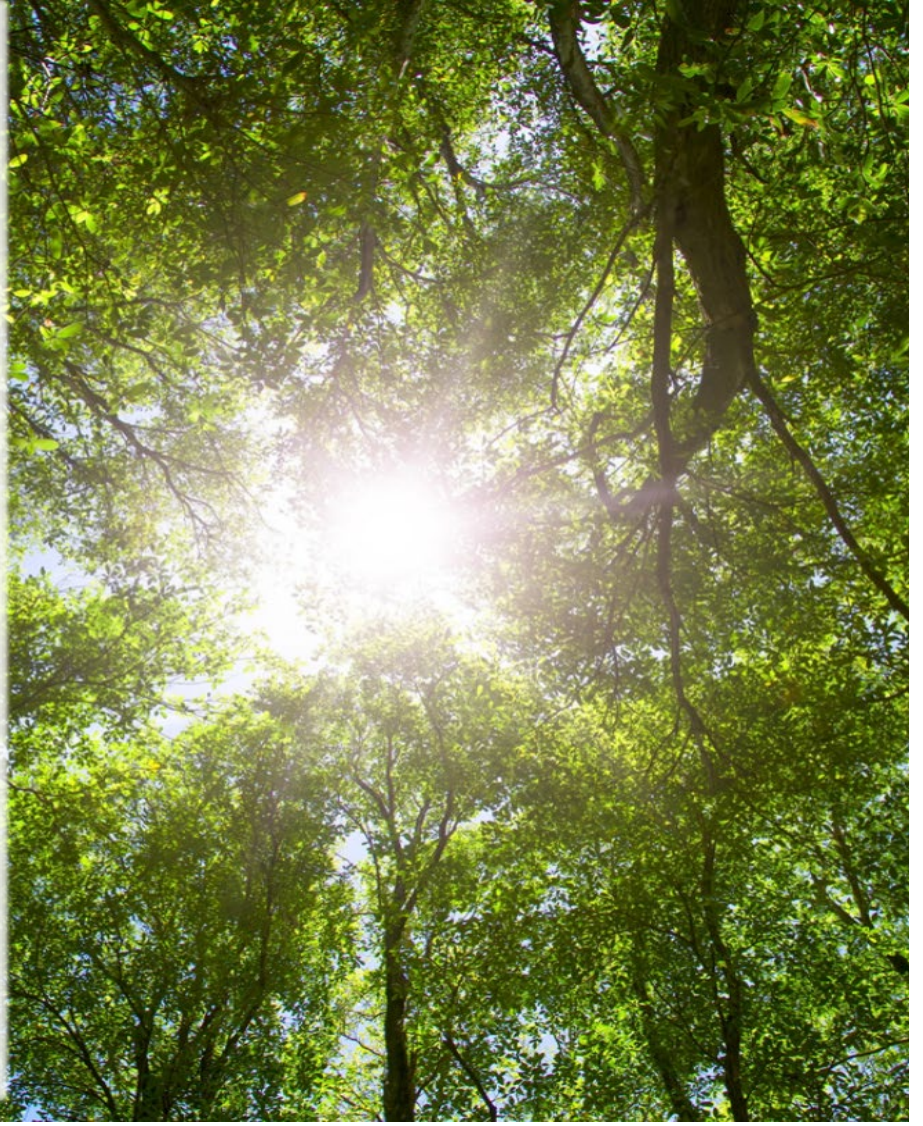


Wilmslow Road, Manchester

Sustainability Statement

**Ensphere Group Ltd
on behalf of Watkin Jones**



Ensphere Group Ltd
52 Grosvenor Gardens
London, SW1W 0AU
+44 (0) 20 7846 9040
www.enspheregroup.com



Wilmslow Road, Manchester

Sustainability Statement

Client Name: Watkin Jones

Document Reference: 20-E161-003

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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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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 scheme at Wilmslow Road, Manchester
- 1.2 Development proposals include the conversion and extension of retained building and new development to accommodate student residential accommodation.
- 1.3 A range of sustainable design features are proposed, and construction will be responsibly managed to ensure minimal impact on the environment and local community.
- 1.4 The scheme will be assessed against BREEAM and a commitment is made to a rating of “Very Good”.
- 1.5 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.

2. Introduction

- 2.1 Ensphere Group Ltd was commissioned by Watkin Jones to produce a Sustainability Statement for the proposed redevelopment at Wilmslow Road, Manchester.

Site and Surroundings

- 2.2 The site is located within Fallowfield, immediately west of the University of Manchester Fallowfield Campus. The site is located circa 2km south of the main University of Manchester Campus, 3km south of Manchester Metropolitan University Campus, and 4km south of Manchester City Centre.
- 2.3 The site currently consists of the Union of Shop, Distributive and Allied Workers (USDAW) Head Office and associated car parking.
- 2.4 Vehicular access to the Application Site is currently afforded via three bellmouth accesses off Langley Road. An historic vehicular access point in the form of a dropped kerb arrangement is available to the site's Wilmslow Road frontage.

Proposed Development

- 2.5 Partial demolition of existing buildings, conversion and extension of retained building and new development to accommodate student residential accommodation and amenity / management facilities, with hard and soft landscaping, parking and access arrangements.

Report Objective

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

3. Assessment Methodology

Sustainability & Sustainable Development

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

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

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

Analysis Methodology

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

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

Assessment Matrix

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

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

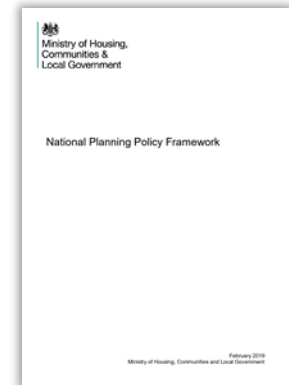
4. Planning Context

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

National Context

National Planning Policy Framework (2019)

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



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

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

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

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

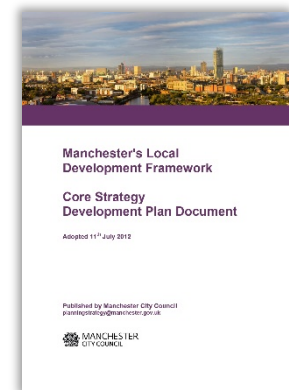
Planning Practice Guidance (2016; updated 2018)

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

Local Context

Manchester City Council Core Strategy (2012)

4.3 The Manchester City Council Core Strategy sets out the vision, objectives, strategy and policies that will guide public and private sector investment to manage development and regeneration in the council over the next 15 years. The Core Strategy is the key planning document in the Manchester Local Development Framework (MDF).



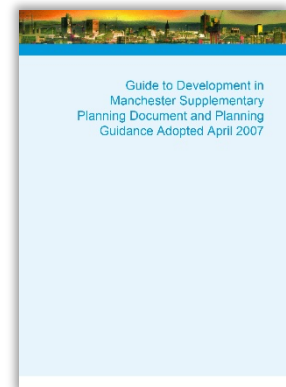
4.4 The following policies are considered most pertinent to this report:

- Policy SP1 (*Spatial Principles*) – includes reference to the promotion of sustainable modes of transport, minimising emissions and efficient use of natural resources.
- Policy H12 (*Purpose Built Student Accommodation*) – includes reference to the provision and management of waste disposal facilities in accordance with the waste hierarchy.
- Policy EN2 (*Tall Buildings*) – requires developments to contribute positively to sustainability.
- Policy EN4 (*Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development*) – developments must follow the Energy Hierarchy and reduce carbon emissions.
- Policy EN5 (*Strategic Areas for Low and Zero Carbon Decentralised Energy Infrastructure*) – Highlights areas within which projects will need to consider proposals for energy infrastructure.
- Policy EN6 (*Target Framework for CO₂ reductions from low or zero carbon energy suppliers*) – requires major applications to reduce carbon emissions.
- Policy EN7 (*Energy Infrastructure Opportunities*) – includes a presumption in favour of low and zero carbon decentralised energy.
- Policy EN8 (*Adaption to Climate Change*) – all new developments are expected to be adaptable to climate change in terms of design, layout, siting and function.
- Policy EN9 (*Green Infrastructure*) – encourages the incorporation of green roofs, walls and planting.
- Policy EN14 (*Flood Risk*) – developments should be directed away from sites at the greatest risk of flooding.

- Policy EN15 (*Biodiversity and Geological Conservation*) – developers are expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity.
- Policy EN16 (*Air Quality*) – developers are expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development and from the use of the development.
- Policy EN17 (*Water Quality*) – developments should avoid any adverse impact on water quality. This includes minimise surface water run-off through the use of Sustainable Drainage Systems (SuDS).
- Policy EN19 (*Waste*) – developers are required to demonstrate that proposals are consistent with the principles of the waste hierarchy.
- Policy DM1 (*Development Management*) – includes reference to commercial developments demonstrating best practice through the application of BREEAM.

Guide to Development in Manchester (SPD) (2007)

4.5 The Guide to Development in Manchester (SPD) sets out the required documents and format that should accompany planning proposals in Manchester. Whilst written in the context of the former Unitary Development Plan, the guide remains an adopted document and gives reference to environmental standards, particularly in relation to energy efficiency and renewable energy.



4.6 References are made to carbon reduction targets in the context of earlier versions of the Building Regulations; however, the renewable energy target remains current and reference is made for developers to aim for at least 20% of final site energy demand.

4.7 The guide also includes a section on environmental design stating that developments should be a BREEAM rating of “Very Good”.

The Greater Manchester Spatial Framework Publication Plan 2020

4.8 When adopted, the Greater Manchester Spatial Framework will set out how Greater Manchester should develop up to the year 2037. The document includes a series of draft policies, including the following:

- Draft Policy GM-Strat 14 (*A Sustainable and Integrated Transport Network*) - New development will have a significant role in delivering Greater Manchester’s future sustainable and integrated transport network in order to reduce car dependency and increase levels of walking, cycling and public transport.

- Draft Policy GM-S 1 (*Sustainable Development*) - To help tackle climate change, development should aim to maximise its economic, social and environmental benefits simultaneously, minimise its adverse impacts, utilise sustainable construction techniques and actively seek opportunities to secure net gains across each of the different objectives.
- Draft Policy GM-S 2 (*Carbon and Energy*) – includes an expectation that all new development will be net zero from 2028; and encourages BREEAM “Excellent” for non-domestic.
- Draft Policy GM-S 3 (*Heat and Energy Networks*) – encourages connection to District Energy Networks (DEN).
- Draft Policy GM-S 4 (*Resilience*) – includes a requirement for adaptable buildings and places that can easily respond to changing needs, future climate impacts and new technologies.
- Draft Policy GM-S 6 (*Clean Air*) - Restricting and carefully regulating developments that would generate significant point source pollution such as some types of industrial activity and energy generation.
- Draft Policy GM-S 7 (*Resource Efficiency*) – promotes circular economy principles and sustainable design and construction.
- Draft Policy GM-E 1 (*Sustainable Places*) - Greater Manchester will aim to become one of the most liveable city regions in the world.

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 regards to its economic, social, and environmental context; acknowledging that interrelationships exist between many of these issues.

Socio Economic Context

Output Area Classifications

- 5.2 Area classifications for Great Britain have been produced after every census since 1971, and as of the 2001 Census, they have been extended to cover the UK as a whole.
- 5.3 Using socioeconomic and demographic data from each census, the classifications seek to identify areas of the country with similar characteristics. Therefore, the presented information should not be interpreted as an assessment specific to the Application Site and the surrounding area; but rather it is a reflection of the characteristics of areas with a similar socioeconomic and demographic pattern.
- 5.4 Data from the 2011 Census has been released identifying the Site as having an Output Area Code of E000026251 and is classified as “Cosmopolitans” (Supergroup Code 2), “Students Around Campus” (Group Code 2a) and “Students Digs” (Subgroup Code 2a2).
- 5.5 Radial Plots are provided by the Office for National Statistics. Each data point on a radial plot displays the value for each one of the 60 standardised and transformed 2011 Census variables used.
- 5.6 The data indicates higher than average occupancy of terraced / end-terraced and flatted accommodation, higher levels of social renting and overcrowding.

Indices of Multiple Deprivation

- 5.7 The English Indices of Deprivation use 38 separate indicators, organised across seven distinct domains of deprivation. The Indices of Multiple Deprivation data are then constructed by combining the seven transformed domain scores, using the following weights; income (22.5%); employment (22.5%); health and disability (13.5%); education, skills and training (13.5%); barriers to housing and services (9.3%); crime (9.3%); and living environment (9.3%).
- 5.8 The IMD can be used to rank every Lower Layer Super Output Area in England according to their relative level of deprivation. The data is not a measure of affluence; therefore the area ranked as the least deprived is not necessarily the most affluent.
- 5.9 The IMD data comprise a numeric value in a scale of 1 to 32,844 (1=most deprived) and are represented in a coloured scale of deciles (1=most deprived – dark red; 10=least deprived – dark blue) in the respective maps. Government data (illustrated below) indicates that the area

ranks 11,452 out of 32,844; where 1 is the most deprived. The area is therefore considered to have a lower than average level of deprivation overall.

- 5.10 The table below provides the data for the individual domains:

Table 5.1 IMD Domain Scores

Domain	Score
Income Rank	15,191
Employment Rank	21,923
Education, Skills and Training Rank	24,548
Health Deprivation and Disability Rank	6,267
Crime Rank	1,785
Barriers to Housing and Services Rank	11,248
Living Environment Rank	4,714
Rank of IMD Score	11,452

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

Environmental Context

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

Land Use

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

Flooding

- 5.13 A Flood Risk Assessment has been undertaken for the site, which concluded that the site is not at risk of flooding from a major source (e.g. fluvial and/or tidal). The site has a 'low probability' of fluvial flooding as the site is located within Flood Zone 1 with less than a 1 in 1000 annual probability of river flooding in any year (<0.1%).

Ecology

- 5.14 A Preliminary Ecology Appraisal has been undertaken for the site. Several Habitats of Principal Importance (HPIs) were identified during the desk study, including an area of deciduous woodland HPI immediately adjacent to the site boundary.

Local Amenities & Public Transport

- 5.15 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.

- 5.16 As outlined in the Transport Statement, submitted in support of the application, the site is located within a short walk of excellent public transport connections to and from the City Centre and Universities, and is also within an easy walking distance of a range of everyday local facilities such as shopping and leisure opportunities.
- 5.17 Greater Manchester Accessibility Levels (GMAL) provide a measure of the accessibility of a point to public transport opportunities. The calculation takes account walk access and service availability. The GMAL calculation included as part of the Transport Statement identifies that the Application Site has a GMAL level of 7, which indicates a high level of public transport accessibility.

6. Sustainable Design Proposals

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

Environmental Standards

- 6.2 It is proposed to undertake a BREEAM assessment of the student accommodation and a rating of “Very Good” will be targeted. A Pre-Assessment is appended to this report highlighting the anticipated credit scores.

Energy

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

Energy Efficiency

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

Low Carbon & Renewable Technologies

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

- Air Source Heat Pumps (ASHP) to provide water heating.

- 6.6 The domestic hot water demand represents approximately 71% of the overall regulated energy demand. The application of ASHPs to hot water therefore permits the scheme to significantly exceed the Council's 20% renewable target.

Water

Conservation

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

- | | |
|--|-------------------------------|
| • WCs | Dual flush 6 litre / 3 litre; |
| • Taps (excluding kitchen & external): | Flow rate 5 litres / minute; |
| • Showers | 8 litres / minute; |

Sustainable Drainage Systems

- 6.8 A Drainage Strategy is incorporated as part of the submitted FRA and it is proposed the surface water for the development will discharge into the public sewers at a restricted runoff rate for all events up to and including the 1 in 100 year (+40%) events by a flow control device.
- 6.9 As a consequence of limiting the rate of discharge from the site, at times of heavy rainfall the volume of water leaving the site will be significantly less than that draining from it. In order to prevent this water backing up in the system and causing flooding, attenuation storage will be incorporated into the site layout, such that the proposed development has the capacity to accommodate the 100 year rainfall event including a 40% increase in rainfall intensity that is predicted to occur as a result of climate change.
- 6.10 The remainder of the site that is not formally drained, i.e. landscaped areas, will be permeable (grass). The majority of rainwater falling on these areas will soak into the ground. Surface water runoff would be directed to the drainage system through drainage gullies located around the perimeter of the buildings and through contouring of the hardstanding areas.
- 6.11 These methods will reduce peak flows, the volume of runoff, and slow down flows and will provide a suitable SuDS solution for this site.

Materials & Waste

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

Pollution

- 6.14 Transport emissions shall be minimal, as the Site offers excellent connections to public transport services and a wide range of amenities at walking distance.
- 6.15 Measures relating to building design, fabric design and landscaping shall be implemented as appropriate so that internal ambient noise levels are acceptable for the intended use and do not compromise the health & well-being of occupants.
- 6.16 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.
- 6.17 Good internal air quality will be achieved through the creation of a building envelope with a low air permeability; meaning that the building fabric will reduce the infiltration of pollution from the external environment.
- 6.18 The developer will also endeavour to avoid the use of materials with a high VOC (volatile organic compound) content; therefore ensuring an improved air quality for the completed development.

Ecology

- 6.19 The Preliminary Ecology Appraisal included a number of recommendations to mitigate impacts and enhance the ecological value. These included:
- The planting of new trees at a ratio of two trees for every one lost.
 - With regards to birds, planting of native species of trees and shrubs and the provision of alternative nesting opportunities in the form of nest boxes within the new development.
- 6.20 The Appraisal also encouraged the creation of habitats as part of the landscaping proposals.

Sustainable Transport

- 6.21 The scheme is proposed to be promoted as effectively "car free", with on-site parking provision limited to disabled parking, on-site staff parking and electric vehicle charging points.
- 6.22 Cycle access to the site would be supported via the provision of secure cycle stores adjacent to the main pedestrian access off Wilmslow Road. Access to the cycle stores would be restricted to residents only, with the areas managed by the site management company.

7. Sustainable Construction Proposals

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

Responsible Construction Practices

Impacts on Neighbours, Pedestrians, Road Users and Workforce

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

Environmental Management

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

Materials Optimisation and Waste

- 7.4 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

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

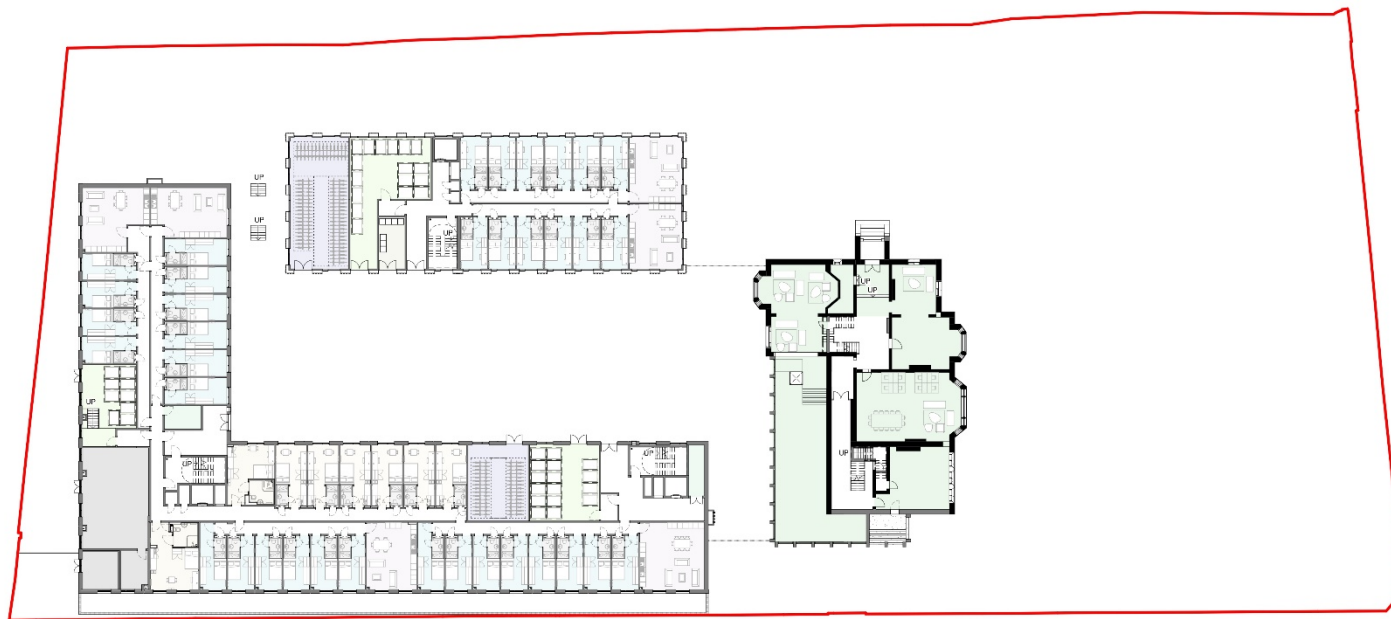
7.9 Appropriate measures shall be implemented to minimise risks of watercourse and underground water pollution, in line with EA's PPG 5 Works in, near or liable to affect watercourses and the Guide for developers Building a better environment, as stated above. Specific measures shall be outlined in the 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.
- 8.3 A review of Manchester City Council's planning policies has identified a number of requirements relating to sustainability. The body and appendices of this report provide a fuller description and regard has been given to both the current Core Strategy as well as the Guide to Development in Manchester and emerging Greater Manchester Spatial Framework.
- 8.4 Planning proposals include the conversion and extension of retained building and new development to accommodate student residential accommodation. At a strategic level, this is considered to be sustainable on the basis that the project will assist with attracting students, staff and investment in the area, whilst returning traditional housing occupied by students to the housing market in benefit of the housing supply-demand balance and affordability.
- 8.5 A range of sustainable design and construction features are proposed including:
- Highly thermally efficient building fabric;
 - Air Source Heat Pumps for hot water heating;
 - Highly efficient lighting;
 - Water saving sanitary fittings and appliances to deliver a water efficient development;
 - The use of materials with a low lifecycle environmental impact and embodied energy;
 - Consideration of the principles of Secured by Design;
 - Efficient construction and operational waste management;
- 8.6 It is proposed to assess the scheme against BREEAM with a target rating of "Very Good".
- 8.7 Overall, the proposals for the scheme are in line with the overarching principles of sustainable development as well as the policy requirements of the planning authority.

Appendices

A. Site Plans



**TIM
GROON**
CREDIT UNION

7 Constance Street
Kreit 161
Manchester
M10 4J2
Tel: +44 (0)161 978 1100
www.kreit.co.uk

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Rev	Description	Date
A	Existing Building Room Areas Added	05/08/20
B	Preliminary Issue	02/10/20
C	Working Progress Update	16/10/20
D	Scheme updated for Planning	18/11/20

Client
Watkins Jones Group Ltd

Project
188 Wimslow Road_Manchester

Title
GA Ground Floor

Status
Planning

Project number
1093

Date
02/06/19

Drawn by
MP

Checked by
MP

Scale
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Revision
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B. Key Local Planning Policy Requirements

Manchester City Council Core Strategy (2012)

The Manchester City Council Core Strategy is the overall strategic plan for Manchester.

Policy SP1 – Spatial Principles

The key spatial principles which will guide the strategic development of Manchester to 2027 are:

- The Regional Centre will be the focus for economic and commercial development, retail, leisure and cultural activity, alongside high quality city living.
- The growth of Manchester Airport will act as a catalyst for the regional economy, and will also provide the impetus for a second hub of economic activity in this part of the City.
- Beyond these areas, the emphasis is on the creation of neighbourhoods of choice, providing high quality and diverse housing around district centres which meet local needs, all in a distinct environment. The majority of new residential development in these neighbourhoods will be in the Inner Areas, defined by the North Manchester, East Manchester and Central Manchester Regeneration Areas.
- The City is covered by regeneration areas including the City Centre. All development should have regard to the character, issues and strategy for each regeneration area as described in the North, East, Central and South Manchester and Wythenshawe Strategic Regeneration Frameworks and the Manchester City Centre Strategic Plan.
- The City's network of open spaces will provide all residents with good access to recreation opportunities. The River Valleys (the Irk, Medlock and Mersey) and City Parks are particularly important, and access to these resources will be improved.
- New development will maximise the potential of the City's transport infrastructure, in particular promoting walking, cycling and use of the public transport. The extension to the Metrolink network through the Oldham and Ashton lines will create key corridors for new development.

Core Development Principles

Development in all parts of the City should:-

- Make a positive contribution to neighbourhoods of choice including:-
 - creating well designed places that enhance or create character.
 - making a positive contribution to the health, safety and wellbeing of residents
 - considering the needs of all members of the community regardless of age, gender, disability, sexuality, religion, culture, ethnicity or income.
 - protect and enhance the built and natural environment.
- Minimise emissions, ensure efficient use of natural resources and reuse previously developed land wherever possible.
- Improve access to jobs, services, education and open space by being located to reduce the need to travel and provide good access to sustainable transport provision.

Policy H12 – Purpose Built Student Accommodation

The provision of new purpose built student accommodation will be supported where the development satisfies the criteria below. Priority will be given to schemes which are part of the universities' redevelopment plans or which are being progressed in partnership with the universities, and which clearly meet Manchester City Council's regeneration priorities.

1. Sites should be in close proximity to the University campuses or to a high frequency public transport route which passes this area.

2. The Regional Centre, including the Oxford Road Corridor, is a strategic area for low and zero carbon decentralised energy infrastructure. Proposed schemes that fall within this area will be expected to take place in the context of the energy proposals plans as required by Policy EN 5.
3. High density developments should be sited in locations where this is compatible with existing developments and initiatives, and where retail facilities are within walking distance. Proposals should not lead to an increase in on-street parking in the surrounding area.
4. Proposals that can demonstrate a positive regeneration impact in their own right will be given preference over other schemes. This can be demonstrated for example through impact assessments on district centres and the wider area. Proposals should contribute to providing a mix of uses and support district and local centres, in line with relevant Strategic Regeneration Frameworks, local plans and other masterplans as student accommodation should closely integrate with existing neighbourhoods to contribute in a positive way to their vibrancy without increasing pressure on existing neighbourhood services to the detriment of existing residents.
5. Proposals should be designed to be safe and secure for their users, and avoid causing an increase in crime in the surrounding area. Consideration needs to be given to how proposed developments could assist in improving the safety of the surrounding area in terms of increased informal surveillance or other measures to contribute to crime prevention.
6. Consideration should be given to the design and layout of the student accommodation and siting of individual uses within the overall development in relation to adjacent neighbouring uses. The aim is to ensure that there is no unacceptable effect on residential amenity in the surrounding area through increased noise, disturbance or impact on the streetscene either from the proposed development itself or when combined with existing accommodation.
7. Where appropriate proposals should contribute to the re-use of Listed Buildings and other buildings with a particular heritage value.
8. Consideration should be given to provision and management of waste disposal facilities, that will ensure that waste is disposed of in accordance with the waste hierarchy set out in Policy EN 19, within the development at an early stage.
9. Developers will be required to demonstrate that there is a need for additional student accommodation or that they have entered into a formal agreement with a University, or another provider of higher education, for the supply of all or some of the bedspaces.
10. Applicants/developers must demonstrate to the Council that their proposals for purpose built student accommodation are deliverable.

Policy EN2 – Tall Buildings [extract]

Tall buildings are defined as buildings which are substantially taller than their neighbourhoods and/or which significantly change the skyline.

Proposals for tall buildings will be supported where it can be demonstrated that they

- Are of excellent design quality,
- Are appropriately located,
- Contribute positively to sustainability,
- Contribute positively to place making, for example as a landmark, by terminating a view, or by signposting a facility of significance, and
- Will bring significant regeneration benefits.

[...]

Policy EN4 – Reducing CO₂ Emissions by Enabling Low and Zero Carbon Development

The Council will seek to reduce fuel poverty and decouple growth in the economy, growth in CO₂ emissions, and rising fossil fuel prices, through the following actions:

- All development must follow the principle of the Energy Hierarchy, being designed:
 - to reduce the need for energy through design features that provide passive heating, natural lighting and cooling

- to reduce the need for energy through energy efficient features such as improved insulation and glazing
- to meet residual energy requirements through the use of low or zero carbon energy generating technologies
- Wherever possible new development and retrofit projects, including energy generation plant, must be located and designed in a manner that allows advantage to be taken of opportunities for low and zero carbon energy supplies.
- Where possible new development and retrofit projects will be used as a mechanism to help improve energy efficiency and provide low and zero carbon energy supplies to existing buildings.
- Where appropriate new development and retrofit projects will be required to connect to and/or make contributions to low or zero carbon energy schemes and/or to incorporate provision to enable future connection to any existing / potential decentralised energy schemes.
- The use of building materials with low embodied carbon in new development and refurbishment schemes.

Policy EN5 – Strategic Area for Low and Zero Carbon Decentralised Energy Infrastructure

Within Manchester it is considered that the following strategic areas, indicated on the key diagram, will have a major role to play in achieving an increase in the level of decentralised, low and zero carbon energy supplies available:

- The Regional Centre, which also includes the Oxford Road Corridor and Eastlands
- District Centres and associated major development sites
- Airport Strategic Site
- Strategic housing location
- Strategic employment locations

Within these areas new development, regeneration and retrofit projects, will be expected to take place in the context of more detailed proposals for decentralised low and zero carbon energy infrastructure in the form of energy proposals plans. The Council will work with all relevant stakeholders, which may include developers, landowners, residents, community groups, private sector partners, utilities companies, neighbouring authorities and other public sector bodies, as appropriate, to bring forward such plans.

Where investment or development is being undertaken into or adjacent to a public building/asset or district heating network, full consideration shall be given to the potential role that these can have in providing an anchor load within a decentralised energy network or in creating opportunities for CO₂ reduction funded by contributions.

Policy EN6 – Target Framework for CO₂ reductions from low or zero carbon energy supplies

Applications for residential development of 10 or more units and all other development over 1,000 sq m will be expected as a minimum to meet the target shown in Tables 12.1 or 12.2, unless this can be shown not to be viable. This should be demonstrated through an energy statement, submitted as part of the Design and Access Statement. Such a statement will be expected to set out the projected regulated energy demand and associated CO₂ emissions for all phases of the development.

Developments smaller than the above threshold, but involving the erection of a building or substantial improvement to an existing building will also be expected to meet the minimum target, where viable, but will not be expected to submit an energy statement.

The target framework relates to three broad development locations and their potential for low and zero carbon, decentralised energy. The areas are defined as follows

- Target 1 Network development areas: Locations where the proximity of new and existing buildings, the mix of uses and density of development provide the right conditions to support district heating (and cooling).
- Target 2 Electricity intense areas: Locations where the predominant building type has an all electric fit-out such as retail units and leisure complexes.
- Target 3 Micro-generation areas: Locations where lower densities and a fragmented mix of uses tend to mean that only building scale solutions are practical.

Domestic CO₂ emissions reduction targets

Table 12.1

Target	% Minimum requirement
Target 1: Network development area	CHP/district heating anchor or connection or where not feasible a 15% increase on Part L 2010
Target 2: Electricity intense buildings	+15% increase on Part L 2010
Target 3: Micro development area	+15% increase on Part L 2010

Non-domestic CO₂ emissions reduction targets

Table 12.2

Target	% Minimum requirement
Target 1: Network development area	CHP/district heating anchor, or connection or where not feasible, a 15% increase on Part L 2010
Target 2: Electricity intense buildings (Applies to commercial uses with a high proportion of emissions from electricity use (>45 kg CO ₂ /m ²))	+10% increase on Part L 2010
Target 3: Micro generation area	+15% increase on Part L 2010

Where the CO₂ emissions reduction required under any future revision to Part L of the building regulations becomes greater than the '% Minimum requirement', the reduction required under building regulations would apply.

Where the Council identifies an 'allowable solution', for example within an energy proposals plan, that would produce higher carbon reductions at no extra cost than that of achieving the '% Minimum requirement' (or required under building regulations if greater) the higher percentage reduction will be required. The cost comparison is based on the cost of incorporating the 'allowable solution' at design stage.

The energy statement will be required to be submitted at the outset of any proposed development (outline application or before). Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO₂ mitigation, subject to the energy statement incorporating evidence such as modelling to demonstrate compliance.

Guidance on what the energy statement should contain and how to decide which target applies to a development proposal is given in Appendix A.

Policy EN7 – Energy Infrastructure Opportunities

There will be a general presumption in favour of low and zero carbon decentralised energy schemes, subject to the following considerations:

- That any new generating plant capable of producing heat and cooling as well as electricity should be located in a way that facilitates future connection to a local distributed energy system.
- That any energy centre, including generating plant, standby/boiler plant and substations, shall be located and designed to a high quality so as to integrate with and contribute to the townscape.
- Biofuels should be obtained from sustainable sources and processes and in a way that minimises transport impacts, following a sequential approach in order to minimise CO₂ emissions – firstly prioritising local and regional sources, followed by national, European and international.
- Consideration should be given to biofuel delivery by rail and waterways where possible. Where large-scale fuel or feedstock delivery is required by road the energy centre must be located in or adjacent to light industrial, industrial or leisure uses with any impact on local residential amenity minimised.
- The cumulative impact of energy schemes will be taken into account when considering applications, to include modelled impacts on air quality and landscape character, with reference to Policy EN16.
- Flood risk, through the Manchester-Salford-Trafford Strategic Flood Risk Assessment.

In determining proposals for development, consideration will be given to the need to safeguard strategic energy sites and network routes, both proposed or existing, where these have been identified as having strategic significance for the delivery

of low or zero carbon energy infrastructure or, would be required in order to achieve the successful regeneration of an area in line with targets for reducing carbon emissions.

Policy EN8 – Adaption to Climate Change

All new development will be expected to be adaptable to climate change in terms of the design, layout, siting and function of both buildings and associated external spaces. In achieving developments which are adaptable to climate change developers should have regard to the following, although this is not an exhaustive list:

- Minimisation of flood risk by appropriate siting, drainage, and treatment of surface areas to ensure rain water permeability
- Reduction in urban heat island effect through the use of Green Infrastructure such as green roofs, green walls, increased tree cover and waterways
- The need to control overheating of buildings through passive design
- The opportunity to provide linked and diverse green space to enhance natural habitats which will assist species adaptation

Developers will be permitted to use green infrastructure elements such as green roofs, green walls, street trees and waterways to contribute to compliance with CO₂ mitigation under Policy EN6, subject to sufficient evidence to quantify their contribution to compliance.

Policy EN9 – Green Infrastructure [extract]

New development will be expected to maintain existing green infrastructure in terms of its quantity, quality and multiple function. Where the opportunity arises and in accordance with current Green Infrastructure Strategies the Council will encourage developers to enhance the quality and quantity of green infrastructure, improve the performance of its functions and create and improve linkages to and between areas of green infrastructure. Where the benefits of a proposed development are considered to outweigh the loss of an existing element of green infrastructure, the developer will be required to demonstrate how this loss will be mitigated in terms of quantity, quality, function and future management.

Key features of Manchester's green infrastructure will include: [...]

- The encouragement of green roofs, green walls, tree planting and other forms of green infrastructure to allow for the adaption to climate change in heavily urbanised areas.

New green infrastructure provision should be an exemplar of best practice and innovation in terms of both its design and management.

Policy EN14 – Flood Risk

- In line with the risk-based sequential approach contained within PPS25, development should be directed away from sites at the greatest risk of flooding, and towards sites with little or no risk of flooding; this should take account of all sources of flooding identified in the Manchester-Salford-Trafford Strategic Flood Risk Assessment (SFRA).
- In addition to the requirements for site-specific Flood Risk Assessments (FRAs) set out in PPS25, an appropriate FRA will also be required for all development proposals, including changes of use, on sites greater than 0.5ha within Critical Drainage Areas (CDAs) and Canal Hazard Zones identified in the SFRA.
- All new development should minimise surface water run-off, including through Sustainable Drainage Systems (SUDS) and the appropriate use of Green Infrastructure. Developers should have regard to the surface water run-off rates in the SFRA User Guide. In CDAs, evidence to justify the surface water run-off approach / rates will be required.
- The City of Manchester contains many sections of rivers which are culverted or 'hidden'; where these are indicated in the SFRA beneath the proposed development site, further investigation will be required and the development proposal should take this into account; where feasible and appropriate development should seek to open up culverted/hidden rivers to reduce the associated flood risk and danger of collapse, taking advantage of opportunities to enhance biodiversity and Green Infrastructure.

Policy EN 15 – Biodiversity and Geological Conservation [extract]

[...]

Developers will be expected to identify and implement reasonable opportunities to enhance, restore or create new biodiversity, either on-site or adjacent to the site, contributing to linkages between valuable or potentially valuable habitat areas where appropriate, with reference to:

- the Manchester Biodiversity Strategy, which provides further details of priority habitats within Manchester and opportunities for biodiversity enhancement including corridors such as the Mersey, Medlock and Irk river valleys, the canals and disused railway lines and areas of managed greenspace particularly in parks;
- the Green Infrastructure Framework for Greater Manchester, which encompasses an ecological framework that seeks to guide and inform habitat creation and repair, including identifying large 'biodiversity opportunity areas' including the Moston Brook Corridor and Nutsford Vale;
- the Open Space, Sport & Recreation Study, which identifies areas where there is a deficit of natural and semi-natural greenspace, opportunities for green corridors and other linkages;
- Manchester's Climate Change Action Plan;
- the Strategic Flood Risk Assessment (SFRA) for Manchester;
- the Habitats Regulations Assessment (HRA) for Manchester, which gives detailed consideration to Special Areas of Conservation (SACs), including the Rochdale Canal SAC just outside the district boundary;
- the River Basin Management Plan for the North West;
- the Manchester Tree Strategy.

Any adverse impacts on biodiversity will need to be justified against the wider benefits of the proposal, assessed against other LDF policies. Where adverse impacts are unavoidable, developers will be required to provide appropriate mitigation and/or compensation.

Development should wherever possible seek to maintain, enhance or restore existing geology.

Policy EN 16 – Air Quality

The Council will seek to improve the air quality within Manchester, and particularly within Air Quality Management Areas, located along Manchester's principal traffic routes and at Manchester Airport. Developers will be expected to take measures to minimise and mitigate the local impact of emissions from traffic generated by the development, as well as emissions created by the use of the development itself, including from Combined Heat and Power and biomass plant.

When assessing the appropriateness of locations for new development the Council will consider the impacts on air quality, alongside other plan objectives. This includes cumulative impacts, particularly in Air Quality Management Areas.

Policy EN 17 – Water Quality

With reference to the Manchester-Salford-Trafford SFRA and other relevant documents:

- Development should avoid any adverse impact on water quality, including during the construction phase, and wherever possible should seek to enhance water quality, both chemical and ecological;
- Development should minimise surface water run-off from development and associated roads, and maximise the use of appropriate sustainable drainage systems, to minimise groundwater contamination, and to avoid pollutants reaching watercourses;
- Development close to a watercourse should also ensure that waste or litter cannot enter the watercourse from the site;
- Development should, where feasible and appropriate, seek to open up any culverted or hidden watercourse beneath the site to improve the ecological status of that watercourse.

Policy EN 19 - Waste

The Council will

- Work with other Districts through the Greater Manchester Joint Waste Development Plan Document (GMJWDPD) to safeguard existing sites for waste management and identify and safeguard new sites in existing areas of employment where appropriate.
- Require all developers, including those of new waste management facilities within the District, to demonstrate the proposal's consistency with the principles of the waste hierarchy (prevention, reduction, re-use, recycling/composting, energy recovery, final disposal)
- Require all developers of new waste management facilities within the District to plan for and, where appropriate, use sustainable modes for waste transport, including use of modes such as rail and the Manchester Ship Canal.
- Require all developers to submit a waste management plan to demonstrate how both construction and demolition waste will be minimised and recycled on site wherever possible and how the sustainable waste management needs of the end user will be met.
- Have full regard to the economic and environmental benefits that well designed and run, waste management facilities can bring to the District, subject to any conditions required to protect the amenity of existing adjacent users.
- Promote the development of innovation and technological advancement within the sustainable waste management industry, aiming to achieve a closed-loop waste management system.
- Require waste management practices to have full regard to the environmental, social and economic impacts of such development and encourage long-term benefits in improving the environment, the regeneration of areas in need of investment and co-location with other employment uses where appropriate.
- Encourage communities to take responsibility for the waste they create through the provision of accessible facilities.

Policy DM1 – Development Management

All development should have regard to the following specific issues for which more detailed guidance may be given within a supplementary planning document:

- Appropriate siting, layout, scale, form, massing, materials and detail.
- Impact on the surrounding areas in terms of the design, scale and appearance of the proposed development. Development should have regard to the character of the surrounding area.
- Effects on amenity, including privacy, light, noise, vibration, air quality, odours, litter, vermin, birds, road safety and traffic generation. This could also include proposals which would be sensitive to existing environmental conditions, such as noise.
- Accessibility: buildings and neighbourhoods fully accessible to disabled people, access to new development by sustainable transport modes.
- Community safety and crime prevention.
- Design for health.
- Adequacy of internal accommodation and external amenity space.
- Refuse storage and collection.
- Vehicular access and car parking.
- Effects relating to biodiversity, landscape, archaeological or built heritage.
- Green Infrastructure including open space, both public and private.
- The use of alternatives to peat-based products in landscaping/gardens within development schemes.
- Flood risk and drainage.
- Existing or proposed hazardous installations.
- Subject to scheme viability, developers will be required to demonstrate that new development incorporates sustainable construction techniques as follows (In terms of energy targets this policy should be read alongside policy EN6 and the higher target will apply):-

- a) For new residential development meet as a minimum the following Code for Sustainable Homes standards. This will apply until a higher national standard is required:
 - o Year 2010 – Code Level 3;
 - o Year 2013 - Code Level 4;
 - o Year 2016 - Code Level 6; and
- b) For new commercial developments to demonstrate best practice which will include the application of the BREEAM (Building Research Establishment Environmental Assessment Method) standards. By 2019 provisions similar to the Code for Sustainable Homes will also apply to all new non-domestic buildings.

C. BREEAM Pre-Assessment

Issue ID	Issue ID/ Description/Aim	Credit Requirements	Available Credits	Predicted Credits	Contingency Credits	Available Score	Predicted Score	Contingency Credits	RIBA Stage - Critical	Responsibilities/Comments
Man01	Project brief and design Encouraging an integrated design process and considering BREEAM performance targets early to influence decision-making and optimise building performance, while avoiding unnecessary costs.	Project Delivery Planning (1 Credit) 1. Responsibilities Matrix 2. Project directory and project brief 3. Design and Access Statement 4. Key meeting minutes Stakeholder Consultation (Interested parties) (1 Credit) 1. Copy of the consultation plan 2. Meeting Minutes/Consultation report summary 3. List of design changes as a result of consultation BREEAM AP (concept design) (1 Credit) 1. BREEAM pre-assessment + any additional sustainability targets and requirements 2. Meeting minutes BREEAM AP demonstrating regular attendance to DTM (monthly) BREEAM AP (developed design) (1 Credit) As above	4	4	0	2.10%	2.10%	0.00%	Early Action RIBA Stage 2	Responsibilities Client Project Manager Architect BREEAM AP Comments Early actions required Ensphere to provide letter template
Man02	Life cycle cost and service life planning 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.	Elemental Life Cycle Cost (LCC) (2 Credits) 1. A copy of Elemental Life Cycle Cost Report 2. List of design changes as a result of the LCC Component Level LCC Option Appraisal (1 Credit) 1. A copy of component Life Cycle Cost Report 2. List of design changes as a result of the LCC Capital Cost Reporting (1 Credit) 1. Predicted Capital Cost report	4	4	0	2.10%	2.10%	0.00%	Early Action RIBA Stage 2	Responsibilities Client Contractor Comments Early actions required
Man03	Responsible Construction Practices Encouraging construction sites to be managed in an environmentally and socially considerate and responsible manner. Monitoring to encourage continuous improvements and utility consumption reduction.	Pre-requisite 1. All specification containing timber products to have the relevant timber requirements Environmental Management (1 Credit) 1. Copy of EMS certificates from Principal contractor and completed PPG6 BREEAM AP Site (1 Credit) 1. Appointment of AP for construction and a copy of agreed targets during construction Responsible Construction Management (Up to 2 credits) 1. A copy of Environmental Management Plan 2. Template of environment site inspection that will be used during construction Monitoring of Construction Site Impacts (1 Credit) 1. Commitment to monitor, record energy and water consumption Monitoring of Construction Site Impacts - Transport of construction materials & waste (1 Credit) 1. Target and commitment to monitor, record CO2e emissions associated with material and waste transport	6	6	0	3.14%	3.14%	0.00%		Responsibilities Contractor Comments Ensphere to provide letter templates
Man04	Commissioning and handover Encouraging a well-managed handover and commissioning process, which will ensure building services and fabric defects are identified and rectified. Ensuring that the building responds to the needs of the occupants.	Pre-Requisite 1. Commitment letter from client to produce two BUGs. Commissioning - Testing Schedule and Responsibilities (1 Credit) 1. Appointment letter for commissioning manager. Commissioning - Design and Preparation (1 Credit) 1. Appointment letter for commissioning manager at RIBA stage 2/3. 2. Meeting minutes from commissioning manager showing input during design stage. Evidence the commissioning manager has the relevant qualification Testing and Inspecting Building Fabric (1 Credit) 1. Commitment letter from client to undertake thermographic survey and rectify any issues Handover (1 Credit) Commitment letter from client to undertake two BUGs and corresponding trainings.	4	3	1	2.10%	1.57%	0.52%		Responsibilities Commissioning Manager M&E Client Comments Ensphere to provide letter templates

Man05	Aftercare Encouraging aftercare support during the first year of the building operation, to ensure the building operates in accordance with the design intent and in response to the building occupants' needs.	Aftercare Support (1 Credit) 1. Commitment letter from client to provide appropriate aftercare support Commissioning Implementation (1 Credit) 1. Commitment letter from client to provide the following seasonal commissioning activities Post Occupancy Evaluation (1 Credit) 1. Commitment letter from client/building occupier to undertake POE.	3	3	0	1.57%	1.57%	0.00%		Responsibilities Client Building Occupier Comments Ensphere to provide letter templates
Hea01	Visual comfort Providing occupants with the conditions that facilitate good visual comfort by designing out the potential for glare, achieving good practice daylight factors and having an adequate view out. Designing internal and external lighting systems to provide appropriate illuminance (lux) levels, thereby giving a more comfortable environment for occupants. Internal lighting is zoned to allow for occupant control.	Glare Control (1 Credit) 1. Copy of the glare strategy covering areas deemed at risk and measures to minimise/avoid glare. Daylighting (building type dependent) (Up to 2 Credits) 1. Report from specialist confirming the targeted daylight ratio View Out (1 Credit) 1. Drawings confirming view out calculations. Internal Lighting, External Lighting and Zoning and Occupant Control (1 Credit) 1. Internal lighting strategy and modelling demonstrating compliance with the different standards 2. Light fittings schedule 2. Product datasheet confirming luminance of light fittings install 1. Zoning and control strategy - drawing showing it	5	2	2	3.68%	1.47%	1.47%		Responsibilities Daylight Consultant Architect M&E Comments Ensphere to provide letter template M&E have confirmed the lighting to be installed, specifications also required
Hea02	Indoor air quality Facilitating good indoor air quality by considering indoor air pollution early in the design process so that a mitigation strategy can be put in place. Managing harmful emissions from construction products by specifying finishes and products that have been tested in accordance with the appropriate standards. Specifying an appropriate ventilation strategy that maintains good indoor air quality.	Pre-requisite - Indoor Air Quality (IAQ) plan 1. Indoor Air Quality Plan Ventilation (1 Credit) 1. Drawings confirming calculations Emissions from Construction Products (Up to 2 Credits) 1. Relevant specifications Post-construction Indoor Air Quality Measurement (1 Credit) 1. Commitment letter from client to undertake post-construction air quality test	4	0	4	2.95%	0.00%	2.95%	Early Action RIBA Stage 2	Responsibilities Air Quality Consultant M&E Architect Contractor Comments Ensphere to provide letter template
Hea03	Safe containment in laboratories This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.	N/A	0	0	0	0.00%	0.00%	0.00%		
Hea04	Thermal comfort Thermal modelling informs the building design to provide a comfortable thermal environment that considers current climatic conditions, and projected climate change scenario conditions. Giving occupants control over their environment through appropriate temperature control strategies and thermal zoning.	Thermal Modelling (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis Design for Future Thermal Comfort (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis Thermal Zoning and Controls (1 Credit) 1. Thermal Modelling and full dynamic thermal analysis	3	3	0	2.21%	2.21%	0.00%		Responsibilities M&E
Hea05	Acoustic performance Enabling occupants to experience best practice acoustic performance levels appropriate to the functional activities in occupied spaces.	Acoustic Performance (Up to 4 Credits) 1. Acoustic report	4	0	1	2.95%	0.00%	0.74%		Responsibilities Acoustician
Hea06	Security Designing the building to consider and take into account security needs to ensure occupants safety and wellbeing.	Security of Site and Building (1 Credit) 1. Meeting minutes with SQSS 2. Drawings, technical memos showing that the recommendations have been incorporated	1	0	1	0.74%	0.00%	0.74%	Early Action RIBA Stage 2	Responsibilities Security Specialist Architect Comments Early actions required

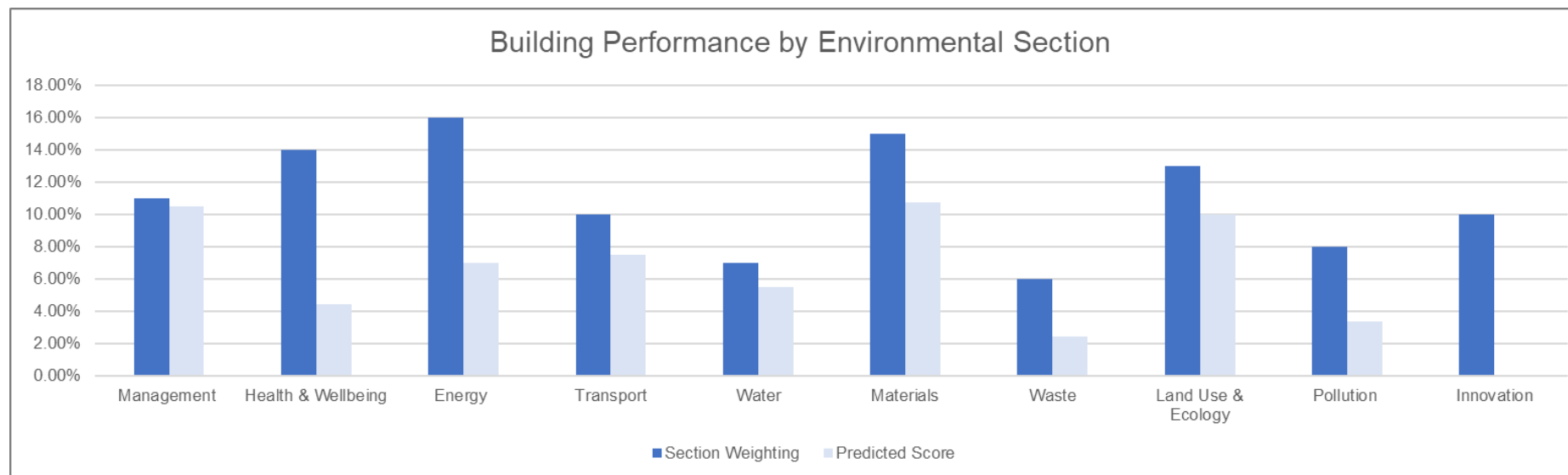
Hea07	Safe and healthy surroundings Providing external site areas that are safe for occupant use. Enhancing the wellbeing of building users by giving access to an outdoor space.	Safe Access (1 Credit) 1. Construction drawings showing cycle and pedestrian paths Outside Space (1 Credit) 1. Construction drawings showing external spaces and amenities	2	1	1	1.47%	0.74%	0.74%		Responsibilities Security Specialist Architect
Ene 01	Reduction of energy use and carbon emissions Encouraging the design of energy efficient buildings with energy performance above national building regulations. Encouraging the accurate modelling of operational energy consumption.	Energy Performance (Up to 9 Credits) 1. RIBA stage 4 BRUKL 2. Energy statement Prediction of Operational Energy Consumption (4 Credits) 1. RIBA stage 4 BRUKL 2. Energy statement	13	4	0	9.04%	2.78%	0.00%	Early Action RIBA Stage 2	Responsibilities Energy Specialist Comments Early actions required
Ene02	Energy monitoring Helping to identify and reduce high energy demands where possible by accurate measurement of the energy consumption of the building by end use.	Sub-metering of End Use Categories (1 Credit) 1. Schematics showing metering of space heating, cooling, ventilation, lighting, small power etc. 2. Table Ene 02 filled out Sub-metering of High Energy Load and Tenancy Areas (1 Credit) 1. Schematics showing metering of space heating, cooling, ventilation, lighting, small power etc. 2. Table Ene 02 filled out	2	2	0	1.39%	1.39%	0.00%		Responsibilities M&E
Ene03	External lighting Reducing the building's energy consumption through the specification of energy efficient external lighting.	External Lighting (1 Credit) 1. Product datasheet confirming that the product specified achieves 70 luminaire lumens per circuit Watt 2. Specification confirming control (e.g. daylight, movement etc..) installed for external lighting	1	1	0	0.70%	0.70%	0.00%		Responsibilities M&E
Ene04	Low carbon design Reducing the building's energy consumption through the adoption of passive design solutions, free cooling and low or zero carbon (LZC) energy sources.	Passive Design Analysis (PDA) (1 Credit) 1. Passive design analysis (PDA) 2. Thermal modelling and BRUKL with passive design measures 3. Evidence that a suitably qualified energy specialist has quantified the CO2e reduction Free Cooling (1 Credit) 1. Passive design analysis with cooling analysis 2. Evidence for suitably qualified energy specialist 3. Dynamic simulation model demonstrating that the cooling demand can be met by free cooling Low and Zero Carbon Technologies (1 Credit) 1. LZC analysis and BRUKL Report 2. Evidence for suitably qualified energy specialist	3	1	1	2.09%	0.70%	0.70%	Early Action RIBA Stage 2	Responsibilities M&E Comments Early actions required
Ene05	Energy efficient cold storage Reducing the building's operational greenhouse gas emissions (CO ₂ -eq) through the design, installation and commissioning of energy efficient refrigeration systems.	Refrigeration Energy Consumption (1 Credit) 1. Product data sheets for the refrigeration system 2. Written commitment that Commissioning of the refrigeration system will take place Indirect Greenhouse Gas Emissions (1 Credit) 1. Demonstration of savings in indirect greenhouse gas emissions	0	0	0	0.00%	0.00%	0.00%		Responsibilities M&E
Ene06	Energy efficient transportation systems Reducing the building's energy consumption by specifying the optimum number and size of energy efficient transportation systems.	Energy Consumption (1 Credit) 1. Lift analysis that meet BREEAM requirements Energy Efficient Features (1 Credit) 1. Lift specification with corresponding datasheet that confirm the requirements are met	2	2	0	1.39%	1.39%	0.00%		Responsibilities Lift Consultant
Ene07	Energy efficient laboratory systems Reducing the building's operational greenhouse gas emissions (CO ₂ -eq) by specifying best practice energy efficient laboratory equipment.	Design Specification (1 Credit) 1. Minutes of meetings to confirm consultation with relevant stakeholders 2. Project brief that includes laboratory performance criteria Best Practice Energy Efficient Features (Up to 4 Credits) 1. Energy Demand Assessment 2. Laboratory system specification and drawings	0	0	0	0.00%	0.00%	0.00%		Responsibilities M&E
Ene08	Energy efficient equipment Demonstrating a meaningful reduction in the total unregulated energy demand of the building by using energy efficient equipment.	Energy Efficient Equipment (2 Credits) 1. Fill in energy 08 table 2. Specification confirming targeted requirements.	2	0	0	1.39%	0.00%	0.00%		Responsibilities M&E

Tra01	Transport assessment and travel plan Recognising developments in proximity to good public transport networks, thereby helping to reduce transport-related pollution and congestion	Travel Plan (2 Credits) 1. Travel Plan 2. Drawings showing travel plan proposals	2	2	0	1.67%	1.67%	0.00%		Responsibilities Transport Consultant
Tra02	Sustainable transport measures Recognising developments in close proximity of, and accessible to, local amenities which are likely to be frequently required and used by building occupants.	Sustainable Transport Measures (Up to 10 Credits) 1. Evidence to demonstrate the measures targeted	10	7	3	8.33%	5.83%	2.50%		Responsibilities Transport Consultant
Wat01	Water consumption Reducing the demand for potable water through the provision of efficient sanitary fittings, rainwater collection and water recycling systems.	Water Consumption (Up to 5 Credits) 1. Water 01 Calculator 2. Specifications 3. Product data sheet confirming flow rates	5	3	2	3.89%	2.33%	1.56%		Responsibilities BREEAM Assessor Architect
Wat02	Water monitoring 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.	Pre-requisite 1. Drawing showing location of water meter Water Monitoring (1 Credit) 1. Schematics showing submetering 2. Specification and corresponding product datasheet of the product 3. Specification highlighting connection to BMS or ability to be connected	1	1	0	0.78%	0.78%	0.00%		Responsibilities M&E
Wat03	Water leak detection Reducing the unintended water consumption due to leaks by installing leak detection systems and flow control devices.	Leak Detection System (1 Credit) 1. Specification detailing leak detection system 2. Product datasheet for the leak detection system Flow Control Devices (1 Credit) 1. Mechanical Specification 2. Drawings to show the location of the flow control systems	2	2	0	1.56%	1.56%	0.00%		Responsibilities M&E
Wat04	Water efficient equipment Reducing water consumption for non-domestic scale, non-sanitary water uses by specifying efficient systems and improving the design efficiency of any water-using processes.	Unregulated Water Demand (1 Credit) 1. Letter template	1	1	0	0.78%	0.78%	0.00%		Responsibilities Contractor Comments Ensphere to provide a letter template
Mat01	Environmental impacts from construction products - Building life cycle assessment (LCA) Reducing buildings' environmental life cycle impacts through conducting Life Cycle Assessment and integrating its outcomes in the design decision-making process.	Life Cycle Impacts 1. Specifications 2. Allocation to undertake the material assessment 3. Cost plan Substructure and Hard Landscaping Options Appraisal during Concept Design (Up to 6 Credits) 1. Specifications 2. Allocation to undertake the material assessment Core Building Services Options Appraisal during Concept Design (1 Credit) 1. Specifications 2. Allocation to undertake the material assessment	7	7	0	7.50%	7.50%	0.00%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer LCA modeller Comments Early actions required
Mat02	Environmental impacts from construction products - Environmental Product Declarations (EPD) To encourage availability of robust and comparable data on the impacts of construction products by rewarding the specification of products with environmental products declarations.	Specification of Products with a Recognised Environmental Product Declaration (EPD) (1 Credit) 1. Specification 2. EPDs 3. Allocation to undertake the material assessment	1	0	1	1.07%	0.00%	1.07%		Responsibilities Architect Structural Engineer Building Services

Mat03	Responsible sourcing of construction products Recognising and encouraging responsible sourcing of construction products. This includes the source of products and the intermediary companies processing and transporting the product to site.	Pre-requisite 1. All relevant specification susceptible to contain timber products to have the relevant timber requirements. Sustainable Procurement Plan (1 Credit) 1. Procurement plan in place by RIBA stage 2 Measuring Responsible Sourcing (Up to 3 Credits) 2. Responsible Sourcing of materials	4	2	0	4.29%	2.14%	0.00%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
Mat04	Insulation This is no longer assessed as a separate issue within BREEAM UK New Construction 2018.	N/A	0	0	0	0.00%	0.00%	0.00%		
Mat05	Designing for durability and resilience Increasing the lifespan of the building through designing for durability and protection from degradation and specifying appropriate construction products.	Protecting Vulnerable Parts of the Building from Damage (0.5 Credit) 1. Marked up drawings Protecting Exposed Parts of the Building from Material Degradation (0.5 Credit) 1. Completed Mat 05 spreadsheet and supporting draw ings	1	1	0	1.07%	1.07%	0.00%		Responsibilities Architect
Mat 06	Material efficiency Encouraging the reduction of environmental impacts through optimising the use of materials during all stages of the project.	Material Efficiency (1 Credit) 1. Material efficiency technical memo/report (must include quantities of materials saved)	1	0	1	1.07%	0.00%	1.07%	Early Action RIBA Stage 1/2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
Wst01	Construction waste management Improving resource efficiency through developing a pre-demolition audit and a Resource Management Plan, maximising the recovery of material during demolition and diverting non-hazardous waste from landfill.	Pre-demolition Audit (1 Credit) 1. Pre-demolition Audit Construction Resource Efficiency (Up to 3 Credits) 1. Site Waste Management Plan Diversion of Resources from Landfill (1 Credit) 1. Site Waste Management Plan	5	3	2	3.00%	1.80%	1.20%	Early Action RIBA Stage 2	Responsibilities Waste Consultant Contractor Comments Early actions required
Wst02	Use of recycled and sustainably sourced aggregates Encouraging the use of recycled or secondary aggregate or aggregate types with lower environmental impact to reduce waste and optimise material efficiency.	Recycled Aggregate (1 Credit) 1. Recycled content calculator 2. Specification 3. Letter of commitment from Contractor	1	0	0	0.60%	0.00%	0.00%		Responsibilities Structural Engineer Contractor
Wst03	Operational Waste Encouraging the diversion of operational waste from landfill through the provision of space and facilities allowing the segregation and storage of recyclable waste.	Operational Waste (1 Credit) 1. Draw ings/Specifications to demonstrate the location of the operational waste facility 2. Confirmation for the likely waste streams for the site.	1	1	0	0.60%	0.60%	0.00%		Responsibilities Architect Waste Consultant
Wst04	Speculative finishes (Offices only) Specification of floor and ceiling finishes only where agreed with the occupant or, for tenanted areas where the future occupant is unknown, installation in a show area only, to reduce wastage.	N/A	0	0	0	0.00%	0.00%	0.00%		Responsibilities Architect
Wst05	Adaptation to climate change Encouraging consideration and implementation of measures to mitigate the impact of more extreme weather conditions arising from climate change over the lifespan of the building.	Resilience of Structure, Fabric, Building Services and Renewables Installation (1 Credit) 1. Climate Change Adaptation Strategy 2. Appraisal or Structural and fabric resilience 3. Systematic risk assessment	1	0	1	0.60%	0.00%	0.60%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required

Wst06	Design for disassembly and adaptability Encouraging consideration and implementation of measures design options related to adaptability and disassembly, which can accommodate future changes to the use of the building and its systems over its lifespan.	Design for Disassembly and Functional Adaptability - Recommendations (1 Credit) 1. Building-specific functional adaptation strategy study Disassembly and Functional Adaptability – Implementation (1 Credit) 1. Building-specific functional adaptation strategy study	2	0	2	1.20%	0.00%	1.20%	Early Action RIBA Stage 2	Responsibilities Architect Structural Engineer M&E Comments Early actions required
LE01	Site selection Recognising the reuse of previously developed and contaminated land where appropriate remediation has taken place.	Previously Occupied Land (1 Credit) 1. Photograph/Exiting site plan of the site or Design and Access Statement describing the previous use Contaminated Land (1 Credit) 1. Contaminated site investigation and risk assessment/report 2. Commitment letter from the contractor that the remediation strategy will be implemented	2	1	1	2.00%	1.00%	1.00%		Responsibilities Client Contractor Contaminated land consultant
LE02	Identifying and understanding the risks and opportunities for the project Identifying and understanding the ecological risks and opportunities associated with the site to inform the determination of the strategic outcome for the site.	Pre-requisite - Ecological Value of Site 1. Risk evaluation checklist completed 2. Appointment of ecologist if going through Route 2 3. EMP detailing the processes in place during construction to monitor ecology Route 1 - Low Risk and Opportunities Defined in GN34 (1 Credit) Completed Assessment using GN35 OR Route 2 - Complex Ecological Systems (2 Credits) Ecologist's Survey and recommendation following hierarchy	2	2	0	2.00%	2.00%	0.00%	Early Action RIBA Stage 1	Responsibilities Ecologist Selected team member Comments Early actions required
LE03	Managing negative impacts on ecology Recognition of steps taken to avoid impacts on existing site ecology as far as possible.	Identification and Understanding the Risks and Opportunities for the Site (1 Credit) 1. Ecologists report 2. Confirmation that the Ecologist is suitably Qualified Managing Negative Impacts of the Project (Up to 2 Credits) 1. Ecologists report 2. Confirmation that the features of value will be protected in line with the Ecologist's recommendations	3	2	1	3.00%	2.00%	1.00%	Early Action RIBA Stage 1	Responsibilities Ecologist Selected team member Comments Early actions required
LE04	Change and enhancement of ecological value Recognition of steps taken to enhance site ecology.	Identification and Understanding the Risks and Opportunities for the Site 1. Ecology Report Change and Enhancement of Ecology - Route 1 ONLY (1 Credit) 1. Confirmation that the project team have implemented local ecological solutions and measures to enhance the site Change and Enhancement of Ecology - Route 2 ONLY (Up to 3 Credits) 1. Calculation of the Ecological value	4	3	1	4.00%	3.00%	1.00%		Responsibilities Ecologist Selected team member
LE05	Long term ecology management and maintenance Encouraging the long term maintenance and management of ecology on site to ensure both new and existing ecological features continue to thrive.	Long Term Impact on Biodiversity 1. As above Planning Liason, Data, Monitoring and Review Management and Maintenance (1 Credit) 1. Ecology report 2. Confirmation of additional measures 3. Confirm Ecology and Biodiversity section in Building User Guide Landscape and Ecology Plan (1 Credit) 1. Landscape and Ecology Plan	2	2	0	2.00%	2.00%	0.00%		Responsibilities Ecologist Selected team member Client
Pol01	Impact of refrigerants Rewarding buildings that reduce the impact of refrigerant gas emissions.	Impact of Refrigerants (2 Credits) 1. Specification and/or manufacturer's literature to confirm the design/type of system to be installed 2. Drawings to show the positioning of the units Leak Detection (1 Credit) 1. Specification and/or manufacturer's literature to confirm the design/type of system to be installed 2. Drawings to show the positioning of the units	3	1	0	2.00%	0.67%	0.00%		Responsibilities M&E
Pol02	Local air quality Recognising buildings which limit their impact on local air quality, by consideration of the combustion plant and fuel used on site.	Local Air Quality (Up to 2 Credits) 1. Data sheets and/or manufacturer emails confirming NOx emissions for each piece of equipment 2. Boiler/CHP/Heat Emitter/Cooling/Heater schedules	2	0	2	1.33%	0.00%	1.33%		Responsibilities M&E

Pol03	Flood and surface water management Rewarding buildings and their sites that limit on-site and off-site local flooding and hence the damage this can cause.	Flood Resilience (Up to 2 Credits) 1. Site Specific Flood Risk Assessment Pre-requisite - Surface Water Run-off 1. Calculations and Drainage Plan Surface Water Run-off Rates (1 Credit) 1. Calculations and Drainage Plan Surface Water Run-off Volume (1 Credit) 1. Calculations and Drainage Plan Minimising Water Course Pollution (1 Credit) 1. Drainage Plan	5	2	1	3.33%	1.33%	0.67%		Responsibilities Flood Risk Consultant Drainage Engineer
Pol04	Reduction of night time light pollution Avoiding or reducing the impact of night time light pollution, through careful design and specification of light sources.	Night Time Light Pollution (1 Credit) 1. Completed letter template 2. Drawings to show the location of the external lighting, time switches and photo-cells	1	1	0	0.67%	0.67%	0.00%		Responsibilities M&E
Pol05	Reduction of noise pollution Avoiding or reducing the impact of external noise from the building.	Reduction of Noise Pollution (1 Credit) 1. Noise Impact Assessment	1	1	0	0.67%	0.67%	0.00%		Responsibilities Acoustician
Inn01	Innovation Test out new ideas which, if successful, could change the status quo of the industry. Allow the industry to explore new opportunities and evolve its processes.	Up to 10 Credits	10	0	0	10.00%	0.00%			
Total							61.25%	22.05%		



D. General Notes

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

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

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

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

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Ensphere Group Ltd
52 Grosvenor Gardens
London, SW1W 0AU
+44 (0) 20 7846 9040
www.enspheregroup.com