# Sandycombe Road, Richmond

Sustainability Statement

Ensphere Group Ltd on behalf of Goldcrest



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# Sandycombe Road, Richmond

## Sustainability Statement

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## 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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# Contents

# 1. Executive Summary

1.1 This Sustainability Statement presents the sustainability credentials for a proposed scheme at Sandycombe Road, Richmond.

1.2 Consideration has 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 proposed scheme is for the redevelopment of the site to commercial space as well as residential flats. At a strategic level, the development of residential will assist with addressing the supply side housing shortages and associated sustainable development objectives. The proposal for commercial space will provide employment for local people, improve the local economy, increase the wealth and lifestyle of employed individuals and contribute to local business rates. In addition, the proposals are consistent with the objectives of the local community strategy.

1.4 A number of sustainable design features are proposed and construction will be responsibly managed to ensure minimal impact on the environment and local community. It is proposed that the commercial space will achieve a BREEAM rating of “Excellent”.

1.5 Overall, the proposals are considered in line with the overarching principles of sustainable development, as defined by the National Planning Policy Framework, and are also considered consistent with the policy requirements of the local planning authority.

# 2. Introduction

2.1 Ensphere Group Ltd was commissioned by Goldcrest to produce a Sustainability Statement for a proposed development at 1-9 Sandycombe Road, Richmond.

## Site & Surroundings

### Site

2.2 The site is located in the north east of Richmond. It is of an approximately triangular shape, roughly level topography and comprises almost entirely of a single building and hardstanding.

### Surroundings

2.3 Access to the site is via Sandycombe Road, to the immediate west. A railway line flanks the eastern boundary and a two-storey commercial unit with Planning permission for a mixed use residential/commercial development is located to the immediate north. Lower Richmond Road (A316) is located to the immediate south.

2.4 The majority of the surrounding land uses are residential; however, commercial uses are evident to the southwest, south and southeast of the site. Recreation spaces can be found to the northeast and west.

## Proposed Development

2.5 Development proposals are for the redevelopment of the site to residential flats with commercial space at ground and part of the first floor.

## Report Objective

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

# 3. Assessment Methodology

## Sustainability & Sustainable Development

3.1 "Sustainability" is a broad concept generally used to describe the ability to perpetuate a particular state of being. It is widely used in the context of development and where there is potential for changing circumstances to cause an impediment to the perpetuation of a phenomenon.

3.2 The term is subjective and the understanding of the concept is influenced by perceptions and aspirations. "Sustainability" is therefore variably defined but normally encapsulates a wide range of issues, often characterised by their relationship with the economy, society and the environment (the "three pillars" of sustainability).

3.3 These issues are not necessarily mutually exclusive and whilst they are often presented as such, technically, the economy is a function of society; and society concerns the interrelationships and behaviours of one species within the wider environment. Nevertheless, the identification and characterisation of these issues enables a better understanding of the things that matter in decision making, which enable a balance to be struck when priorities compete.

3.4 The term "sustainable development" is often used interchangeable with "sustainability" but it is narrower in scope and seeks to promote the perpetuation of human advancement. The "Brundtland Report" (officially titled "Our Common Future" and written by the United Nations World Commission on Environment and Development, Chaired by Gro Harlem Bruntland in 1987), presents perhaps the most widely cited and understood interpretation of this concept:

> ***"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"***

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

3.6 Whilst the Brundtland Report has contributed significantly to understanding the core principles of the subject, the definition has been advanced; and in the context of planning and development in England, the term "sustainable development" is defined very broadly within the National Planning Policy Framework (NPPF).

## Analysis Methodology

3.7 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 sustainable communities' strategy, planning policy and other considerations.

3.8 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; and 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 | ✓ | ✓ | ✓ |

3.9 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.

3.10 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. Sustainable Communities

4.1 The status quo should not necessarily be interpreted as representative of a sustainable community on the basis that it ignores a need (or desire) to evolve in the context of change and over the course of time.

4.2 The aspirations of and for an area are, perhaps, most clearly represented through the democratic process and whilst conflicts of interests can exist between local, national and international priorities, local considerations are considered of greatest pertinence in this instance and in the context of local decision making.

### Richmond upon Thames Community Plan 2013-2018 "Putting People First"

4.3 The Community Plan presents the vision and priorities for the borough going forward. The vision is stated as follows:

> ***"Our vision is for a borough where local people are engaged and involved in their communities and where there is a vibrant and sustainable community and voluntary sector to support residents and help them play a full role in community life. Where people lead happy and healthy lives and are able to enjoy life, with opportunities to learn, develop and fulfil their potential.***
>
> ***Where people can live as independently as possible in the local community and feel empowered to take responsibility for their health and wellbeing and plan for their future.***
>
> ***Where people feel safe, are respected and valued and able to contribute to their communities and where diversity is celebrated.***
>
> ***Where the local character of the environment is protected and new development is high quality and compatible with local character, meets people's needs and provides opportunities for all.***
>
> ***Where out towns and local centres are attractive, viable for businesses and contribute positively to the quality of life of residents and visitors"***

4.4 Three broad theme have been developed and form the basis for the borough's priorities.

**Our Priorities**

- Involving and engaging local people and businesses;
- Delivering for local people;
  - Tackling inequality and creating opportunity for children and young people;

  - A healthy borough;
  - A safe borough;
  - Supporting business, voluntary and community sector and the arts;
  - A green borough.
- Being accountable to local people.

# 5. Planning Context

5.1 National and local planning policy relevant to sustainable development is considered in detail below; with local policy drawing on the visions and priorities expressed as part of the Community Plan discussed in the previous section:

## National Planning Policy Framework

5.2 The Department for Communities and Local Government determines national policies on different aspects of planning and the rules that govern the operation of the system.

5.3 The National Planning Policy Framework (NPPF) defines "sustainable development" in the context of the planning system in England as comprising policies 18 to 219, taken as a whole, of the NPPF. A "presumption" is established in favour of sustainable development.

## London Planning Policy Framework

### The London Plan as Altered (March 2016)

5.4 The London Plan is the overall strategic plan for London. Chapter five details *London's Response to Climate Change* and include a number of policies that set the overarching principles for reducing carbon emissions in the built environment, predominant of which is Policy 5.3 as follows:

**Policy 5.3 Sustainable Design & Construction**

**Strategic**

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

**Planning Decisions**

B) Development proposals should demonstrate that sustainable design standards are integral to the proposal, including its construction and operation, and ensure that they are considered at the beginning of the process.

C) Major development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance and this should be clearly demonstrated within a design and access statement. The standards include measures to achieve other policies in this Plan and the following sustainable design principles apply:

- Minimising carbon dioxide emissions across the site, including the building and

services (such as heating and cooling systems);

- Avoiding internal overheating and contributing to the urban heat island effect;
- Efficient use of natural resources (including water), including making the most of natural systems both within and around buildings;
- Minimising pollution (including noise, air and urban run-off);
- Minimising the generation of waste and maximising reuse or recycling;
- Avoiding impacts from natural hazards (including flooding);
- Ensuring developments are comfortable and secure for users, including avoiding the creation of adverse local climatic conditions;
- Securing sustainable procurement of materials, using local supplies where feasible; and
- Promoting and protecting biodiversity and green infrastructure.

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

## Local Planning Policy Framework

5.5 The relevant planning authority is London Borough of Richmond upon Thames and planning policy for the area is detailed in a number of statutory documents.

### Core Strategy (April 2009)

5.6 The London Borough of Richmond upon Thames Core Strategy is the key planning policy document of the local plan and was adopted in April 2009. The Core Strategy sets out the Council's vision and its guiding principles for planning in Richmond.

**Policy CP1 Sustainable Development**

1.A The policy seeks to maximise the effective use of resources including land, water and energy, and assist in reducing any long term adverse environmental impacts of development. Development will be required to conform to the Sustainable Construction checklist, including the requirement to meet the Code for Sustainable Homes level 3 (for new homes), Ecohomes "excellent" (for conversions) or BREEAM "excellent" (for other

types of development). This requirement will be adjusted in future years through subsequent DPDs, to take into account the then prevailing standards in the Code for Sustainable Homes and any other National Guidance, and ensure that these standards are met or exceeded.

The following principles will be promoted:

1.B Appropriate location of land use

Facilities and services should be provided at the appropriate level locally, taking account of the network of town centres identified in policy CP8.

Higher density residential and mixed use developments to be in town centres, near to public transport to reduce the need to travel by car.

1.C Making the best use of land

The use of existing and proposed new facilities should be maximised through management initiatives, such as co-location or dual use.

Redevelopment of sites should normally only take place where there can be an increase in the number of housing units and / or quantity of commercial floorspace.

1.D Reducing environmental impact

The environmental benefits of retaining and, where appropriate, refurbishing existing buildings, should be compared against redevelopment.

Development should seek to minimise the use of open land for development and seek to maintain the natural vegetation, especially trees, where possible.

Local environmental impacts of development with respect to factors such as noise, air quality and contamination should be minimised.

1.E Environmental gain to compensate for any environmental cost of development will be sought.

**Policy CP2 Reducing Carbon Emissions**

2.A The Borough will reduce its carbon dioxide emissions by requiring measures that minimise energy consumption in new development and promoting these measures in existing development, particularly in its own buildings.

2.B The Council will require the evaluation, development and use of decentralised energy

in appropriate development.

2.C The Council will increase the use of renewable energy by requiring all new development to achieve a reduction in carbon dioxide emissions of 20% from on-site renewable energy generation unless it can be demonstrated that such provision is not feasible, and by promoting its use in existing development.

**Policy CP3 Climate Change – Adapting to the Effects**

3.A Development will need to be designed to take account of the impacts of climate change over its lifetime, including:

- Water conservation and drainage;
- The need for summer cooling;
- Risk of subsidence;
- Flood risk from the River Thames and its tributaries.

3.B Development in areas of high flood risk will be restricted, in accordance with PPS25, and using the Environment Agency's Catchment Flood Management Plan, Borough's Strategic Flood Risk Assessment and site level assessments to determine risk.

**Policy CP4 Biodiversity**

4.A The Borough's diversity including the SSSIs and Other Sites of Nature Importance will be safeguarded and enhanced. Biodiversity enhancements will be encouraged particularly in areas of deficiency (parts of Whitton, Hampton, Teddington, Twickenham and South Kew), in areas of new development and along wildlife corridors and green chains such as the River Thames and River Crane corridors.

4.B Weighted priority in terms of their importance will be afforded to protected species and priority species and habitats in the UK, Regional and Richmond upon Thames Biodiversity Action Plans.

**Policy CP5 Sustainable Travel [extract]**

5.A The need for travel will be reduced by the provision of employment, shops and services and the most appropriate level locally, within the network of town centres identified in CP8. To implement this policy, the Council will:

- Require developments which would generate significant amounts of travel to be located on sites well served by public transport.

**Policy CP7 Maintaining and Improving the Local Environment [extract]**

7.B All new development should recognise distinctive local character and contribute to creating places of a high architectural and urban design quality that are well used and valued. Proposals will have to illustrate that they:

i) are based on an analysis and understanding of the Borough's development patterns, features and views, public transport accessibility and maintaining appropriate levels of amenity;

ii) connect positively with their surroundings to create safe and inclusive places through the use of good design principles including layout, form, scale, materials, natural surveillance and orientation, and sustainable construction.

### Development Management Plan (November 2011)

5.7 The Development Management Plan (DMP) takes forward the Core Strategy's three inter-related themes of "A Sustainable Future", "Protecting Local Character" and "Meeting People's Needs" with more detailed policies for the control of development.

5.8 Policies considered pertinent to this report include:

**Policy DM SD1 Sustainable Construction**

All development in terms of materials, landscaping, standard of construction and operation should include measures capable of mitigating and adapting to climate change to meet future needs.

New buildings should be flexible to respond to future social, technological and economic needs by conforming to the Borough's Sustainable Construction Checklist SPD.

New homes will be required to meet or exceed requirements of the Code for Sustainable Homes Level 3.

They also must achieve a minimum 25 per cent reduction in carbon dioxide emissions over Building Regulations (2010) in line with best practice from 2010 to 2013, 40 per cent improvement from 2013 to 2016, and "zero carbon" standards from 2016. It is expected that efficiency measures will be prioritised as a means towards meeting these targets. These requirements may be adjusted in future years to take into account the then

prevailing standards and any other national guidance to ensure the standards are met or exceeded.

New non-residential buildings over 100sqm will be required to meet the relevant BREEAM "excellent" standards. For conversions see Policy DM SD3 "Retrofitting".

**Policy DM SD9 Protecting Water Resources and Infrastructure [extract]**

The borough's water resources and supplies will be protected by resisting development proposals that would pose an unacceptable threat to surface water and groundwater quantity and quality. This includes pollution caused by water run-off from developments into nearby waterways.

New developments must achieve a high standard of water efficiency by:

1. Meeting the minimum mandatory target for water consumption as set out in the Code for Sustainable Homes; or
2. Meeting a minimum of 2 credits on water consumption for other types of development (BREEAM "excellent"); or
3. Meeting a minimum of 3 credits on water consumption for conversions (EcoHomes "excellent"); and
4. Utilising rainwater harvesting for all external water uses to reduce the consumption of potable water wherever possible.

The above requirements may be adjusted in future years to take into account the then prevailing standards and any other national guidance to ensure that these standards are met or exceeded.

New developments should also consider the following:

1. Utilising rainwater harvesting and greywater recycling for all non-potable uses to reduce the consumption of potable water wherever possible; and
2. Designing of landscaping to minimise water demand.

[…]

**Policy DM DC1 Design Quality**

New development must be of a high architectural and urban design quality based on sustainable design principles. Development must be inclusive, respect local character

including the nature of a particular road, and connect with, and contribute positively to, its surroundings based on thorough understanding of the site and its context.

In assessing the design quality of a proposal the Council will have regard to the following:

- Compatibility with local character including relationship to existing townscape and frontages, scale, height, massing, proportions and form;
- Sustainable development and adaptability, subject to aesthetic considerations;
- Layout and access;
- Space between buildings and relationship to the public realm;
- Detailing and materials.

# 6. Other Policy & Regulatory Considerations

6.1 This section comprises an overview of other considerations relevant to the Sustainability Statement.

## National Planning Practice Guidance

### Climate Change

6.2 Advises how planning can identify suitable mitigation and adaption measures in plan-making and the application process to address the potential for climate change.

### Design

6.3 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

6.4 Explains key issues in implementing policy to protect biodiversity, including local requirements.

### Renewable and Low Carbon Energy

6.5 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 Planning Practice Guidance

### Sustainable Design and Construction Supplementary Planning Guidance (April 2014)

6.6 The Mayor has published supplementary planning guidance on Sustainable Design and Construction. The document provides guidance on the implementation of London Plan policy 5.3 as well as a range of policies, primarily in Chapters 5 and 7 that deal with matters relating to environmental sustainability.

### Energy Planning Guidance (March 2016)

6.7 Policy 5.2 of the London Plan requires each major development proposal to submit a detailed energy assessment. The GLA provides guidance to developers and their advisors on preparing energy assessments to accompany strategic planning applications. With regards to the carbon reduction targets detailed in policy 5.2 of the London Plan, the mayor will apply a 35 per cent target beyond Part L 2013 of the Building Regulations. This is deemed to be broadly equivalent to the 40 per cent target beyond Part L 2010.

## Local Planning Practice Guidance

### Sustainable Construction Checklist Guidance Document (August 2011)

6.8 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.

6.9 Checklist issues comprise:

- Energy Use & Pollution;
- Transport;
- Biodiversity;
- Flooding and Drainage;
- Improving Resource Efficiency;
- Design Standards and Accessibility;

6.10 The Checklist allows for performance against these issues to be scored; with an overall score indicating the level of sustainability of the development.

## Sustainability Standards

### BREEAM

6.11 The Building Research Establishment's Environmental Assessment Method (BREEAM) is an environmental assessment for non-domestic buildings

6.12 BREEAM goes beyond Building Regulations requirements to encourage best practice in: Management; Health & Wellbeing; Energy; Transport; Water; Materials; Waste; Land Use & Ecology; and Pollution.

6.13 The standard measures sustainability by awarding "credits" against "issues" relevant to nine design categories. An additional Innovation category exists for the purpose of rewarding exemplar performance.

6.14 BREEAM uses a rating system to communicate the extent to which performance has been achieved. There are six levels with ratings ranging from "Unclassified" to "Outstanding" and certain issues require a mandatory level of performance depending upon the sought BREEAM rating.

### Eric Pickles Written Statement to Parliament (25 March 2015)

6.15 On the 25 March 2015, the Department for Communities and Local Government and The Right Honourable Eric Pickles produced a Written Statement to Parliament. This included the following statements in relation to the Code for Sustainable Homes:

**Plan Making [extract]**

From the date the Deregulation Bill 2015 is given Royal Assent, local planning authorities and qualifying bodies preparing neighbourhood plans should not set in their emerging Local Plans, neighbourhood plans, or supplementary planning documents, any additional local technical standards or requirements relating to the construction, internal layout or performance of new dwellings. This includes any policy requiring any level of the Code for Sustainable Homes to be achieved by new development; the government has now withdrawn the Code, aside from the management of legacy cases.

6.16 The Deregulation Bill was given Royal Assent on 26 March 2015.

**Decision Taking, Transition and Compliance [extract]**

Where there is an existing plan policy which references the Code for Sustainable Homes, authorities may continue to apply a requirement for a water efficiency standard equivalent to the new national technical standard, or in the case of energy a standard consistent with the policy set out in the earlier paragraph in this statement concerning energy performance.

# 7. Site Context & Strategic Appraisal

## Site Context

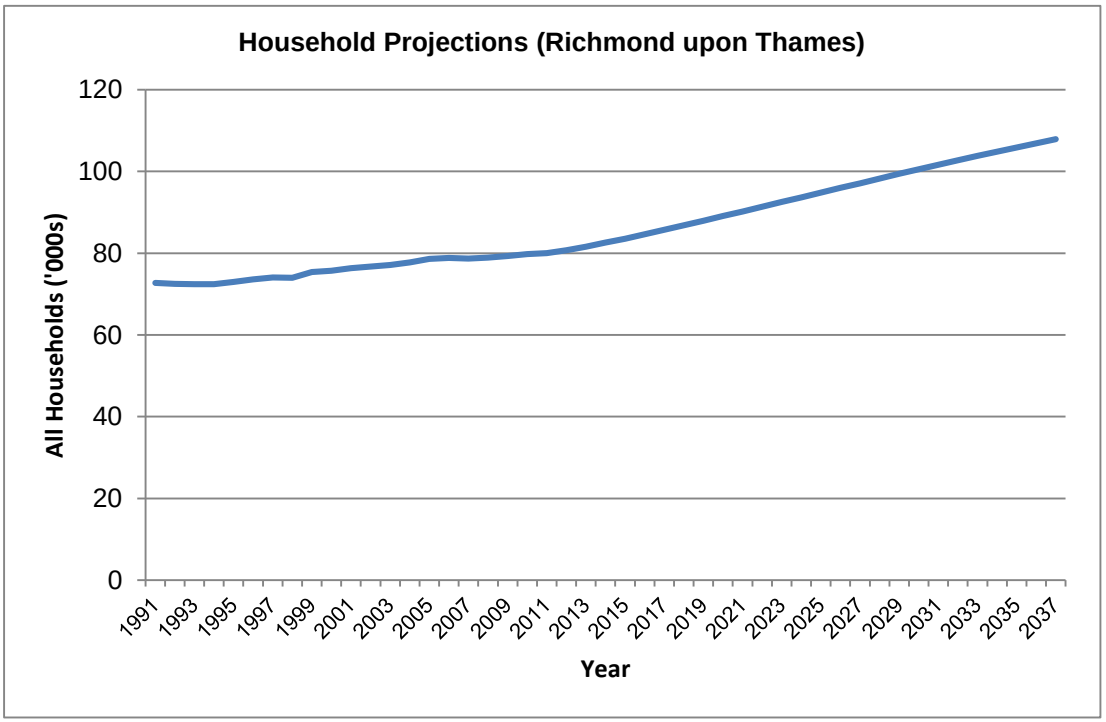
7.1 In line with the "three pillars" of sustainability discussed within the methodology section, the site context has been considered with regard to its economic, social and environmental context; acknowledging that interrelationships exist between many of these issues.

## Socio Economic Context

### 2012-based Household Projections, 2012-2037

7.2 The Department for Communities and Local Government has produced a statistical release on the projected number of households in England and its local authority districts up to 2037. The figures are based upon the 2012-based sub-national population projections, published by the Office for National Statistics (ONS) in May 2014.

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



7.4 The above is extracted from Table 406 in the DCLG's supporting information and shows a 29% predicted increase in households between 2015 and 2037. Data from Table 415 of the DCLG's supporting information suggests that almost all of this growth (98%) is anticipated to be from an increasing population; rather than as a result of other changes such as household formation.

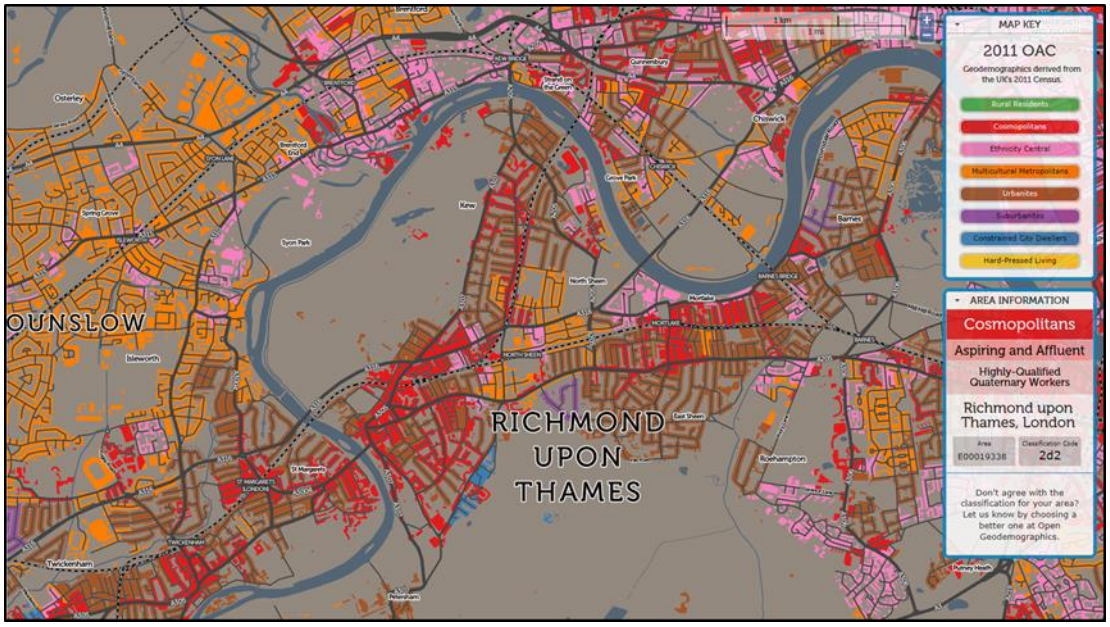
### Output Area Classifications

7.5 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.

7.6 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.

7.7 Data from the 2011 Census has been released identifying the site as having an Output Area Code of E00019338, classified as "Cosmopolitans" (Supergroup Code 2), "Aspiring and Affluent" (Group Code 2d) and "Highly Qualified Quaternary Workers" (Subgroup Code 2d2).

**Figure 7.1 Extract from 2011 OAC Interactive Maps (http://public.cdrc.ac.uk)**

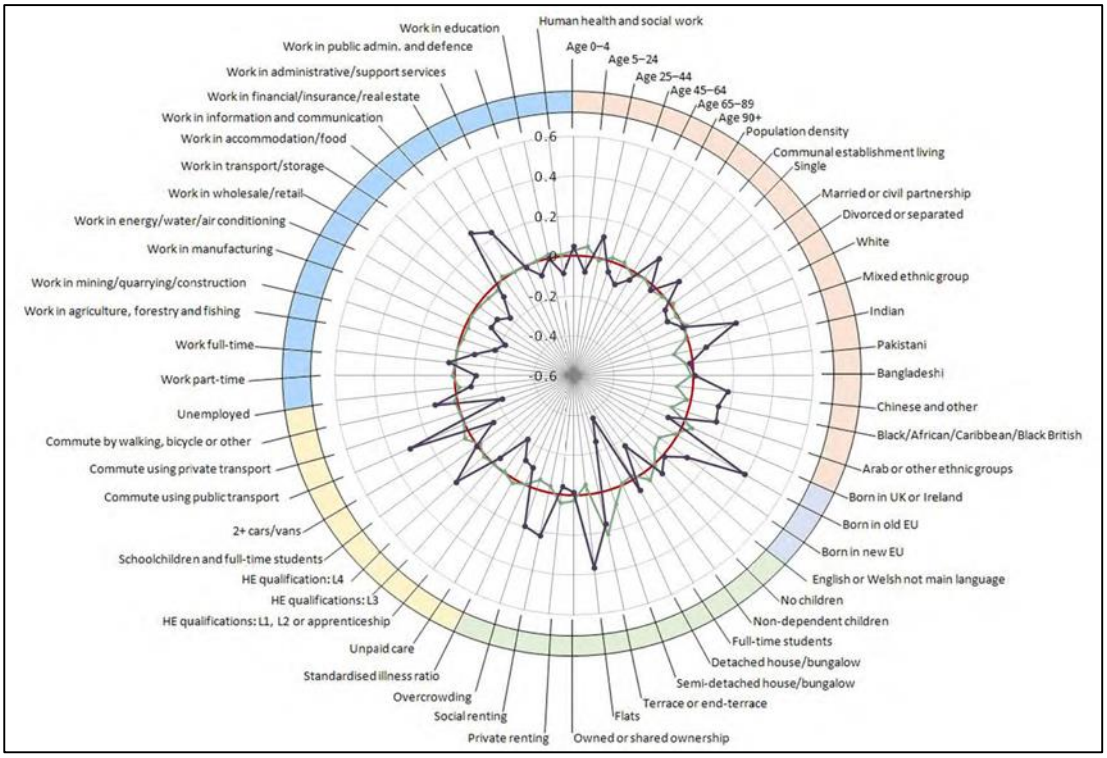



7.8 Radial Plots are provided by the Office for National Statistics. Each data point on a radial plot displays the value for each one of the 60 standardised and transformed 2011 Census variables used. Data points with positive values represent variables that have a higher value than the standardised UK mean or the standardised parent cluster mean. Conversely, data

points with negative values represent variables that have a lower value than the standardised UK mean or the standardised parent cluster mean.

7.9 On each radial plot, a red circle represents the standardised UK mean and the standardised parent cluster mean.

**Figure 7.2 Office for National Statistics Radial Plot**




7.10 The Office for National Statistics provides the following narrative for these groups:

**Supergroup 2: Cosmopolitans**

The majority of the population in this supergroup live in densely populated urban areas. They are more likely to live in flats and communal establishments, and social renting is more prevalent than elsewhere in the UK. The group has a high ethnic integration, with an above average number of residents from EU accession countries coinciding with a below average proportion of persons stating their country of birth as the UK or Ireland. A result of this is that households are less likely to speak English or Welsh as their main language. The population of the group is characterised by young adults, with a higher proportion of single adults and households without children than nationally. There are also higher proportions of full-time students. Workers are more likely to be employed in the accommodation, information and communication, and financial related industries, and using public transport, or walking or cycling to get to work.

**Group 2d: Aspiring and Affluent**

The proportion of people age 0 to 14 is higher than for the parent supergroup. A higher proportion of people are married. There is a higher proportion of people who are of mixed ethnicity. A lower proportion of households have full-time students. Compared with the supergroup a higher proportion of households live in semi-detached or terraced properties. People are more likely to work in the information and communication, and financial related industries, and use public transport to get to work.

**Group 2d2: Highly-qualified Quaternary Workers**

The label "quaternary" refers loosely to 'intellectual' activities. In comparison with the parent group there is a higher proportion of people aged 5 to 14, and a lower proportion of persons of Indian ethnicity. Households are more likely to live in terraced or end-terraced properties.

### Indices of Multiple Deprivation

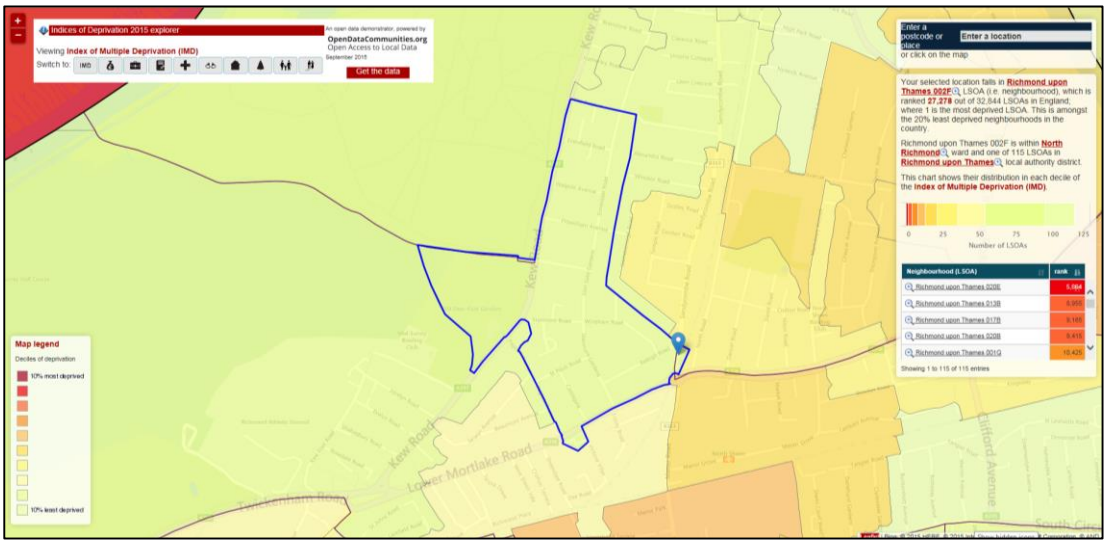
7.11 The English Indices of Deprivation use 38 separate indicators, organised across seven distinct domains of deprivation. The Indices of Multiple Deprivation data are then constructed by combining the seven transformed domain scores, using the following weights; income (22.5%); employment (22.5%); 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%).

7.12 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.

7.13 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.

7.14 Government data (illustrated below) indicates that the area ranks 27,278 out of 32,844; where 1 is the most deprived. The area is therefore considered to have little deprivation overall.

Figure 7.3 Department for Communities and Local Government IMD Data Map




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

IMD Domain Scores (Out of 32,844 where 1 is the most deprived)

| Domain | |
|---|---|
| Rank of Income | 27,697 |
| Rank of Employment | 26,469 |
| Rank of Health and Disability | 32,721 |
| Education Skills and Training | 32,301 |
| Rank of Barriers to Housing and Services Score | 17,670 |
| Rank of Crime Score | 18,270 |
| Rank of Living Environment Score | 7,718 |
| **Rank of IMD Score** | **27,278** |

## Environmental Context

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

### Land Use

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

### Geology

7.18 RPS Consultants has undertaken an initial environmental assessment of the site and has identified British Geological Survey (BGS) mapping as indicating that the site is directly underlain by the Kempton Park Gravel Formation and these deposits are likely to be several

metres in thickness. The Kempton Park Gravel Formation is underlain by the London Clay Formation, likely to be up to 100m in thickness. Given the development history of the area it is likely that Made Ground may be present beneath the site.

### Flooding / Groundwater

7.19 The site is reportedly not located in a groundwater Source Protection Zone (SPZ) and there are no surface water features readily identifiable on Ordnance Survey Mapping within 500m of the site.

7.20 According to the Environment Agency flood map, the site is not located within an indicative fluvial floodplain.

### Ecology

7.21 The site is almost entirely covered by a building and hardstanding with only limited soft landscaping in the southern tip and along the western boundary. Ecological value is therefore considered to be low.

## Strategic Appraisal

### Residential Accommodation

7.22 Both nationally and regionally there is a shortfall in housing, which is leading to property prices rising significantly faster than earnings; with implications for affordability and ownership. Furthermore, lack of access to housing is often most acutely felt by for those people who are not yet on the housing ladder and who have not benefited in the increase in property asset values. Typically, these people will be the younger and those with lower incomes.

7.23 The lack of housing supply is therefore causing an intergenerational imbalance meaning that the ability of future generations to meet their housing needs is being compromised. This is inconsistent with the principles of “sustainable development” as defined by Brundtland; and if not addressed, will have longer term societal and economic implications.

7.24 The Indices of Multiple Deprivation data suggest that deprivation associated with Barriers to Housing and Services is approximately average for the areas assess across England. However, Overcrowding is highlighted within the Output Area Classifications as being higher than average and the Deprivation Index rank for the Living Environment is significantly below the national average.

7.25 This suggests that whilst housing stock is accessible, a potential exists to improve the quality and number of units.

7.26 A need is therefore considered to exist on the basis that the nature of the proposed development will help alleviate the supply-side housing shortage and assist with the

rebalancing of the socio-economic factors. The type of development is therefore considered consistent with the objectives of sustainable development.

### Commercial Space

7.27 The proposal is intended to maintain a level of employment usage at the site and therefore providing jobs for the local area.

7.28 Whilst OAC and IMD data indicates that the site is not significantly deprived with regards to employment, the continuation of employment usage and enhancement through the provision of high quality office space, potentially gives rise to a higher value commercial activity; with associated higher pay for employees.

7.29 Employment has a number of indirect impacts which will benefit the local community. It is expected that those employed at the site will spend much of their earnings in the vicinity, which will increase the circulation of money locally, benefitting other businesses and the size of the local economy.

7.30 Increased individual wealth can also improve quality of life through increase opportunities and potentially improved lifestyle (with the associated positive impacts that this can have on health);

7.31 Additional business in the local area will benefit the Council, and therefore local community, through the payment of business rates. This money can be used to further enhance local service provision;

7.32 The development of a prosperous and sustainable local economy is a stated objective of the local community and it is an area identified by the Council for this type of development.

7.33 A need is therefore considered to exist on the basis that the nature of the proposed development will satisfy an existing demand, provide positive benefits to the local community and economy and satisfy local objectives and priorities.

# 8. Sustainable Design Proposals & Appraisal

8.1 This section presents an overview of the proposed sustainable design features for the scheme and is based upon the Sustainable Development Issues listed within the Sustainable Construction Checklist SPD (August 2011).

## Environmental Standards

8.2 It is proposed that the non-domestic part of the scheme will be assessed against BREEAM with a target of achieving an “excellent” rating.

## Energy Use & Pollution

### Energy Efficiency

8.3 It is intended to optimise the extent of glazing to improve access to natural daylight whilst preserving heating within the properties.

8.4 It is anticipated that the building will have the potential to be ventilated naturally via openable windows and / or trickle vents. This has the advantage of lower energy consumption; decreased costs associated with capital expenditure, operation and maintenance; and reduced noise impacts associated with mechanical plant.

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

8.6 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 and considerate of appropriate CIBSE guidance.

### Low Carbon & Renewable Technologies

8.7 Renewable and low carbon technologies have been considered as part of the energy strategy as presented in the Energy Statement.

8.8 It is proposed to incorporate CHP as the preferred technology solution for the residential part. This is on the basis that it is consistent with the energy hierarchy would also satisfy the carbon reduction target.

8.9 Air Source Heat Pumps would be used for the commercial spaces. This is on the basis that these areas can require mechanical cooling due to occupancy and / or the use of IT. It is therefore considered sensible to incorporate one technology (i.e. a reversible air conditioning unit) rather than using multiple technology solutions.

### Pollution

8.10 Where conventional backup gas-fired boilers are employed, these will be selected to achieve a $NO_X$ rating of <40mg$NO_X$/kWh. Low emissions CHP engines shall be selected as appropriate.

8.11 Transport emissions shall be minimal, as the site offers excellent connections to public transport services and a wide range of amenities at walking distance; the development shall also promote cycling by providing secure cycle storage spaces.

8.12 Measures relating to building design, fabric design and landscaping shall be implemented as appropriate so that internal ambient noise levels are acceptable for the intended use and do not compromise the health & well-being of occupants.

8.13 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.

8.14 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.

8.15 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.

8.16 Drainage systems and wastewater discharge shall be designed in line with best practice guidance, to eliminate any pollution risks for watercourses and underground water.

8.17 Should a risk of ground contamination be identified, this will be assessed by a suitably qualified specialist and remediation implemented in accordance with any recommendations.

## Transport

8.18 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.

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

8.20 According to the Transport for London, the site has a PTAL Rating of 4, representing a good level of public transport connectivity. The following has been identified:

- Nearest Bus Stop (Richmond Manor Circus; ~155m) – serving routes 190, 419, H37, R68 and H22;

- Other Bus Stops (Sandycombe Road; ~200m) (Manor Road Homebase; ~220m) – serving routes 391, 371, 493 and R70;

- Nearest Train Station (North Sheen; ~440m); - regular services to destinations including Waterloo.

8.21 Further detail of the transport infrastructure can be found in the accompanying Transport Assessment.

## Biodiversity

8.22 As discussed in Section 7 above, the ecological value of the site is considered to be low and limited to a 182sqm area in the southern part.

8.23 It is proposed to protect and retain this area as part of the development to ensure minimal impact on the existing ecological features. Furthermore, the site is to be enhanced in accordance with the recommendations of a suitably qualified ecologist; and an area of 342sqm of intensive green roofs are proposed for the development.

8.24 Bird and bat boxes will also be added, most likely at roof level, and in accordance with the ecologist's proposals.

## Flooding and Drainage

8.25 The site is not located within an indicative fluvial floodplain. A Flood Risk Assessment has been undertaken and further information on the proposed drainage strategy and flood risk mitigation measures can be sourced from the respective report, submitted in support of this application. Overall the proposal for redevelopment will improve existing flood resilience of the site and shall not have any adverse impact on flooding risks for neighbouring properties.

8.26 The volume of run-off over the development's lifecycle will be no greater than it would have been prior to the site's proposed development.

8.27 Landscaping will be reliant on natural precipitation to reduce the water demand for the site.

## Improving Resource Efficiency

### Materials and Waste

8.28 The materials strategy for the development shall consider lifecycle environmental impacts, durability, responsible sourcing and pre-fabrication potential, with a view to optimising materials utilisation and safeguarding natural resources. Measures will include:

- The majority of major elements (walls, floors, roof) with an 'A' or 'A+' rating in the BRE's Green Guide to Specification;

- Use of all timber products that come from an accredited Forest Stewardship Council (FSC) source;
- Use of suppliers/products that operate Environmental Management Systems (e.g. ISO14001, EMS) as per minimum and BES 6001 certification for major applications; and
- Consideration of durability, pre-fabrication and dismantling potential in selecting main elements.

8.29 The operational waste strategy comprises provision of dedicated space of adequate size and in convenient locations for storage of general refuse, recyclables and food waste. Internal and external storage will be considerate of the Building Regulations and Council requirements, as well as BREEAM requirements.

8.30 Consideration will be given to the durability of materials and protection of vulnerable building parts during the detailed design process. It is anticipated that this will include features such as durable floor surfaces, protection from vehicular movements and the use of materials that will resist weathering.

### Water

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

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

## Design Standards and Accessibility

8.32 It is proposed that the development will comply with the Residential Design Standards SPD; Lifetime Homes; Richmond's Design for Maximum Access SPG and ≥10% of residential units will be wheelchair accessible.

# 9. Sustainable Construction Proposals & Appraisal

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

## Responsible Construction Practices

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

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

### Environmental Management

9.3 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

9.4 A pre-demolition audit shall be undertaken to establish the potential for reuse of materials for on-site applications or salvaging for reuse/recycling off-site.

9.5 The Site Waste Management Plan (SWMP) will detail the design measures towards optimum use of materials, set specific targets for construction and demolition waste generation and appropriate mechanisms/protocols for segregating waste on-site and monitoring overall waste management.

9.6 The development will aim for more than 95% by tonnage of demolition and construction waste to be diverted from landfill as per minimum.

## Pollution Prevention

### Pollution Prevention Guidelines

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

### Air Pollution

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

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

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

### Water Pollution

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

## Construction Appraisal

9.11 Given that the development proposals are seeking to go significantly beyond standard practice; targeting best practice to mitigate many of the social and environmental impacts, the construction proposals are considered in accordance with sustainable development.

# 10. Summary

10.1 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.

10.2 Sustainability is a broad concept and covers a range of environmental, social and economic considerations. A review of Richmond Council's planning policies has identified a number of requirements relating to sustainable development. Of these, Core Strategy policies CP1 (*Sustainable Development*), CP2 (*Reducing Carbon Emissions*), CP3 (*Climate Change – Adapting to the Effects*), CP4 (*Biodiversity*), CP5 (*Sustainable Travel*), CP7 (*Maintaining and Improving the Local Environment*) are considered of greatest pertinence along with Development Management Plan policies DM SD1 (*Sustainable Construction*), DM SD9 (*Protecting Water Resources and Infrastructure*) and DM DC1 (*Design Quality*). Consideration has also been given to national and London policies as well as Richmond's Sustainable Construction Checklist.

10.3 The proposed scheme includes the redevelopment of the site to residential flats and commercial space. At a strategic level, the development of residential will assist with addressing the supply side housing shortages and associated sustainable development objectives. The proposal for commercial space will provide employment for local people, improve the local economy, increase the wealth and lifestyle of employed individuals and contribute to local business rates. In addition, the proposals are consistent with the objectives of the local community strategy.

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

- Incorporation of CHP and Air Source Heat Pumps (ASHPs);
- 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;
- Efficient construction and operational waste management;
- Biodiversity enhancement;

10.5 It is proposed to assess the non-domestic part of the scheme against BREEAM with a target rating of "Excellent". The energy strategy will be consistent with the Energy Hierarchy and will satisfy the London Plan carbon reduction target with >35% carbon reduction on site and "zero carbon" being achieved through an "Allowable Solutions" contribution.

10.6 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.

# Appendix A Site Plan


Scale 1:1250

0 25000 50000 75000 100000 125000

This line measures 100mm when this drawing is printed @ A3

| Rev | Date | Revision Description |
|---|---|---|

**IF IN DOUBT ASK.**
Dimension to be verified on Site.


Project
1-9 Sandycombe Rd TW9 2EP

Scale:
1 : 1250@A3

Drawing Title
LocationPlan

Date:
NOV 2016

Drawing # :
P03 001

Status
Planning

GOLDCREST architects
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Sulivan Road SW6 3DU
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# Appendix B Sustainable Construction Checklist

## LBRUT Sustainable Construction Checklist - January 2016

This document forms part of the Sustainable Construction Checklist SPD. This document **must** be filled out as part of the planning application for the following developments: all residential development providing **one or more new residential units (including conversions leading to one or more new units)**, and all other forms of development providing **100sqm or more of non-residential floor space**. Developments including new non-residential development of less than 100sqm floor space, extensions less than 100sqm, and other conversions are strongly encouraged to comply with this checklist. Where further information is requested, please either fill in the relevant section, or refer to the document where this information may be found in detail, e.g. Flood Risk Assessment or similar. **Further guidance** on completing the Checklist may be found in the Justification and Guidance section of this SPD.

| | | | |
|---|---|---|---|
| Property Name (if relevant): | 1-9 Sandycombe Road, Richmond | Application No. (if known): | |
| Address (include. postcode) | 1-9 Sandycombe Road, Richmond, London, TW9 2EP | | |
| Completed by: | Pete Jeavons | | |
| *For Non-Residential* | | *For Residential* | |
| Size of development (m2) | 560 | Number of dwellings | 20 |

### 1 MINIMUM COMPLIANCE (RESIDENTIAL AND NON-RESIDENTIAL)

**Energy Assessment**

| | |
|---|---|
| Has an energy assessment been submitted that demonstrates the expected energy and carbon dioxide emissions saving from energy efficiency and renewable energy measures, including the feasibility of CHP/CCHP and community heating systems? If yes, please tick. | Yes |

**Carbon Dioxide emissions reduction**

| | |
|---|---|
| What is the carbon dioxide emissions reduction against a Building Regulations Part L (2013) baseline | >35% |
| *Policy DM SD 1 and London Plan Policy 5.2 (2015) require a 35% reduction in $CO_2$ emissions beyond Building Regulations 2013.* | |
| Percentage of **total** site CO2 emissions saved through renewable energy installation? | >20% |

### 1A MINIMUM POLICY COMPLIANCE (NON-RESIDENTIAL AND DOMESTIC REFURBISHMENT)

***Please check the Guidance Section of this SPD for the policy requirements***

**Environmental Rating of development:**

| | | | |
|---|---|---|---|
| *Non-Residential new-build (100sqm or more)* | | | |
| BREEAM Level | Excellent | Have you attached a pre-assessment to support this? | ☑ |
| *Extensions and conversions for residential dwellings* | | | |
| BREEAM Domestic Refurbishment | Please Select | Have you attached a pre-assessment to support this? | ☐ |
| *Extensions and conversions for non-residential buildings* | | | |
| BREEAM Level | Please Select | Have you attached a pre-assessment to support this? | ☐ |

| | | | |
|---|---|---|---|
| Score awarded for Environmental Rating: | | **Subtotal** | 8 |
| BREEAM: | Good = *0*, Very Good = 4, Excellent = *8*, Outstanding = *16* | | |

### 1B MINIMUM POLICY COMPLIANCE (RESIDENTIAL)

**Water Usage**

| | | |
|---|---|---|
| Internal water usage limited to 105 litres person per day. (Excluding an allowance 5 litres per person per day for external water consumption). Calculations using the water efficiency calculator for new dwellings have been submitted. | ☑ *1* | |
| | **Subtotal** | 1 |

## 2. ENERGY USE AND POLLUTION

**2.1 Need for Cooling** — *Score*

a. How does the development incorporate cooling measures? Tick all that apply:

| | | |
|---|---|---|
| Energy efficient design incorporating specific heat demand to less than or equal to 15 kWh/sqm | ☐ | 6 |
| Reduce heat entering a building through providng/improving insulation and living roofs and walls | ☑ | 2 |
| Reduce heat entering a building through shading | ☑ | 3 |
| Exposed thermal mass and high ceilings | ☐ | 4 |
| Passive ventilation | ☑ | 3 |
| Mechanical ventilation with heat recovery | ☑ | 1 |
| Active cooling systems, i.e. Air Conditioning Unit | ☑ | 0 |

**2.2 Heat Generation**

b. How have the heating and cooling systems, with preference to the heating system hierarchy, been selected (defined in London Plan policy **5.6**)? Tick all heating and cooling systems that will be used in the development:

| | | |
|---|---|---|
| Connection to existing heating or cooling networks powered by renewable energy | ☐ | 6 |
| Connection to existing heating or cooling networks powered by gas or electricity | ☐ | 5 |
| Site wide CHP network powered by renewable energy | ☐ | 4 |
| Site wide CHP network powered by gas | ☑ | 3 |
| Communal heating and cooling powered by renewable energy | ☐ | 2 |
| Communal heating and cooling powered by gas or electricity | ☐ | 1 |
| Individual heating and cooling | ☑ | 0 |

**2.3 Pollution: Air, Noise and Light**

| | | | |
|---|---|---|---|
| a. | Does the development plan to implement reduction strategies for dust emissions from construction sites? | ☑ | 2 |
| b. | Does the development plan include a biomass boiler? | ☐ | - |
| | If yes, please refer to the biomass guidelines for the Borough of Richmond, please see guidance for supplementary information. If the proposed boiler is of a qualifying size, you may need to completed the information request form found on the Richmond website. | ☐ | - |
| c. | Please tick only one option below | | |
| | Has the development taken measures to reduce existing noise and enhance the existing soundscape of the site? | ☑ | 3 |
| | Has the development taken care to not create any new noise generation/transmission issues in its intended operation? | ☑ | 1 |
| d. | Has the development taken measures to reduce light pollution impacts on character, residential amenity and biodiversity? | ☐ | 3 |
| e. | Have you attached a Lighting Pollution Report? | ☐ | - |

**Subtotal** 18

Please give any additional relevant comments to the Energy Use and Pollution Section below

## 3. TRANSPORT

**3.1 Provision for the safe efficient and sustainable movement of people and goods**

| | | | |
|---|---|---|---|
| a. | Does your development provide opportunities for occupants to use innovative travel technologies? | | |
| | Please explain: | | |
| b. | Does your development include charging point(s) for electric cars? | ☐ | 2 |
| c. | **For major developments ONLY**: Has a Transport Assessment been produced for your development based on TfL's Best Practice Guidance? | | |
| | If you have provided a Transport Assessment as part of your planning application, please tick here and move to Section 3 of this Checklist. | ☑ | 5 |
| d. | **For smaller developments ONLY**: Have you provided a Transport Statement? | ☐ | 5 |
| e. | Does your development provide cycle storage? (Standard space requirements are set out in the the Council's Parking Standards - DM DPD Appendix 4) | ☑ | 2 |
| | If so, for how many bicycles? | 31 | |
| | Is this shown on the site plans? | ☐ | - |
| f. | Will the development create or improve links with local and wider transport networks? If yes, please provide details. | ☐ | 2 |

**Subtotal** 7

Please give any additional relevant comments to the Transport Section below

## 4 BIODIVERSITY

**4.1 Minimising the threat to biodiversity from new buildings, lighting, hard surfacing and people**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Does your development involve the loss of an ecological feature or habitat, including a loss of garden or other green space? (Indicate if yes) | | | | | ☐ | -2 |
| | If so, please state how much in sqm? | | | | | | sqm |
| b. | Does your development involve the removal of any tree(s)? (Indicate if yes) | | | | | ☐ | - |
| | If so, has a tree report been provided in support of your application? (Indicate if yes) | | | | | ☐ | - |
| c. | Does your development plan to add (and not remove) any tree(s) on site? (Indicate if yes) | | | | | ☐ | - |
| d. | Please indicate which features and/or habitats that your development will incorporate to improve on site biodiversity: | | | | | | |
| | Pond, reedbed or extensive native planting | 6 | ☐ | Area provided: | | | sqm |
| | An extensive green roof | 5 | ☐ | Area provided: | | | sqm |
| | An intensive green roof | 4 | ☑ | Area provided: | 342 | | sqm |
| | Garden space | 4 | ☐ | Area provided: | | | sqm |
| | Additional native and/or wildlife friendly planting to peripheral areas | 3 | ☑ | Area provided: | 182 | | sqm |
| | Additional planting to peripheral areas | 2 | ☐ | Area provided: | | | sqm |
| | A living wall | 2 | ☐ | Area provided: | | | sqm |
| | Bat boxes | 0.5 | ☑ | | | | |
| | Bird boxes | 0.5 | ☑ | | | | |
| | Other | 0.5 | ☐ | | | | |
| | | | | | | **Subtotal** | **8** |

Please give any additional relevant comments to the Biodiversity Section below

## 5 FLOODING AND DRAINAGE

**5.1 Mitigating the risks of flooding and other impacts of climate change in the borough**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Is your site located in a high flood risk zone (Zone 3)? (Indicate if yes) | | | | | ☐ | -2 |
| | Have you submitted a Flood Risk Assessment? (Indicate if yes) | | | | | ☑ | - |
| b. | Which of the following measures of the drainage hierarchy are incorporated onto your site? (tick all that apply) | | | | | | |
| | Store rainwater for later use | | | | | ☐ | 5 |
| | Use of infiltration techniques such as porous surfacing materials to allow drainage on-site | | | | | ☑ | 3 |
| | Attenuate rainwater in ponds or open water features | | | | | ☐ | 4 |
| | Store rainwater in tanks for gradual release to a watercourse | | | | | ☐ | 3 |
| | Discharge rainwater directly to watercourse | | | | | ☐ | 2 |
| | Discharge rainwater to surface water drain | | | | | ☐ | 1 |
| | Discharge rainwater to combined sewer | | | | | ☐ | 0 |
| c. | Please give the change in area of permeable surfacing which will result from your development proposal: | | | | 551.7 | | sqm |
| | Please provide details of the permeable surfacing below | | | *please represent a loss in permeable area as a negative number* | | | |
| | | | | | | **Subtotal** | **3** |

Please give any additional relevant comments to the Flooding and Drainage Section below

## 6 IMPROVING RESOURCE EFFICIENCY

**6.1 Reduce waste generated and amount disposed of by landfill though increasing level of re-use and recycling**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Will demolition be required on your site prior to construction? *[Points will only be awarded if 10% or greater of demolition waste is reused/recycled]* | | | | | ☑ | 1 |
| | If so, what percentage of demolition waste will be reused in the new development? | | | | 10 | | % |
| | What percentage of demolition waste will be recycled? | | | | 0 | | % |
| b. | Does your site have any contaminated land? | | | | | ☐ | 1 |
| | Have you submitted an assessment of the site contamination? | | | | | ☑ | 2 |
| | Are plans in place to remediate the contamination? | | | | | ☐ | 2 |
| | Have you submitted a remediation plan? | | | | | ☐ | 1 |
| | Are plans in place to include composting on site? | | | | | ☑ | 1 |

**6.2 Reducing levels of water waste**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| a. | Will the following measures of water conservation be incorporated into the development? (Please tick all that apply): | | | | | | |
| | Fitting of water efficient taps, shower heads etc | | | | | ☑ | 1 |
| | Use of water efficient A or B rated appliances | | | | | ☑ | 1 |
| | Rainwater harvesting for internal use | | | | | ☐ | 4 |
| | Greywater systems | | | | | ☐ | 4 |
| | Fit a water meter | | | | | ☑ | 1 |
| | | | | | | **Subtotal** | **6** |

Please give any additional relevant comments to the Improving Resource Efficiency Section below

| | | | |
|---|---|---|---|
| **7** | **ACCESSIBILITY** | | |
| **7.1** | **Ensure flexible adaptable and long-term use of structures** | | |
| a. | **If the development is residential,** will it meet the requirements of the nationally described space standard for internal space and layout? | ☑ 1 | |
| | If the standards are not met, in the space below, please provide details of the functionality of the internal space and layout | | |
| **AND** | | | |
| b. | **If the development is residential**, will it meet Building Regulation Requirement M4 (2) 'accessible and adaptable dwellings'? | ☑ 2 | |
| | If this is not met, in the space below, please provide details of any accessibility measures included in the development. | | |
| | For major residential developments, are 10% or more of the units in the development to Building Regulation Requirement M4 (3) 'wheelchair user dwellings'? | ☑ 1 | |
| **OR** | | | |
| c. | **If the development is non-residential,** does it comply with requirements included in Richmond's Design for Maximum Access SPG | ☑ 2 | |
| | Please provide details of the accessibility measures specified in the Maximum Access SPG that will be included in the development | | |
| | | **Subtotal** | **6** |

Please give any additional relevant comments to the Design Standards and Accessibility Section below

**LBRUT Sustainable Construction Checklist- Scoring Matrix for *New Construction*** **(Non-Residential and domestic refurb)** ***TOTAL*** ***57***

| Score | Rating | Significance |
|---|---|---|
| *80 or more* | *A+* | Project strives to achieve highest standard in energy efficient sustainable development |
| *71-79* | *A* | Makes a major contribution towards achieving sustainable development in Richmond |
| *51-70* | *B* | Helps to significantly improve the Borough's stock of sustainable developments |
| *36-50* | *C* | Minimal effort to increase sustainability beyond general compliance |
| *35 or less* | *FAIL* | Does not comply with SPD Policy |

**LBRUT Sustainable Construction Checklist- Scoring Matrix for New Construction** **Residential new-build**

| Score | Rating | Significance |
|---|---|---|
| **81 or more** | **A++** | Project strives to achieve highest standard in energy efficient sustainable development |
| *64-80* | *A+* | Project strives to achieve highest standard in energy efficient sustainable development |
| *55-63* | *A* | Makes a major contribution towards achieving sustainable development in Richmond |
| *35-54* | *B* | Helps to significantly improve the Borough's stock of sustainable developments |
| *20-34* | *C* | Minimal effort to increase sustainability beyond general compliance |
| *19 or less* | *FAIL* | Does not comply with SPD Policy |

**Authorisation:**

*I herewith declare that I have filled in this form to the best of my knowledge*

Signature Date 14/11/16

# Appendix C BREEAM Pre-Assessment

**BREEAM 2014 - Office (Shell & Core i.e. Cat A)**
Indicative Pre-assessment Results for Sandycombe Road

| Issue ID | Description | Aim | Issue Part | Available Credits | Predicted Credits | Weighted Score (%) |
|---|---|---|---|---|---|---|
| **Management** | | | | | | **11%** |
| Man 1 | Project Brief and Design | *To recognise and encourage an intergrated design process that optimises building performance.* | Stakeholder Consultation (project delivery) | 1 | 1 | 0.61 |
| | | | Stakeholder Consultation (third party) | 1 | 1 | 0.61 |
| | | | Sustainability Champion (design) | 1 | 1 | 0.61 |
| | | | Sustainability Champion (monitoring progress) | 1 | 1 | 0.61 |
| Man 2 | Life Cycle Cost and Service Life Planning | *To deliver whole life value from investment and promote economic sustainability by recognising and encouraging the use and sharing of life cycle costing and service life planning to improve design, specification and through-life maintenance and operation.* | Elemental Life Cycle Cost | 2 | 2 | 0.11 |
| | | | Component Level LCC Plan | 1 | 1 | 0.06 |
| | | | Capital Cost Reporting | 1 | 1 | 0.06 |
| Man 3 | Responsible Construction Practices | *To recognise and encourage construction sites which are managed in an environmentally and socially considerate, responsible and accountable manner.* | Environmental Management | 1 | 1 | 0.61 |
| | | | Sustainability Champion | 1 | 1 | 0.61 |
| | | | Considerate Construction | 2 | 2 | 1.22 |
| | | | Monitoring of construction-site impacts: | | | 0.00 |
| | | | Energy/Water | 1 | 1 | 0.61 |
| | | | Transport | 1 | 1 | 0.61 |
| Man 4 | Commissioning and Handover | *Toi encourage a properly planned handover and commissioning process that reflects the needs of the building occupants.* | Commissioning/Testing Schedule & Responsibilities | 1 | 1 | 0.61 |
| | | | Commissioning Building Services | 1 | 1 | 0.61 |
| | | | Testing and Inspecting Building Fabric | 1 | 0 | 0.00 |
| | | | Handover | 1 | 1 | 0.61 |
| Man 5 | Aftercare | *To provide post-handover aftercare to the building owner/occupants during the first year of occupation to ensure the building operates and adapts, where relevant, in accordance with the design intent and operational demands.* | Aftercare Support | 0 | 0 | 0.00 |
| | | | Seasonal Commissioning | 0 | 0 | 0.00 |
| | | | Post Occupancy Evaluation | 0 | 0 | 0.00 |
| | | | | 18 | 17 | 10.39 |
| **Health & Wellbeing** | | | | | | **15%** |
| Hea 1 | Visual Comfort | *To ensure daylighting, artificial lighting and occupant controls are considered at the design stage to ensure best practice in visual performance and comfort for building occupants.* | Glare Control | 0 | 0 | 0.00 |
| | | | Daylighting | 1 | 0 | 0.00 |
| | | | View Out | 1 | 0 | 0.00 |
| | | | External Lighting | 1 | 1 | 1.05 |
| Hea 02 | Indoor Air Quality | *To recognise and encourage a healthy internal environment through the specification and installation of appropriate ventilation, equipment and finishes.* | Minimising Sources of Air Pollution | | | |
| | | | IAQ Plan | 0 | 0 | 0.00 |
| | | | Ventilation | 1 | 0 | 0.00 |
| | | | VOC Products | 0 | 0 | 0.00 |
| | | | VOC Emissions Testing | 0 | 0 | 0.00 |
| | | | Adaptability | 1 | 0 | 0.00 |
| Hea 03 | Safe Containment Laboratories | | | | | |

| Issue ID | Description | Aim | Issue Part | Available Credits | Predicted Credits | Weighted Score (%) |
|---|---|---|---|---|---|---|
| **Health & Wellbeing** | | | | | | **15%** |
| Hea 04 | Thermal Comfort | *To ensure that appropriate thermal comfort levels are achieved through design, and controls are selected to maintain a thermally comfortable environment for occupants within the building.* | Thermal Modelling | 1 | 1 | 1.05 |
| | | | Adaptability to a climate change scenario | 1 | 1 | 1.50 |
| | | | Thermal Modelling Controls | 0 | 0 | 0.00 |
| Hea 5 | Acoustic Performance | *To ensure the building's acoustic performance including sound insulation meet the appropriate standards for its purpose.* | Sound Insulation | 1 | 1 | 1.05 |
| | | | | | | 0.00 |
| | | | | | | 0.00 |
| Hea 6 | Safety and Security | *To recognise and encourage effective measures that promote safe and secure use and access to and from the building.* | Safe Access | 0 | 0 | 0.00 |
| | | | Security of the site & building | 2 | 2 | 2.10 |
| | | | | 10 | 4 | 6.90 |
| **Energy** | | | | | | **15%** |
| Ene 1 | Reduction of Energy Use and Carbon Emissions | *To recognise and encourage buildings designed to minimise operational energy demand, primary energy consumption and CO2 emissions.* | N/A | 12 | 5 | 3.57 |
| Ene 2 | Energy Monitoring | *To recognise and encourage the installation of energy sub-metering that facilitates the monitoring of operational energy consumption.* | Major Energy Uses | 1 | 1 | 0.71 |
| | | | High Energy Load/Tenancy Areas | | | |
| Ene 3 | External Lighting | *To recognise and encourage the specification of energy-efficient light fittings for external areas of the development.* | N/A | 1 | 1 | 0.71 |
| Ene 4 | Low Carbon Design | *To encourage the adoption of design measures, which reduce* | Passive Design | | | |
| | | | Passive Design Analysis | 1 | 0 | 0.00 |
| | | | Free Cooling | 1 | 0 | 0.00 |
| | | | LZC Technologies | | | |
| | | | LZC Feasibility Study | 1 | 1 | 0.71 |
| Ene 5 | Energy Efficient Cold Storage | | | | | |
| Ene 6 | Energy Efficient Transportation Systems | *To recognise and encourage the specification of energy efficient transportation systems.* | Energy Consumption | 1 | 1 | 1.67 |
| | | | Energy Features | 1 | 1 | 0.71 |
| Ene 7 | Energy Efficient Laboratory Systems | | | | | |
| Ene 8 | Energy Efficient Equipment | *To recognise and encourage procurement of energy efficient equipment to ensure optimum performance and energy savings in operation.* | N/A | 0 | 0 | 0.00 |
| Ene 9 | Drying Space | | | 0 | 0 | 0.00 |
| | | | | 21 | 10 | 8.10 |
| **Transport** | | | | | | **10%** |
| Tra 1 | Public Transport Accessibility | *To recognise and encourage development in proximity of good public transport networks, thereby helping to reduce transport-related pollution and congestion.* | N/A | 3 | 3 | 3.33 |
| Tra 2 | Proximity to Amenities | *To encourage and reward a building that is located in proximity to local amenities, thereby reducing the need for extended travel or multiple trips.* | N/A | 1 | 1 | 1.11 |

| Issue ID | Description | Aim | Issue Part | Available Credits | Predicted Credits | Weighted Score (%) |
|---|---|---|---|---|---|---|
| Tra 3 | Cyclist Facilities | *To encourage building users to cycle by ensuring adequate provision of cyclist facilities.* | N/A | 2 | 1 | 1.11 |
| Tra 4 | Maximum Car Parking Capacity | *To encourage the use of alternative means of transport other than the private car to and from the building, thereby helping to reduce transport-related emissions and traffic congestion associated with the building's operation.* | | 2 | 2 | 2.22 |
| Tra 5 | Travel Plan | *To recognise the consideration given to accommodating a range of travel options for building users, thereby encouraging the reduction of user reliance on forms of travel that have the highest environmental impact.* | N/A | 1 | 1 | 1.11 |
| | | | | 9 | 8 | 8.89 |
| **Water** | | | | | | **8%** |
| Wat 1 | Water Consumption | *To reduce the consumption of potable water for sanitary use in new buildings from all sources through the use of water efficient components and water recycling systems.* | N/A | 5 | 3 | 2.50 |
| Wat 2 | Water Monitoring | *To ensure water consumption can be monitored and managed, and therefore encourage reductions.* | N/A | 1 | 1 | 0.83 |
| Wat 3 | Water Leak Detection | *To reduce the impact of major water leaks that may otherwise go undetected.* | Leak Detection System | 1 | 1 | 0.83 |
| | | | Flow Control Devices | 1 | 1 | 0.83 |
| Wat 4 | Water Efficient Equipment | *To reduce unregulated water consumption by encouraging specification of water efficient equipment.* | N/A | 0 | 0 | 0.00 |
| | | | | 9 | 6 | 5.00 |
| **Materials** | | | | | | **14.50%** |
| Mat 1 | Life Cycle Impacts | *To recognise and encourage the use of construction materials with a low environmental impact (including embodied carbon) over the full life cycle of the building.* | N/A | 5 | 3 | 3.35 |
| Mat 2 | Hard Landscaping and Boundary Protection | *To recognise and encourage the specification of materials for boundary protection and external hard surfaces that have a low environmental impact, taking into account of the full life cycle of materials used.* | N/A | 1 | 1 | 1.12 |
| Mat 3 | Responsible Sourcing of Materials | *To recognise and encourage the specification and procurement of responsibly sourced materials for key building elements.* | Sustainable Procurement Plan | 1 | 1 | 1.12 |
| | | | Responsible Sourcing of Materials | 3 | 2 | 2.23 |
| Mat 4 | Insulation | *To recognise and encourage the use of thermal insulation which has a low embodied environmental impact relative to its thermal properties.* | Embodied Impact | 1 | 1 | 1.12 |
| Mat 5 | Designing for Durability and Resilience | *To recognise and encourage adequate protection of exposed elements of the building and landscape, therefore minimising the frequency of replacement and maximising materials optimisation.* | N/A | 1 | 1 | 1.12 |
| Mat 6 | Material Efficiency | *To recognise and encourage measures to optimise material efficiency in order to minimise environmental impact of material use and waste.* | N/A | 1 | 1 | 1.12 |
| | | | | 13 | 10 | 11.15 |

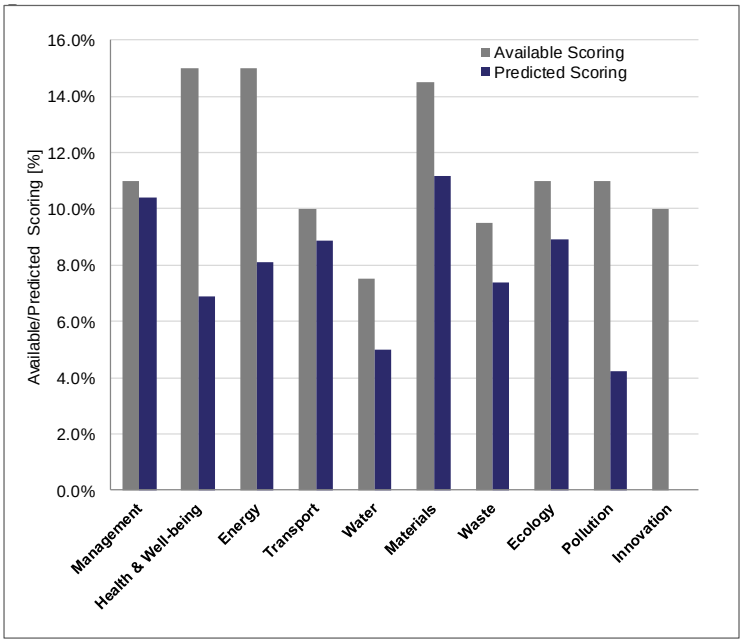
| Issue ID | Description | Aim | Issue Part | Available Credits | Predicted Credits | Weighted Score (%) |
|---|---|---|---|---|---|---|
| **Waste** | | | | | | **9.50%** |
| Wst 1 | Construction Waste Management | *To promote resource efficiency via the effective management and reduction of construction waste.* | Construction Resource Efficiency | 3 | 2 | 2.11 |
| | | | Diversion of Resources from Landfill | 1 | 1 | 1.06 |
| Wst 2 | Recycled Aggregates | *To recognise and encourage the use of recycled and secondary aggregates in construction, thereby reducing the demand for virgin material and optimising material efficiency in construction.* | N/A | 1 | 0 | 0.00 |
| Wst 3 | Operational Waste | *To recognise the provision of dedicated storage facilities for a building's operational-related recyclable waste streams, so that such waste is diverted from landfill or incineration.* | N/A | 1 | 1 | 1.06 |
| Wst 4 | Speculative Floor and Ceiling Finishes | *To encourage the specification and fitting of floor and ceiling finishes selected by the building occupant and therefore avoid unnecessary waste of materials* | No speculative floor or ceiling finishes will be specified in the building or either they are specified with the future tenant. | 1 | 1 | 1.06 |
| Wst 5 | Adaptation to Climate Change | *To recognise and encourage measures taken to mitigate the impact of extreme weather conditions arising from climate change over the lifespan of the building.* | Structural and Fabric Resilience | 1 | 1 | 1.06 |
| Wst 6 | Functional Adaptability | *To recognise and encourage measures taken to accommodate future changes of use of the building over its lifespan.* | N/A | 1 | 1 | 1.06 |
| | | | | 9 | 7 | 7.39 |
| **Land Use & Ecology** | | | | | | **11%** |
| LE 1 | Site Selection | *To encourage the use of previously developed land and/or contaminated land and avoid land which has not been previously disturbed.* | Previously Occupied Land | 1 | 1 | 1.10 |
| | | | Contaminated Land | 1 | 0 | |
| LE 2 | Ecoloigcal Value of Site and Protection of Ecological Features | *To encourage development on land that already has limited value to wildlife and to protect existing ecological features from substantial damage during site preparation and completion of construction works.* | Ecological Value of Site | 1 | 1 | 1.10 |
| | | | Protection of Ecological Features | 1 | 1 | 1.10 |
| LE 3 | Minimising Impact on Existing Site Ecology | *To minimise the impact of a building development on existing site ecology.* | | 2 | 2 | 2.20 |
| LE 4 | Enhancing Site Ecology | *To recognise and encourage actions taken to maintain and enhance the ecological value of the site as a result of development.* | Ecologist's Report & Recommendations | 1 | 1 | 1.10 |
| | | | Increase in Ecological Value | 1 | 1 | 0.10 |
| LE 5 | Long Term Impact on Biodiversity | *To minimise the long term impact of the development on the site's, and surrounding area's, biodiversity.* | N/A | 2 | 2 | 2.20 |
| | | | | 10 | 9 | 8.90 |
| **Pollution** | | | | | | **11%** |
| Pol 1 | Impact of Refrigerants | *To reduce the level of greenhouse gas emmissions arising from the leakage of refrigerants from building systems.* | N/A | 3 | 1 | 0.85 |
| Pol 2 | NOx Emissions | *To contribute to a reduction in national Nox emission levels through the use of low emission heat sources in the building.* | Nox emmissions heating and cooling | 3 | 0 | 0.00 |

| Issue ID | Description | Aim | Issue Part | Available Credits | Predicted Credits | Weighted Score (%) |
|---|---|---|---|---|---|---|
| Pol 3 | Surface Water Run-Off | *To avoid, reduce and delay the discharge of rainfall to public sewers and watercourses, thereby minimising the risk and impact of localised flooding on and off-site, watercourse pollution and other environmental damage.* | Flood Risk | 2 | 1 | 0.85 |
| | | | Surface Water Run-Off | 2 | 1 | 0.85 |
| | | | Minimising Watercourse Pollution | 1 | 0 | 0.00 |
| Pol 4 | Reduction of Night Time Pollution | *To ensure that external lighting is concentrated in the appropriate areas and that upward lighting is minimised, reducing unnecessary light pollution, energy consumption and nuisance to neighbouring properties.* | N/A | 1 | 1 | 0.85 |
| Pol 5 | Reduction of Noise Pollution | *To reduce the likelihood of noise from the new development affecting nearby noise-sensitive buildings.* | N/A | 1 | 1 | 0.85 |
| | | | | 13 | 5 | 4.23 |

| Innovation | | | | 10% |
|---|---|---|---|---|
| Inn 1 | Man03 Responsible Construction Pratices | 1 | 0 | 0 |
| | Man05 Aftercare | 1 | 0 | 0 |
| | Hea01 Visual Comfort | 1 | 0 | 0 |
| | Hea02 Indoor Air Quality | 2 | 0 | 0 |
| | Ene01 Reduction of Energy Use and Carbon Emissions | 5 | 0 | 0 |
| | Wat01 Water Consumption | 1 | 0 | 0 |
| | Mat01 Life Cycle Impacts | 3 | 0 | 0 |
| | Mat03 Responsible Sourcing of Materials | 1 | 0 | 0 |
| | Wst01 Construction Waste Management | 1 | 0 | 0 |
| | Wst02 Recycled Aggregates | 1 | 0 | 0 |
| | Wst05 Adaptation to Climate Change | 1 | 0 | 0 |
| | | 10 | 10 | 0 |

**BREEAM 2014 Office - Results Summary**

Indicative Pre-assessment Results for Sandycombe Road




| | FINAL SCORE | |
|---|---|---|
| | **Available** | **Predicted** |
| Management | 11.00% | 10.39% |
| Health & Wellbeing | 15.00% | 6.90% |
| Energy | 15.00% | 8.10% |
| Transport | 10.00% | 8.89% |
| Water | 7.50% | 5.00% |
| Materials | 14.50% | 11.15% |
| Waste | 9.50% | 7.39% |
| Ecology | 11.00% | 8.90% |
| Pollution | 11.00% | 4.23% |
| **Total** | **104.50%** | **70.95%** |
| Innovation | 10.00% | 0.00% |

| | |
|---|---|
| **Score** | **70.95%** |
| **Rating** | **'Very Good'** |

| Rating Scale | % score |
|---|---|
| Unclassified | <30 |
| Pass | ≥30 |
| Good | ≥45 |
| Very Good | ≥55 |
| Excellent | ≥70 |
| Outstanding | ≥85 |

# Appendix D General Notes

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

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

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

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