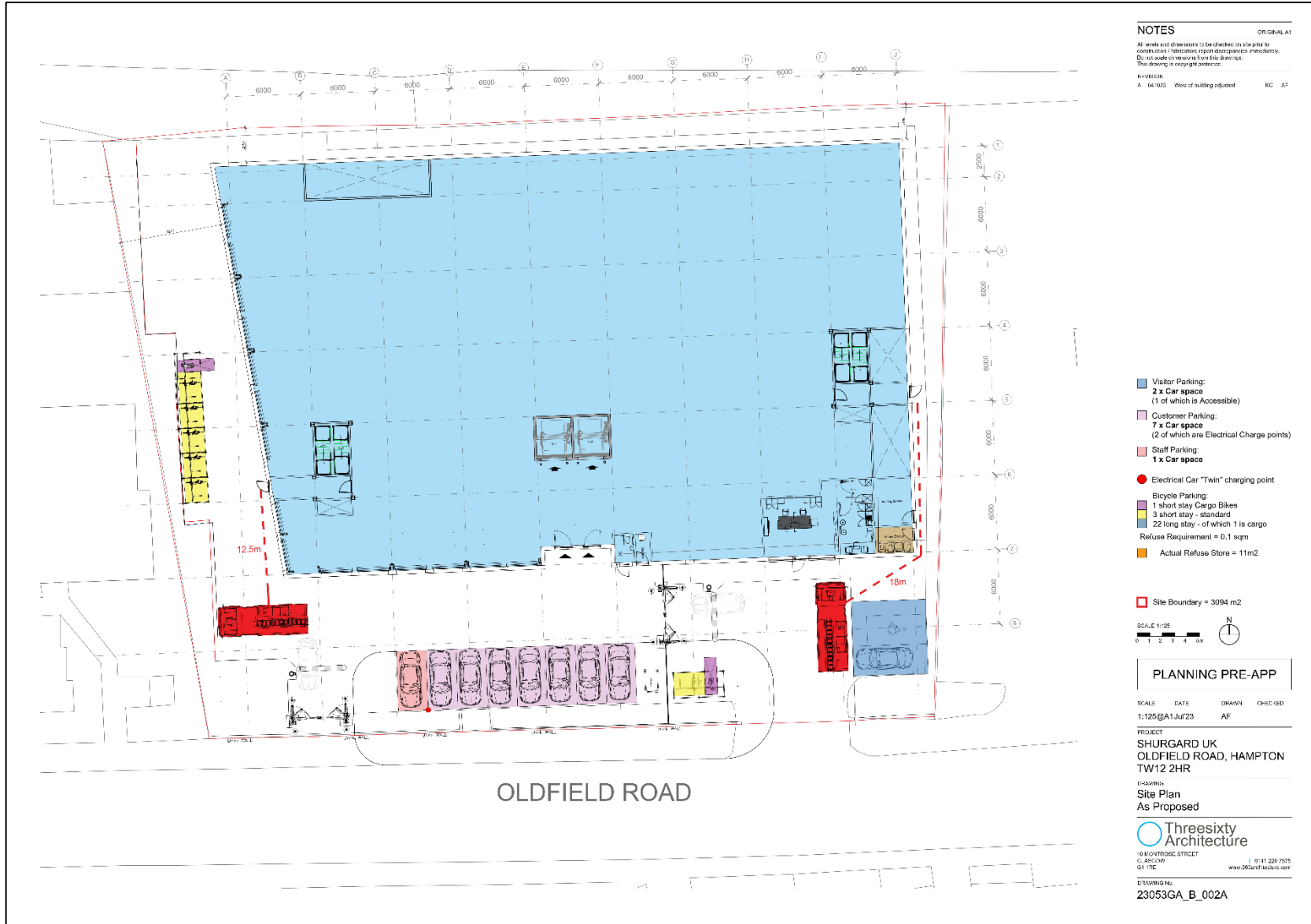
- Air Source Heat Pumps will be provided for the reception/shop areas and an extent of PV will be located at roof level.
- Highly thermally efficient building fabric.
- Highly efficient lighting.
- Water saving sanitary fittings and appliances to deliver a water efficient development.
- The use of materials with a low lifecycle environmental impact and embodied energy.
- Consideration of the principles of Secured by Design.
- Efficient construction and operational waste management.
- A BREEAM "Excellent" rating will be targeted as a minimum.

8.5 Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority

# Appendices



## A. Site Plans



## **B. Key Local Planning Policy Requirements**

### London Plan (2021)

#### 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

##### The design-led approach

- 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:

##### Form and layout

- 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

##### Experience

- 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

#### Quality and Character

- 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 [...]**

[...]

- 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 SI1 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 [...]

#### **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:
    - a) construction and demolition – 95 per cent reuse/recycling/recovery
    - b) excavation – 95 per cent beneficial use
  - 6) 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.

### Richmond upon Thames' Local Plan (2018)

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#### Policy LP1 Local Character and Design Quality

- A. The Council will require all development to be of high architectural and urban design quality. The high quality character and heritage of the borough and its villages will need to be maintained and enhanced where opportunities arise. Development proposals will have to demonstrate a thorough understanding of the site and how it relates to its existing context, including character and appearance, and take opportunities to improve the quality and character of buildings, spaces and the local area.

To ensure development respects, contributes to and enhances the local environment and character, the following will be considered when assessing proposals:

1. compatibility with local character including the relationship to existing townscape, development patterns, views, local grain and frontages as well as scale, height, massing, density, landscaping, proportions, form, materials and detailing;
2. sustainable design and construction, including adaptability, subject to aesthetic considerations;
3. layout, siting and access, including making best use of land;
4. space between buildings, relationship of heights to widths and relationship to the public realm, heritage assets and natural features;
5. inclusive design, connectivity, permeability (as such gated developments will not be permitted), natural surveillance and orientation; and
6. suitability and compatibility of uses, taking account of any potential adverse impacts of the co-location of uses through the layout, design and management of the site.

All proposals, including extensions, alterations and shopfronts, will be assessed against the policies contained within a neighbourhood plan where applicable, and the advice set out in the relevant Village Planning Guidance and other SPDs relating to character and design.

#### Shopfronts

- B. The Council will resist the removal of shopfronts of architectural or historic interest. Shopfronts, including signage and illumination, should complement the proportions, character, materials and detailing, surrounding streetscene and the building of which it forms part. Blinds, canopies or shutters, where acceptable in principle, must be appropriate to the character of the shopfront and the context within which it is located. External security grilles and large illuminated fascias will only be allowed in exceptional circumstances. In sensitive areas, such as Conservation Areas and relevant Character Areas as identified in the Village Planning Guidance SPDs, rigid and gloss finish blinds will generally be unacceptable.

#### Advertisements and hoardings

- C. The Council will exercise strict control over the design and siting of advertisements and hoardings to ensure the character of individual buildings and streets are not materially harmed, having regard to the interests of amenity and public safety (including highway safety).

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#### Policy LP10 Local Environmental Impacts, Pollution and Land Contamination

- A. The Council will seek to ensure that local environmental impacts of all development proposals do not lead to detrimental effects on the health, safety and the amenity of existing and new users or occupiers of the development site, or the surrounding land. These potential impacts can include, but are not limited to, air pollution, noise and vibration, light pollution, odours and fumes, solar glare and solar dazzle as well as land contamination.

Developers should follow any guidance provided by the Council on local environmental impacts and pollution as well as on noise generating and noise sensitive development. Where necessary, the Council will set planning conditions to reduce local environmental impacts on adjacent land uses to acceptable levels.

#### Air Quality

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B. The Council promotes good air quality design and new technologies. Developers should secure at least 'Emissions Neutral' development. To consider the impact of introducing new developments in areas already subject to poor air quality, the following will be required:

1. an air quality impact assessment, including where necessary, modelled data;
2. mitigation measures to reduce the development's impact upon air quality, including the type of equipment installed, thermal insulation and ducting abatement technology;
3. measures to protect the occupiers of new developments from existing sources;
4. strict mitigation for developments to be used by sensitive receptors such as schools, hospitals and care homes in areas of existing poor air quality; this also applies to proposals close to developments used by sensitive receptors.

#### **Noise and Vibration**

C. The Council encourages good acoustic design to ensure occupiers of new and existing noise sensitive buildings are protected. The following will be required, where necessary:

1. a noise assessment of any new plant and equipment and its impact upon both receptors and the general background noise levels;
2. mitigation measures where noise needs to be controlled and managed;
3. time limits and restrictions for activities where noise cannot be sufficiently mitigated;
4. promotion of good acoustic design and use of new technologies;
5. measures to protect the occupiers of new developments from existing sources.

#### **Light Pollution**

D. The Council will seek to ensure that artificial lighting in new developments does not lead to unacceptable impacts by requiring the following, where necessary:

1. an assessment of any new lighting and its impact upon any receptors;
2. mitigation measures, including the type and positioning of light sources;
3. promotion of good lighting design and use of new technologies.

#### **Odours and Fume Control**

E. The Council will seek to ensure that any potential impacts relating to odour and fumes from commercial activities are adequately mitigated by requiring the following:

1. an impact assessment where necessary;
2. the type and nature of filtration to be used;
3. the height and position of any chimney or outlet;
4. promotion and use of new abatement technologies;

#### **Land Contamination**

F. The Council promotes, where necessary, the remediation of contaminated land where development comes forward. Potential contamination risks will need to be properly considered and adequately mitigated before development proceeds.

#### **Construction and Demolition**

G. The Council will seek to manage and limit environmental disturbances during construction and demolition as well as during excavations and construction of basements and subterranean developments. To deliver this the Council requires the submission of Construction Management Statements (CMS) for the following types of developments:

1. all major developments;
2. any basement and subterranean developments;
3. developments of sites in confined locations or near sensitive receptors; or

4. if substantial demolition/excavation works are proposed.

Where applicable and considered necessary, the Council may seek a bespoke charge specific to the proposal to cover the cost of monitoring the CMS.

#### **Policy LP17 Green Roofs and Walls**

Green roofs and/or brown roofs should be incorporated into new major developments with roof plate areas of 100sqm or more where technically feasible and subject to considerations of visual impact. The aim should be to use at least 70% of any potential roof plate area as a green / brown roof.

The onus is on an applicant to provide evidence and justification if a green roof cannot be incorporated. The Council will expect a green wall to be incorporated, where appropriate, if it has been demonstrated that a green / brown roof is not feasible.

The use of green / brown roofs and green walls is encouraged and supported in smaller developments, renovations, conversions and extensions.

#### **Policy LP20 Climate Change Adaption**

- A. The Council will promote and encourage development to be fully resilient to the future impacts of climate change in order to minimise vulnerability of people and property.
- B. New development, in their layout, design, construction, materials, landscaping and operation, should minimise the effects of overheating as well as minimise energy consumption 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 shading, reducing solar reflectance, 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 systems (ensuring they are the lowest carbon options).
- C. Opportunities to adapt existing buildings, places and spaces to the likely effects of climate change should be maximised and will be supported.

#### **Policy LP21 Flood Risk and Sustainable Design [Extract]**

- A. All developments should avoid, or minimise, contributing to all sources of flooding, including fluvial, tidal, surface water, groundwater and flooding from sewers, taking account of climate change and without increasing flood risk elsewhere. Development will be guided to areas of lower risk by applying the 'Sequential Test' as set out in national policy guidance, and where necessary, the 'Exception Test' will be applied. Unacceptable developments and land uses will be refused in line with national policy and guidance, the Council's Strategic Flood Risk Assessment (SFRA) and as outlined in the table below.

In Flood Zones 2 and 3, all proposals on sites of 10 dwellings or more or 1000sqm of non-residential development or more, or on any other proposal where safe access/egress cannot be achieved, a Flood Emergency Plan must be submitted [...]

##### **[...] Sustainable drainage**

- B. The Council will require the use of Sustainable Drainage Systems (SuDS) in all development proposals. Applicants will have to demonstrate that their proposal complies with the following:
  1. A reduction in surface water discharge to greenfield run-off rates wherever feasible.
  2. Where greenfield run-off rates are not feasible, this will need to be demonstrated by the applicant, and in such instances, the minimum requirement is to achieve at least a 50% attenuation of the site's surface water runoff at peak times based on the levels existing prior to the development.

##### **Flood defences**

- C. Applicants will have to demonstrate that their proposal complies with the following:

1. Retain the effectiveness, stability and integrity of flood defences, riverbanks and other formal and informal flood defence infrastructure.
2. Ensure the proposal does not prevent essential maintenance and upgrading to be carried out in the future.
3. Set back developments from riverbanks and existing flood defence infrastructure where possible (16 metres for the tidal Thames and 8 metres for other rivers).
4. Take into account the requirements of the Thames Estuary 2100 Plan and the River Thames Scheme, and demonstrate how the current and future requirements for flood defences have been incorporated into the development.
5. The removal of formal or informal flood defences is not acceptable unless this is part of an agreed flood risk management strategy by the Environment Agency.

#### **Policy SP22 Sustainable Design and Construction**

- A. Developments will be required to achieve the highest standards of sustainable design and construction to mitigate the likely effects of climate change. Applicants will be required to complete the following:
1. Development of 1 dwelling unit or more, or 100sqm or more of non-residential floor space (including extensions) will be required to complete the Sustainable Construction Checklist SPD. A completed Checklist has to be submitted as part of the planning application.
  2. Development that results in a new residential dwelling, including conversions, change of use, and extensions that result in a new dwelling unit, will be required to incorporate water conservation measures to achieve maximum water consumption of 110 litres per person per day for homes (including an allowance of 5 litres or less per person per day for external water consumption).
  3. New non-residential buildings over 100sqm will be required to meet BREEAM 'Excellent' standard.
  4. Proposals for change of use to residential will be required to meet BREEAM Domestic Refurbishment 'Excellent' standard (where feasible).

#### **Reducing Carbon Dioxide Emissions**

- B. Developers are required to incorporate measures to improve energy conservation and efficiency as well as contributions to renewable and low carbon energy generation. Proposed developments are required to meet the following minimum reductions in carbon dioxide emissions:
1. All new major residential developments (10 units or more) should achieve zero carbon standards in line with London Plan policy.
  2. All other new residential buildings should achieve a 35% reduction.
  3. All non-residential buildings over 100sqm should achieve a 35% reduction. From 2019 all major non-residential buildings should achieve zero carbon standards in line with London Plan policy.

Targets are expressed as a percentage improvement over the target emission rate (TER) based on Part L of the 2013 Building Regulations.

- C. This should be achieved by following the Energy Hierarchy:

1. Be lean: use less energy
2. Be clean: supply energy efficiently
3. Be green: use renewable energy

#### **Decentralised Energy Networks**

- D. The Council requires developments to contribute towards the Mayor of London target of 25% of heat and power to be generated through localised decentralised energy (DE) systems by 2025. The following will be required:
1. All new development will be required to connect to existing DE networks where feasible. This also applies where a DE network is planned and expected to be operational within 5 years of the development being completed.

2. Development proposals of 50 units or more, or new non-residential development of 1000sqm or more, will need to provide an assessment of the provision of on-site decentralised energy (DE) networks and combined heat and power (CHP).
3. Where feasible, new development of 50 units or more, or new non-residential development of 1000sqm or more, as well as schemes for the Proposal Sites identified in this Plan, will need to provide on-site DE and CHP; this is particularly necessary within the clusters identified for DE opportunities in the borough-wide Heat Mapping Study. Where on-site provision is not feasible, provision should be made for future connection to a local DE network should one become available.

Applicants are required to consider the installation of low, or preferably ultra-low, NOx boilers to reduce the amount of NOx emitted in the borough.

Local opportunities to contribute towards decentralised energy supply from renewable and low-carbon technologies will be encouraged where appropriate.

### **Policy LP30 Health and Wellbeing**

Planning, at all levels, can play a crucial role in creating environments that enhance people's health and wellbeing. The Council promotes and supports healthy and active lifestyles and measures to reduce health inequalities.

- A. The Council will support development that results in a pattern of land uses and facilities that encourage:
  1. Sustainable modes of travel such as safe cycling routes, attractive walking routes and easy access to public transport to reduce car dependency.
  2. Access to green infrastructure, including river corridors, local open spaces as well as leisure, recreation and play facilities to encourage physical activity.
  3. Access to local community facilities, services and shops which encourage opportunities for social interaction and active living, as well as contributing to dementia-friendly environments.
  4. Access to local healthy food, for example, allotments and food growing spaces.
  5. Access to toilet facilities which are open to all in major developments where appropriate (linked to the Council's Community Toilet Scheme).
  6. An inclusive development layout and public realm that considers the needs of all, including the older population and disabled people.
  7. Active Design which encourages wellbeing and greater physical movement as part of everyday routines.
- B. This policy will be delivered by requiring developments to comply with the following:
  1. A Health Impact Assessment must be submitted with all major development proposals.
  2. The Council will manage proposals for new fast-food takeaways (A5 uses) located within 400 metres of the boundaries of a primary or secondary school in order to promote the availability of healthy foods.
  3. Existing health facilities will need to be retained where these continue to meet, or can be adapted to meet, residents' needs.
  4. Applications for new or improved facilities or loss of health and social care facilities will be assessed in line with the criteria set out in the Social and Community Infrastructure policy.

### **Policy LP44 Sustainable Travel Choices**

The Council will work in partnership to promote safe, sustainable and accessible transport solutions, which minimise the impacts of development including in relation to congestion, air pollution and carbon dioxide emissions, and maximise opportunities including for health benefits and providing access to services, facilities and employment. The Council will:

#### **A. Location of development**

Encourage high trip generating development to be located in areas with good public transport with sufficient capacity, or which are capable of supporting improvements to provide good public transport accessibility and capacity, taking account of local character and context.

**B. Walking and cycling**

Ensure that new development is designed to maximise permeability within and to the immediate vicinity of the development site through the provision of safe and convenient walking and cycling routes, and to provide opportunities for walking and cycling, including through the provision of links and enhancements to existing networks.

**C. Public transport**

Ensure that major new developments maximise opportunities to provide safe and convenient access to public transport services. Proposals will be expected to support improvements to existing services and infrastructure where no capacity currently exists or is planned to be provided.

Protect existing public transport interchange facilities unless suitable alternative facilities can be provided which ensure the maintenance of the existing public transport operations. Applications will need to include details setting out how such re-provision will be secured and provided in a timely manner.

**D. The road network**

Ensure that new development does not have a severe impact on the operation, safety or accessibility to the local or strategic highway networks. Any impacts on the local or strategic highway networks, arising from the development itself or the cumulative effects of development, including in relation to on-street parking, should be mitigated through the provision of, or contributions towards, necessary and relevant transport improvements.

In assessing planning applications the cumulative impacts of development on the transport network will be taken into account. Planning applications will need to be supported by the provision of a Transport Assessment if it is a major development, and a Transport Statement if it is a minor development.

**E. River transport**

Encourage the use of the River Thames for passenger and freight transport through the protection of, improvement to, and provision of new relevant infrastructure including wharves, slipways and piers.

**F. Safeguarding of routes and facilities**

Land required for proposed transport schemes as identified in the London Plan and the Council's Local Implementation Plan for Transport will be protected from developments which would prevent their proper implementation.

Local filling stations and supporting services such as car repair facilities will be protected from redevelopment

for alternative uses unless exceptional circumstances can be demonstrated that warrant their loss.

**G. Taxis and private hire vehicles**

Ensure that taxis and private hire vehicles are adequately catered for in appropriate locations.

## **C. BREEAM Pre-Assessment**



Issue ID	Issue ID/ Description/Aim	Credit Requirements	Available Credits	Predicted Credits	Contingency Credits	Available Score	Predicted Score	Awarded Score	Contingency Credits	RIBA Stage - Critical	Responsibilities/Comments
Man01	<b>Project brief and design</b> Encouraging an integrated design process and considering BREEAM performance targets early to influence decision-making and optimise building performance, while avoiding unnecessary costs.	<b>Project Delivery Planning (1 Credit)</b> 1. Responsibilities Matrix template 2. Project team consultation template 3. RIBA stage timeframe template 4. Meeting minutes <b>Stakeholder Consultation (interested parties) (1 Credit)</b> 1. Stakeholder engagement report covering minimum content 2. Drawings/specifications confirming how the design was updated in line with consultation 3. Stakeholder Consultation template <b>BREEAM AP (concept design) (1 Credit)</b> 1. Appointment template 2. Formal target template 3. Meeting minutes 4. Progress reports <b>BREEAM AP (developed design) (1 Credit)</b> As above	4	4	0	2.10%	2.10%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Project Manager Ensphere  <b>Comments</b>
Man02	<b>Life cycle cost and service life planning</b> 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.	<b>Elemental Life Cycle Cost (LCC) (2 Credits)</b> 1. BREEAM compliant Elemental Life Cycle Cost Report from RIBA 2 2. List of design changes as a result of the LCC <b>Component Level LLC Option Appraisal (1 Credit)</b> 1. BREEAM compliant component Life Cycle Cost Report from RIBA 4 2. List of design changes as a result of the LCC <b>Capital Cost Reporting (1 Credit)</b> 1. Estimated Capital Cost template	4	4	0	2.10%	2.10%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Project Manager Contractor Costing Consultant/QS  <b>Comments</b>
Man03	<b>Responsible Construction Practices</b> Encouraging construction sites to be managed in an environmentally and socially considerate and responsible manner. Monitoring to encourage continuous improvements and utility consumption reduction.	<b>Pre-requisite</b> 1. Letter template confirming that all timber will be legally harvested. <b>Environmental Management (1 Credit)</b> 1. Completed PPG6 2. Letter template confirming operation of compliant EMS 3. EMS certificate <b>BREEAM AP (Site) (1 Credit)</b> 1. Letter template 2. Progress reports 3. Meeting minutes <b>Responsible Construction Management (Up to 2 credits)</b> 1. Copy of CCS certificate/report 2. Letter template <b>Monitoring of Construction Site Impacts (1 Credit)</b> 1. Completed letter template <b>Monitoring of Construction Site Impacts - Transport of construction materials &amp; waste (1 Credit - Potential expemprary available)</b> 1. As above	6	6	0	3.14%	3.14%	0.00%	0.00%		<b>Responsibilities</b> Contractor  <b>Comments</b>

Man04	<p><b>Commissioning and handover</b> 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.</p>	<p><b>Commissioning - Testing Schedule and Responsibilities (1 Credit)</b> 1. Appointment letter for commissioning manager. 2. Completed commissioning template</p> <p><b>Commissioning - Design and Preparation (1 Credit)</b> 1. Appointment template 2. Meeting minutes from commissioning manager showing input during design stage. 3. Evidence the commissioning manager has the relevant qualifications</p> <p><b>Testing and Inspecting Building Fabric (1 Credit)</b> 1. Completed letter template</p> <p><b>Handover (1 Credit)</b> 1. Completed letter template</p>	4	3	0	2.10%	1.57%	0.00%	0.00%	<p><b>Responsibilities</b> Commissioning Manager/appointed individual Contractor Project Manager</p> <p><b>Comments</b></p>
Man05	<p><b>Aftercare</b> 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.</p>	<p><b>Aftercare Support (1 Credit)</b> 1. Letter template</p> <p><b>Commissioning - Implementation (1 Credit)</b> 1. Letter template</p> <p><b>Post-Occupancy Evaluation (1 Credit)</b> 1. Letter template</p>	3	3	0	1.57%	1.57%	0.00%	0.00%	<p><b>Responsibilities</b> Project Manager</p> <p><b>Comments</b></p>
Hea01	<p><b>Visual comfort</b> 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.</p>	<p><b>Glare Control (1 Credit)</b> 1. Drawings showing glare control measures 2. Datasheets for above measures (i.e. black out blinds)</p> <p><b>Daylighting (1 Credit)</b> 1. BREEAM compliant daylighting report</p> <p><b>View Out (1 Credit)</b> 1. View out drawings showing % of external walls in relevant building areas occupied by a window; must confirm room depths</p> <p><b>Internal Lighting, External Lighting and Zoning and Occupant Control (1 Credit)</b> 1. Lighting schedule showing internal and external lights alongside controls 2. Datasheets for internal and external lights alongside controls 3. Drawings showing the lights on site alongside the controls 4. Letter template 5. Zoning and controls strategy</p>	4	3	1	3.29%	2.47%	0.00%	0.82%	<p><b>Responsibilities</b> Daylight Consultant Architect M&amp;E</p> <p><b>Comments</b></p>
Hea02	<p><b>Indoor air quality</b> 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.</p>	<p><b>Pre-requisite - Indoor Air Quality (IAQ) plan</b> 1. BREEAM compliant Indoor Air Quality Plan from RIBA 2</p> <p><b>Ventilation (1 Credit)</b> 1. Letter template 2. Further evidence confirming what is outlined in the letter</p> <p><b>Emissions from construction products (Up to 2 Credits)</b> 1. Datasheets for materials 2. Completed materials schedule template</p> <p><b>Post-Occupancy indoor air quality measurement (1 Credit)</b> 1. Letter template</p>	4	2	2	3.29%	1.65%	0.00%	1.65%	<p><b>Responsibilities</b> Air Quality Consultant M&amp;E Contractor</p> <p><b>Comments</b></p> <p>Early Action</p> <p>RIBA Stage 2</p>
Hea03	<p><b>Safe containment in laboratories</b> This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.</p>	<p><b>No Longer Assessed</b></p>	0	0	0	0.00%	0.00%	0.00%	0.00%	<p><b>No Longer Assessed</b></p>

Hea04	<b>Thermal comfort</b> 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.	<b>Thermal Modelling (1 Credit)</b> 1. BREEAM compliant TMS2/59 (building type dependent) <b>Design for Future Thermal Comfort (1 Credit)</b> 1. BREEAM compliant TMS2/59 (building type dependent) <b>Thermal Zoning and Controls (1 Credit)</b> 1. Letter template 2. Drawings showing the thermal zones 3. Datasheets for the controls	3	3	0	2.47%	2.47%	0.00%	0.00%		<b>Responsibilities</b> M&E Energy Modeller  <b>Comments</b>
Hea05	<b>Acoustic performance</b> Enabling occupants to experience best practice acoustic performance levels appropriate to the functional activities in occupied spaces.	<b>Acoustic Performance (Up to 4 Credits)</b> 1. BREEAM compliant acoustic report	3	0	1	2.47%	0.00%	0.00%	0.00%		<b>Responsibilities</b> Acoustician  <b>Comments</b>
Hea06	<b>Security</b> Designing the building to consider and take into account security needs to ensure occupants safety and wellbeing.	<b>Security of Site and Building (1 Credit)</b> 1. Security Needs Assessment by SQSS produced during RIBA 2 2. Drawings showing that the recommendations have been incorporated 3. Completed template if consultant appointed later than RIBA 2	1	1	0	0.82%	0.82%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Security Specialist Architect M&E  <b>Comments</b>
Hea07	<b>Safe and healthy surroundings</b> Providing external site areas that are safe for occupant use. Enhancing the wellbeing of building users by giving access to an outdoor space.	<b>Safe Access (1 Credit)</b> 1. Letter template 2. Drawing showing all items outlined in the letter <b>Outside Space (1 Credit)</b> 1. Letter template 2. Drawing showing all items outlined in the letter	2	1	1	1.65%	0.82%	0.00%	0.82%		<b>Responsibilities</b> Architect  <b>Comments</b>
Ene 01	<b>Reduction of energy use and carbon emissions</b> Encouraging the design of energy efficient buildings with energy performance above national building regulations. Encouraging the accurate modelling of operational energy consumption.	<b>Energy Performance (Up to 9 Credits)</b> 1. As Designed BRUKL 2. INP file <b>Prediction of Operational Energy (4 Credits)</b> 1. Achieve Ene 04 Passive Design credit 2. BREEAM compliant TM54 report 3. Workshop meeting minutes 4. Completed letter template	13	4	0	9.90%	3.05%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Energy Specialist  <b>Comments</b>
Ene02	<b>Energy monitoring</b> Helping to identify and reduce high energy demands where possible by accurate measurement of the energy consumption of the building by end use.	<b>Sub-metering of End Use Categories (1 Credit)</b> 1. Letter template 2. Drawings showing the location of the meter and monitoring system 3. Datasheets confirming meters with pulsed output <b>Sub-metering of High Energy Load and Tenancy Areas (1 Credit)</b> 1. As above	2	2	0	1.52%	1.52%	0.00%	0.00%		<b>Responsibilities</b> M&E Contractor  <b>Comments</b>
Ene03	<b>External lighting</b> Reducing the building's energy consumption through the specification of energy efficient external lighting.	<b>External Lighting (1 Credit)</b> 1. Letter template 2. Schematic showing all external lights and their controls 3. Datasheets confirming luminous efficacy 4. Datasheets for the controls (i.e. PIR, photocells, etc) 5. External lighting schedule	1	1	0	0.76%	0.76%	0.00%	0.00%		<b>Responsibilities</b> M&E  <b>Comments</b>

Ene04	<b>Low carbon design</b> Reducing the building's energy consumption through the adoption of passive design solutions, free cooling and low or zero carbon (LZC) energy sources.	<b>Passive Design Analysis (PDA) (1 Credit)</b> 1. BREEAM compliant Passive design analysis report from RIBA 2 2. Close out Hea 04 Thermal Comfort credit 3. CV confirming qualifications of energy modeller 4. Drawings showing passive design measures <b>Free Cooling (1 Credit)</b> 1. Close out PDA above 2. CV confirming qualifications of energy modeller 3. Dynamic simulation model demonstrating that the cooling demand can be met by free cooling 4. Drawing confirming incorporation of recommended measures <b>Low and Zero Carbon Technologies (1 Credit)</b> 1. BREEAM compliant LZC analysis report from RIBA 2 2. CV confirming qualifications of energy modeller 4. Datasheet(s) for recommended technology 5. Drawings showing the recommended technology on site	3	2	0	2.29%	1.52%	0.00%	0.00%	Early Action  RIBA Stage 2	<b>Responsibilities</b> M&E  <b>Comments</b>
Ene05	<b>Energy efficient cold storage</b> Reducing the building's operational greenhouse gas emissions (CO <sub>2</sub> -eq) through the design, installation and commissioning of energy efficient refrigeration systems.	Not applicable	0	0	0	0.00%	0.00%	0.00%	0.00%	<b>Responsibilities</b> M&E	
Ene06	<b>Energy efficient transportation systems</b> Reducing the building's energy consumption by specifying the optimum number and size of energy efficient transportation systems.	<b>Energy Consumption (1 Credit)</b> 1. BREEAM compliant lift traffic analysis <b>Energy Efficient Features (1 Credit)</b> 1. Datasheets confirming standby condition, luminaire lumens per circuit watt of lighting in cabin and use of drive controller capable of variable speed, variable-voltage, and variable-frequency 2. Drawing confirming lift to be installed as per analysis	2	2	0	1.52%	1.52%	0.00%	0.00%	<b>Responsibilities</b> Lift Manufacturer M&E  <b>Comments</b>	
Ene07	<b>Energy efficient laboratory systems</b> Reducing the building's operational greenhouse gas emissions (CO <sub>2</sub> -eq) by specifying best practice energy efficient laboratory equipment.	Not applicable	0	0	0	0.00%	0.00%	0.00%	0.00%	<b>Responsibilities</b> M&E	
Ene08	<b>Energy efficient equipment</b> Demonstrating a meaningful reduction in the total unregulated energy demand of the building by using energy efficient equipment.	Not applicable	0	0	0	0.00%	0.00%	0.00%	0.00%	<b>Responsibilities</b> M&E	
Tra01	<b>Transport assessment and travel plan</b> Recognising developments in proximity to good public transport networks, thereby helping to reduce transport-related pollution and congestion	<b>Travel Plan (2 Credits)</b> 1. BREEAM compliant Draft travel plan produced during RIBA 2. 2. BREEAM compliant Transport Statement produced during RIBA 2. 3. Letter confirming end user involvement (if applicable)	2	2	0	1.67%	1.67%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Transport Consultant  <b>Comments</b>
Tra02	<b>Sustainable transport measures</b> Recognising developments in close proximity of, and accessible to, local amenities which are likely to be frequently required and used by building occupants.	<b>Sustainable Transport Measures (Up to 10 Credits)</b> 1. Letter template 2. Drawings showing incorporation of Travel Plan measures into the design	10	5	2	8.33%	4.17%	0.00%	1.67%	<b>Responsibilities</b> Transport Consultant Architect  <b>Comments</b>	

<b>Wat01</b>	<b>Water consumption</b> Reducing the demand for potable water through the provision of efficient sanitary fittings, rainwater collection and water recycling systems.	<b>Water Consumption (Up to 5 Credits)</b> 1. Completed schedule with all domestic fittings 2. Datasheets confirming reported flow rates as per schedule 3. Wat 01 Calculator	5	3	0	3.89%	2.33%	0.00%	0.00%	<b>Responsibilities</b> BREEAM Assessor Contractor M&E	<b>Comments</b>
<b>Wat02</b>	<b>Water monitoring</b> 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.	<b>Water Monitoring (1 Credit)</b> 1. Letter template 2. Schematics showing meter location(s) 3. Datasheet confirming meter has pulsed output	1	1	0	0.78%	0.78%	0.00%	0.00%	<b>Responsibilities</b> M&E	<b>Comments</b>
<b>Wat03</b>	<b>Water leak detection</b> Reducing the unintended water consumption due to leaks by installing leak detection systems and flow control devices.	<b>Leak Detection System (1 Credit)</b> 1. Letter template 2. Datasheet confirming system complies with letter requirements 3. Drawings showing leak detection system on site <b>Flow Control Devices (1 Credit)</b> 1. Letter template 2. Datasheet confirming system complies with letter requirements 3. Drawings showing location of flow control devices	2	2	0	1.56%	1.56%	0.00%	0.00%	<b>Responsibilities</b> M&E	<b>Comments</b>
<b>Wat04</b>	<b>Water efficient equipment</b> 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.	<b>Water efficient equipment (1 Credit)</b> 1. Letter template 2. Drawings confirming items outlined in letter 3. Ecology information confirming management	1	1	0	0.78%	0.78%	0.00%	0.00%	<b>Responsibilities</b> M&E Contractor	<b>Comments</b>
<b>Mat01</b>	<b>Environmental impacts from construction products - Building life cycle assessment (LCA)</b> Reducing buildings' environmental life cycle impacts through conducting Life Cycle Assessment and integrating its outcomes in the design decision-making process.	<b>RIBA 2 Life Cycle Model (Up to 5 credits)</b> 1) Completed Mat 01 template 2) Mat 01 report 3) Completed Mat 01 Submission Tool <b>RIBA 4 Life Cycle Model Update (Up to 2 credits)</b> 1) As above	7	5	2	7.50%	5.36%	0.00%	2.14%	<b>Responsibilities</b> Architect Structural Engineer M&E	<b>Comments</b>  Early Action RIBA Stage 2
<b>Mat02</b>	<b>Environmental impacts from construction products - Environmental Product Declarations (EPD)</b> To encourage availability of robust and comparable data on the impacts of construction products by rewarding the specification of products with environmental products declarations.	<b>Specification of Products with a Recognised Environmental Product Declaration (EPD) (1 Credit)</b> 1. Completed Mat 02 template 2. EPDs for all materials listed - these can be sourced by the assessor once template is completed, but this will increase review time 3. Mat 02 Calculator	1	1	0	1.07%	1.07%	0.00%	0.00%	<b>Responsibilities</b> Contractor BREEAM Assessor	<b>Comments</b>

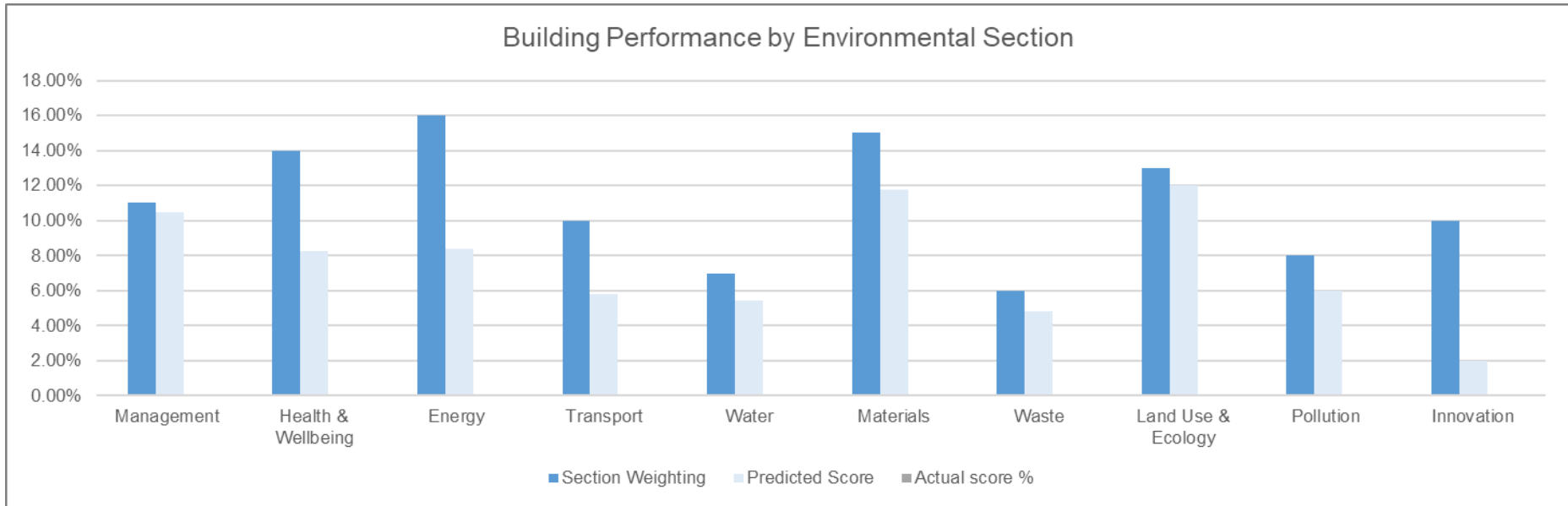
Mat03	<p><b>Responsible sourcing of construction products</b> Recognising and encouraging responsible sourcing of construction products. This includes the source of products and the intermediary companies processing and transporting the product to site.</p>	<p><b>Pre-requisite</b> 1. Letter template confirming sustainable timber <b>Sustainable Procurement Plan (1 Credit)</b> 1. BREEAM compliant Sustainable Procurement Plan in place before RIBA stage 2 <b>Measuring Responsible Sourcing (Up to 3 Credits)</b> 1. Completed Mat 03 template 2. Certificates for all materials listed - these can be sourced by the assessor once template is completed, but this will increase review time 3. Mat 03 Calculator</p>	4	3	1	4.29%	3.21%	0.00%	1.07%	<p>Early Action</p> <p>RIBA Stage 2</p>	<p><b>Responsibilities</b> Project Manager Contractor</p> <p><b>Comments</b></p>
Mat04	<p><b>Insulation</b> This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.</p>	No Longer Assessed	0	0	0	0.00%	0.00%	0.00%	0.00%		
Mat05	<p><b>Designing for durability and resilience</b> Increasing the lifespan of the building through designing for durability and protection from degradation and specifying appropriate construction products.</p>	<p><b>Protecting Vulnerable Parts of the Building from Damage (0.5 Credit)</b> 1. Completed template 2. Drawings showing measures outlined in template <b>Protecting Exposed Parts of the Building from Material Degradation (0.5 Credit)</b> 1. As above</p>	1	1	0	1.07%	1.07%	0.00%	0.00%		<p><b>Responsibilities</b> Architect</p> <p><b>Comments</b></p>
Mat 06	<p><b>Material efficiency</b> Encouraging the reduction of environmental impacts through optimising the use of materials during all stages of the project.</p>	<p><b>Material Efficiency (1 Credit)</b> 1. Completed template from RIBA 1 2. Completed template from RIBA 2 3. Completed template from RIBA 3 4. Completed template from RIBA 4</p>	1	1	0	1.07%	1.07%	0.00%	0.00%	<p>Early Action</p> <p>RIBA Stage 1/2</p>	<p><b>Responsibilities</b> Architect Structural Engineer M&amp;E</p> <p><b>Comments</b></p>
Wst01	<p><b>Construction waste management</b> 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.</p>	<p><b>Pre-demolition Audit (1 Credit)</b> 1. BREEAM compliant Pre-demolition Audit from RIBA 2 <b>Construction Resource Efficiency (Up to 3 Credits)</b> 1. BREEAM compliant Site Waste Management Plan confirming m3 or tonnes of waste produced per 100m2 <b>Diversion of Resources from Landfill (1 Credit)</b> 1. BREEAM compliant Site Waste Management Plan confirming percentage of waste (non-demo, demo and excavation) diverted from landfill.</p>	5	4	1	3.00%	2.40%	0.00%	0.60%	<p>Early Action</p> <p>RIBA Stage 2</p>	<p><b>Responsibilities</b> Waste Consultant Contractor</p> <p><b>Comments</b></p>
Wst02	<p><b>Use of recycled and sustainably sourced aggregates</b> Encouraging the use of recycled or secondary aggregate or aggregate types with lower environmental impact to reduce waste and optimise material efficiency.</p>	<p><b>Recycled Aggregate (1 Credit)</b> 1. Recycled content calculator 2. Specification 3. Letter of commitment from Contractor</p>	1	0	1	0.00%	0.00%	0.00%	0.00%		<p><b>Responsibilities</b> Structural Engineer Contractor</p> <p><b>Comments</b></p>

Wst03	<b>Operational Waste</b> Encouraging the diversion of operational waste from landfill through the provision of space and facilities allowing the segregation and storage of recyclable waste.	<b>Operational Waste (1 Credit)</b> 1. Completed letter template 2. Drawings showing waste storage in line with the letter	1	1	0	0.60%	0.60%	0.00%	0.00%		<b>Responsibilities</b> Architect Waste Consultant  <b>Comments</b>
Wst04	<b>Speculative finishes (Offices only)</b> 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.	Not applicable	0	0	0	0.00%	0.00%	0.00%	0.00%		<b>Responsibilities</b> Architect
Wst05	<b>Adaptation to climate change</b> 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.	<b>Resilience of Structure, Fabric, Building Services and Renewables Installation (1 Credit)</b> 1. Climate Change Adaptation Strategy produced during RIBA 2 2. Climate Change Adaptation Strategy updated at RIBA 4	1	1	0	0.60%	0.60%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Appointed consultant  <b>Comments</b>
Wst06	<b>Design for disassembly and adaptability</b> 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.	<b>Design for Disassembly and Functional Adaptability - Recommendations (1 Credit)</b> 1. Completed template from RIBA 2 <b>Disassembly and Functional Adaptability – Implementation (1 Credit)</b> 1. Completed template from RIBA 4 2. Building adaptability and disassembly guide	2	2	0	1.20%	1.20%	0.00%	0.00%	Early Action RIBA Stage 2	<b>Responsibilities</b> Architect Structural Engineer  <b>Comments</b>
LE01	<b>Site selection</b> Recognising the reuse of previously developed and contaminated land where appropriate remediation has taken place.	<b>Previously Occupied Land (1 Credit)</b> 1. Drawing showing footprint of previous development confirming what percentage of this footprint is covered by the new development. <b>Contaminated Land (1 Credit)</b> 1. Contaminated site investigation and risk assessment/report 2. Commitment letter from the contractor that the remediation strategy will be implemented 3. Evidence of remedial works	2	1	1	2.00%	1.00%	0.00%	1.00%		<b>Responsibilities</b> Architect Contaminated land consultant  <b>Comments</b>
LE02	<b>Identifying and understanding the risks and opportunities for the project</b> Identifying and understanding the ecological risks and opportunities associated with the site to inform the determination of the strategic outcome for the site.	<b>Pre-requisite - Ecological Value of Site</b> 1. Letter template <b>Comprehensive Route (2 Credits)</b> 1. BREEAM compliant Ecology report	2	2	0	2.00%	2.00%	0.00%	0.00%	Early Action RIBA Stage 1	<b>Responsibilities</b> Ecologist Selected team member  <b>Comments</b>

LE03	<b>Managing negative impacts on ecology</b> Recognition of steps taken to avoid impacts on existing site ecology as far as possible.	<b>Prerequisite</b> 1. Close out LE 02 above <b>Planning and Measures On-Site (1 Credit)</b> 1. BREEAM compliant Ecology report 2. CV confirming Ecologist's qualifications 3. Confirmation of implemented site measures in line with report <b>Managing Negative Impacts of the Project (Up to 2 Credits)</b> 1. BREEAM compliant Ecology report 2. Letter template 3. Confirmation of implemented site measures in line with report	3	3	0	3.00%	3.00%	0.00%	0.00%	Early Action  RIBA Stage 1	<b>Responsibilities</b> Ecologist Project Manager Contractor Architect  <b>Comments</b>
LE04	<b>Change and enhancement of ecological value</b> Recognition of steps taken to enhance site ecology.	<b>Prerequisite</b> 1. Close out LE 03 above 2. Letter template <b>Ecological Enhancement - Route 2 ONLY (1 Credit)</b> 1. BREEAM compliant Ecology report 2. Draw ings showing incorporation of recommended measures into the design <b>Change and enhancement of ecology (Up to 3 Credits) - Route 2 ONLY</b> 1. Ecologist completes biodiversity calculator	4	4	0	4.00%	4.00%	0.00%	0.00%		<b>Responsibilities</b> Ecologist Project Manager Contractor Architect  <b>Comments</b>
LE05	<b>Long term ecology management and maintenance</b> Encouraging the long term maintenance and management of ecology on site to ensure both new and existing ecological features continue to thrive.	<b>Long Term Impact on Biodiversity</b> 1. Letter template 2. Close out LE 03 and LE 04 above <b>Planning Liason, Data, Monitoring and Review Management and Maintenance (1 Credit)</b> 1. BREEAM compliant Ecology report 2. Draw ings showing incorporation of recommended measures 3. Confirmation of implemented site measures in line with report 3. Letter template <b>Landscape and Ecology Plan (1 Credit)</b> 1. BREEAM compliant Landscape and Ecology Plan	2	2	0	2.00%	2.00%	0.00%	0.00%		<b>Responsibilities</b> Ecologist Project Manager Contractor Architect/Landscape Architect  <b>Comments</b>
Pol01	<b>Impact of refrigerants</b> Rew arding buildings that reduce the impact of refrigerant gas emissions.	<b>Impact of Refrigerants (2 Credits)</b> 1. Completed Pol 01 template 2. Datasheets showing all numbers used in template 3. Draw ings showing AC units on site 4. Pol 01 Calculator Tool <b>Leak Detection (1 Credit)</b> 1. Datasheets for the leak detection system 2. Draw ings showing location of leak detection system (not required if system is in the unit by default)	3	1	2	2.00%	0.67%	0.00%	1.33%		<b>Responsibilities</b> M&E BREEAM Assessor  <b>Comments</b>
Pol02	<b>Local air quality</b> Recognising buildings w hich limit their impact on local air quality, by consideration of the combustion plant and fuel used on site.	<b>Local Air Quality (Up to 2 Credits)</b> 1. Letter template 2. Draw ings showing system 3. Datasheets for boilers (if not all electric) confirming NOx, PM10 and VOC emissions	2	2	0	1.33%	1.33%	0.00%	0.00%		<b>Responsibilities</b> M&E  <b>Comments</b>



<b>PoI03</b>	<b>Flood and surface water management</b> Rewarding buildings and their sites that limit on-site and off-site local flooding and hence the damage this can cause.	<b>Flood Resilience (Up to 2 Credits)</b> 1. BREEAM compliant Flood Risk Assessment <b>Pre-requisite - Surface Water Run-off</b> 1. BREEAM compliant Drainage Strategy 2. Letter template confirming no change/decrease in impermeable surfaces 3. Draw ings confirming the above <b>Surface Water Run-off Rates (1 Credit)</b> 1. BREEAM compliant Drainage Strategy 2. Draw ings confirming strategy <b>Surface Water Run-off Volume (1 Credit)</b> 1. As per above <b>Minimising Water Course Pollution (1 Credit)</b> 1.As per above	5	4	0	3.33%	2.67%	0.00%	0.00%	<b>Responsibilities</b> Flood Risk Consultant Drainage Engineer  <b>Comments</b>
<b>PoI04</b>	<b>Reduction of night time light pollution</b> Avoiding or reducing the impact of night time light pollution, through careful design and specification of light sources.	<b>Night Time Light Pollution (1 Credit)</b> 1. Completed letter template 2. External lighting schedule including relevant controls 3. Draw ings to show the location of the external lighting, time sw itches and photo-cells 4. Datasheets for all the above.	1	1	0	0.67%	0.67%	0.00%	0.00%	<b>Responsibilities</b> M&E  <b>Comments</b>
<b>PoI05</b>	<b>Reduction of noise pollution</b> Avoiding or reducing the impact of external noise from the building.	<b>Reduction of Noise Pollution (1 Credit)</b> 1. BREEAM compliant Noise Impact Assessment 2. Draw ings confirming installation of any recommendations.	1	1	0	0.67%	0.67%	0.00%	0.00%	<b>Responsibilities</b> Acoustician  <b>Comments</b>
<b>Inn01</b>	<b>Innovation</b> 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.	<b>Up to 10 Credits</b> 1. Man 03 Responsible Construction Management 2. LE04 Ecological Enhancement	10	2	1	10.00%	2.00%	0.00%	1.00%	
<b>Total</b>							74.96%	0.00%	13.53%	



## D. General Note

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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Ensphere Group Ltd  
55A Catherine Place  
London, SW1E 6DY  
+44 (0) 20 7846 9040  
[www.enspheregroup.com](http://www.enspheregroup.com)