Hallmark Property Group

65-69 Holmes Road

London Borough of Camden

Mixed use Development of B8 Warehouse

With Student Accommodation

SUSTAINABILITY STATEMENT

FINAL

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Sustainability Assessment in support of the Planning Application for the proposed development at Holmes Road, Camden by Hallmark Property Group.

This report has been undertaken by Michael Sturdy of Richard Hodkinson Consultancy.

Report Status: FINAL

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Version	Date	Reason for Issue	Prepared By	Checked By
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2.1	22.10.2013	Final	M Sturdy	D Lally

Executive Summary

i. This Sustainability Statement provides an assessment of the development proposal and demonstrates that it is considered sustainable, as measured against relevant national, regional and local policies.

ii. The site is located at 65-69 Holmes Road in Camden and it is proposed that the site is developed into a mixed use building, housing student accommodation and B8 Warehouse. The proposed development has 273 units. A further 36 'cluster units' are provided with shared kitchen facilities, laundry, social/study areas and circulation space. Each of the student rooms incorporate provision of kitchen and bathroom spaces, other than the cluster rooms which make use of shared kitchen facilities.

iii. Through the incorporation of sustainable design and construction, energy, water and waste saving measures, as well as open/green space provision and measures to enhance the existing ecological value of the site, a high quality scheme will be developed.

iv. Further detail on the site-wide energy requirements and proposed strategy are contained within the Energy Statement, prepared by Richard Hodkinson of Richard Hodkinson Consultancy, and this document should be reviewed in parallel with this Sustainability Statement.

v. The key sustainability features outlined in this Assessment are listed below:

- The development will achieve a BREEAM 'Very Good' rating for both multi-residential and warehouse uses;
- It is proposed that the development will incorporate a Combined Heat and Power system;
- The reduction in total regulated CO_2 emissions over the Building Regulations (2010) baseline is 26%;
- 100% of the proposed development is on previously developed land;
- Water efficiency measures and devices will be installed to reduce the total water consumption;
- Green roofs have been incorporated into the designs where feasible, covering an approximate area of 1190 sqm;
- A surface water drainage design is proposed which will meet the BREEAM criteria for peak rate surface water run-off and surface water run off volume;

- Advice from an ecologist will be sought to ensure ecology and biodiversity is protected and enhanced as part of the BREEAM assessment;
- All timber will be sourced in accordance with the Government's Timber Procurement Policy. Materials will be selected based on their environmental impact, with preference given to materials from the BRE Green Guide to Specification that achieve a higher score in the Mat 01 calculator;
- Appropriate facilities will be provided for the storage of operational recyclable waste;
- The proposed development will incorporate the principles of Secured by Design Section 2;
- A Site Waste Management Plan will be prepared and implemented, with a target to reduce waste sent to landfill to a maximum of 11.1 tonnes/100m^2.

vi. This Sustainability Statement concludes that the development proposal at Holmes Road set high levels of environmental protection, social inclusion and economic viability.

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1. Introduction

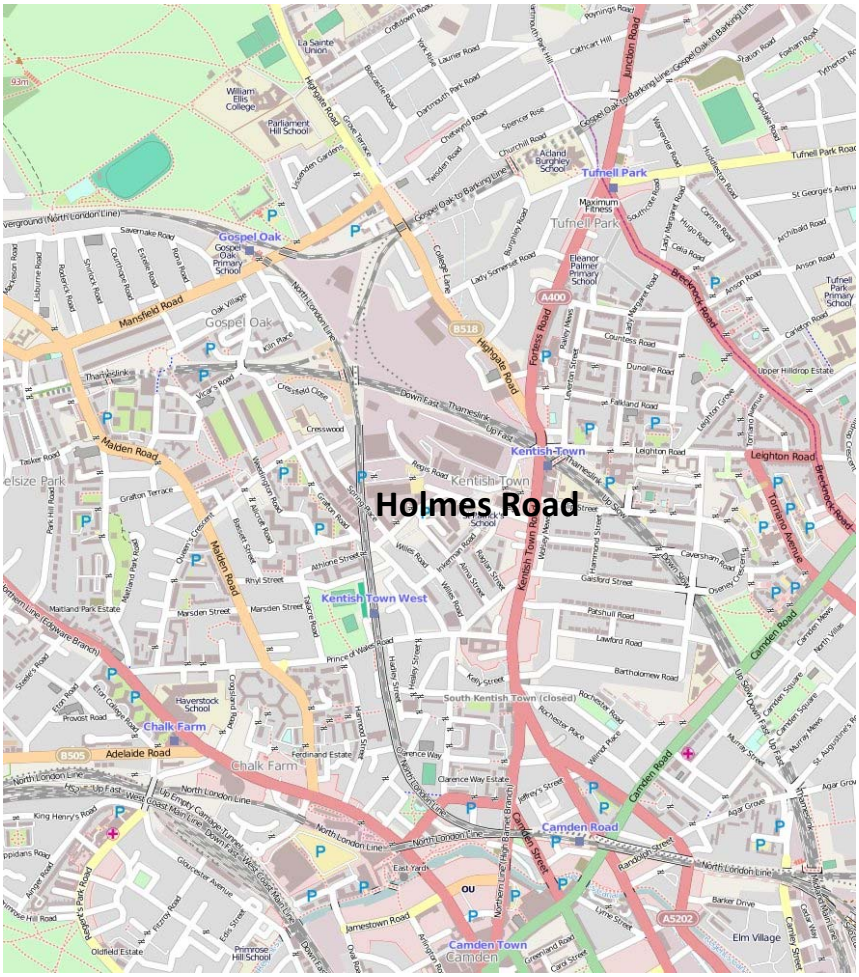
1.1. This Sustainability Statement has been prepared by Richard Hodkinson Consultancy, an innovation, energy and sustainability consultancy, appointed by Hallmark Property Group (the Applicant). This Statement sets out the sustainable design and construction measures included in the proposals for Holmes Road. The development is located within the London Borough of Camden (LBC).

1.2. The formulation of the Sustainability Strategy for the Development has taken into account several important priorities, including:

- To achieve the maximum viable reduction in CO_2 emissions through the application of the London Plan Hierarchy with an affordable, deliverable and technically appropriate strategy;
- To address all national, regional and local planning policies and requirements;
- Provision of high quality student accommodation and warehouse space that both are adaptable to future changes in climate;
- To minimise the negative impact on the Development on both the local and wider climate and environment;
- To achieve the highest viable levels of sustainable design and construction environmental assessment methodologies;
- To minimise emissions of pollutants such as oxides of nitrogen and particulate matter;
- To create a pleasant, safe and friendly working and living environment that will be flexible to its residents' needs.

Development Proposal

1.3. The site is located at 65-69 Holmes Road in Camden and it is proposed that the site is developed into a mixed use building, housing student accommodation and B8 warehouse. The proposed development has 273 units totalling 301 student rooms as well as shared kitchen facilities, laundry, social/study areas and circulation space.



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1.4. Section 2 of this statement aims to show compliance to the National Planning Policy Framework, the London Plan and the London Borough of Camden's Core Strategy 2010-2025.

1.5. Sections 3-10 highlight the environmental sustainability of the proposed development in relation to the policy documents listed in Section 2.

1.6. Appendix A sets out full details of how the strategy is consistent with the London Plan policies on climate change.

1.7. Appendices B and C present illustrative routes for achieving 'Very Good' BREEAM 2011 New Construction for both Warehouse and Multi-Residential uses.

2. Planning Policies and Project Requirements

National Planning Policy

2.1. **The National Planning Policy Framework (NPPF)** was published on 27 March 2012. This document states that:

> *"At the heart of the NPPF is a presumption in favour of sustainable development, which should be seen as a golden thread running through both plan-making and decision-taking.*
>
> *For decision-taking this means:*
>
> - *Approving development proposals that accord with the development plan without delay; and*
> - *Where the development plan is absent, silent or relevant policies are out-of-date, granting permission unless:*
>   - *Any adverse impacts of doing so would significantly and demonstrably outweigh the benefits, when assessed against the policies in this Framework taken as a whole; or*
>   - *Specific policies in this Framework indicate development should be restricted."*

2.2. Paragraph 95 of the NPPF states that:

> *"To support the move to a low carbon future, local planning authorities should:*
>
> - *Plan for new development in locations and ways which reduce greenhouse gas emissions;*
> - *Actively support energy efficiency improvements to existing buildings; and*
> - *When setting any local requirement for a building's sustainability, do so in a way consistent with the Government's zero carbon buildings policy and adopt nationally described standards."*

2.3. The document makes it clear that when setting local requirements for a building's sustainability, local authorities should adopt nationally described standards.

Regional Policy

The London Plan, July 2011

2.4. The current version of the London Plan was adopted in July 2011, and sets out an integrated economic, environmental, transport and social framework for the development of London over the next 20 – 25 years.

2.5. The following outlines key policies set out in the London Plan which must be addressed by new developments and which are relevant to this development.

2.6. **Policy 5.2 – Minimising Regulated Carbon Dioxide Emissions** requires that all residential and non-residential buildings between 2010–2013 achieve a 25% improvement on 2010 Building Regulations.

2.7. **Policy 5.3 – Sustainable Design and Construction** states that the highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments. Major development should meet the minimum standards outlined in the London Plan Supplementary Planning Guidance and this should be clearly demonstrated. The standards includes the following sustainable design principles:

- Minimising CO_2 emissions;
- Avoiding internal overheating and contributing to the urban heat island effect;
- Efficient use of natural resources (including water);
- Minimising pollution (including noise, air and urban run-off);
- Minimising the generation of waste and maximising reuse and recycling;
- Avoiding impacts from natural hazards (including flooding);
- Ensuring developments are comfortable and secure for users;
- Securing sustainable procurement of materials, using local suppliers where feasible;
- Promoting and protecting biodiversity and green infrastructure.

2.8. **Policy 5.5 – Decentralised Energy Networks** states that the Mayor expects 25 per cent of the heat and power used in London to be generated through the use of localised decentralised energy systems by 2025. The Mayor will prioritise the development of decentralised heating and cooling networks at the development and area wide levels, including larger scale heat transmission networks.

2.9. **Policy 5.6 - Decentralised Energy** – requires that all developments should evaluate the feasibility of Combined Heat and Power (CHP) systems, and examine the opportunities to extend the system beyond the site boundary to adjacent sites.

2.10. **Policy 5.7 – Renewable Energy** states that within the framework of the energy hierarchy, major development proposals should provide a reduction in expected carbon dioxide emissions through the use of on-site renewable energy generation, where feasible.

2.11. **Policy 5.8 – Innovative Energy Technologies** encourages the more widespread use of innovative energy technologies to reduce use of fossil fuels and carbon dioxide emissions.

2.12. **Policy 5.9 – Overheating and Cooling** seeks to reduce the impact of the urban heat island effect, reduce potential overheating and reduce reliance on air conditioning systems.

2.13. **Policy 5.10 – Urban Greening** promotes urban greening, such as new planting in the public realm (including streets, squares and plazas) and green infrastructure, to contribute to the adaptation to, and mitigation of, the effects of climate change.

2.14. **Policy 5.11 – Green Roofs** requires roof, wall and site planting, especially green roofs and walls, to be designed where feasible.

2.15. **Policy 5.12 – Flood Risk Management** states that new developments must comply with the flood risk assessment and management requirements as set out in PPS25, and will be required to pass the Exceptions Test addressing flood resilient design and emergency planning.

2.16. **Policy 5.15 – Water Use and Supplies** requires that development should minimise the use of mains water by incorporating water saving measure and equipment.

2.17. **Appendix A** demonstrates how the development addresses the London Plan policy requirements.

London Plan Supplementary Planning Guidance Sustainable Design and Construction (May 2006)

2.18. The Greater London Authority's SPG on Sustainable Design and Construction identifies the following seven key objectives for future developments:

- Re-use land and buildings
- Maximise use of natural systems
- Conserve energy, water and other resources
- Reduce the noise, pollution, flooding and microclimatic effects
- Ensure developments are comfortable and secure for users
- Conserve and enhance the natural environment and biodiversity
- Promote sustainable waste behaviour

2.19. For each of these objectives, plus a separate section on sustainable construction, the SPG includes a series of 'Essential Standards', which apply to all major developments in London, as well as 'Mayor's Preferred Standards' indicating exemplary benchmarks that are not yet policy requirements.

2.20. **The Mayor's Energy Strategy** (February 2004) lists its specific aims as:

- Reducing London's contribution to climate change by minimising emissions of carbon dioxide from all sectors (commercial, domestic, industrial and transport) through energy efficiency, combined heat and power, renewable energy and hydrogen.
- Helping to eradicate fuel poverty by giving Londoners, particularly the most vulnerable groups, access to affordable warmth.
- Contributing to London's economy by increasing job opportunities and innovation in delivering sustainable energy, and improving London's housing and other building stock.

Local Policy

London Borough of Camden

2.21. The **Camden Core Strategy** was adopted in November 2010. It sets out the key elements of the Council's planning vision and strategy for the borough. The principle policy relevant to the Sustainability Statement is presented below.

2.22. **Policy CS13: Tackling Climate Change Through Promoting Higher Environmental Standards** requires that all development to take measures to minimise the effects of, and adapt to, climate change and encourage all development to meet the highest feasible environmental standards that are financially viable during construction and occupation.

2.23. This includes minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing in order the following hierarchy – use less energy, make use of energy from efficient sources, and generate renewable energy on-site. It states that the Council will promote local energy generation and networks.

2.24. Additionally, it requires that water efficiency is considered and the potential for surface water flooding minimised.

2.25. The **Camden Development Policies** was adopted in 2010. This sets out the development management policies for the Borough from 2010 – 2025, including relating to sustainability, building on the strategic policies set out in the Core Strategy. The principle policies relevant to the Sustainability Statement document are presented below.

2.26. **Policy DP9 – Student housing, bedsits and other housing with shared facilities** requires that all student housing developments should serve higher education institutions based in Camden or adjoining boroughs; be located in an area that is accessible to the institutions it will serve; and include a range of flat layouts including flats with shared facilities.

2.27. **Policy DP22 – Promoting Sustainable Design and Construction** outlines Camden's key policies relating to sustainable design and construction. It states that the application must demonstrate how sustainable development principles have been incorporated into the design.

2.28. It states that schemes must incorporate green or brown roofs and walls wherever suitable.

2.29. The Council expects non-domestic developments to achieve 'Very Good' in BREEAM Assessments, and 'Excellent' to be achieved from 2016.

2.30. The Council will require development to be resilient to climate change by ensuring schemes include appropriate climate change adaptation measures, such as summer shading and planting; limiting

run-off; reducing water consumption; reducing air pollution and not locating vulnerable uses in basement in flood-prone areas.

2.31. London Borough of Camden has published a range of Supplementary Planning Guidance. **Camden Planning Guidance 3: Sustainability** (CPG3) is relevant to this document, and provides further detail on the policies outlined above, as well as what the Council like to see provided with planning applications.

2.32. CPG3 requires that developments should achieve the following proportion of credits in each of the following categories:

- Energy 60%
- Water 60%
- Materials 40%

2.33. These targets have been sought where possible, but it is noted that CPG3 was published before BREEAM New Construction was published in 2011, and which significantly amended the energy section making the achievement of 60% of credits extremely difficult.

2.34. In addition, CPG3 requests that BREEAM 'Excellent' is to be sought from 2013. At this stage the development will adhere to the requirement of DP22 and target BREEAM 'very good'.

Sustainability Targets: BREEAM New Construction

2.35. The applicant is committed to achieving BREEAM 'Very Good' ratings for the warehouse and multi-residential uses of the development.

2.36. The pre assessments in Appendices B and C present the possible routes for achieving the BREEAM 'Very Good' ratings for the warehouse and multi-residential space. The actual route to achieving these targets will be further refined during detailed design and may vary from that presented here.

BREEAM

2.37. All of the warehouse and multi-residential units of the proposed development will be assessed against BREEAM, the nationally recognised sustainability standard for non-domestic buildings.

2.38. Using this assessment method will ensure the development is assessed and a quantifiable output is produced by which a nationally recognised measure of sustainability can be applied. The targeted level sought by the developer will ensure a highly sustainable scheme is created.

2.39. Appendices B and C present illustrative routes for achieving 'Very Good' BREEAM 2011 New Construction for both warehouse and multi-residential uses.

2.40. The above therefore sets out the sustainability parameters and influences that the following report has been written to consider. In doing so, it will aim to demonstrate how the proposed scheme, by Hallmark Property Group, has set high aspirations to achieving sustainability goals in not only the design and build process, but also in the development's lifespan.

3. Re-Use Land and Buildings

Brownfield Land

3.1. The proposed development is on previously developed land and thus complies with the Mayor of London's Essential Standard for 100% of development within the city to occur on brownfield land.

Development Density

3.2. The site is located at 65-69 Holmes Road in Camden and it is proposed that the site is developed into a mixed use building, housing student accommodation and B8 warehouse space. The proposed development has 273 units totalling 301 student rooms as well as shared kitchen facilities, laundry, social/study areas and circulation space.

4. Maximise Use of Natural Systems

Accessibility

4.1 The Applicant's commitment to inclusivity will ensure that the proposed development is scaled appropriately so as to respond to the needs of all its users. The Applicant will endeavour to incorporate the requirements of the Equality Act (2010) into their design, making reasonable adjustments to enable disabled access, regularly reviewing whether the buildings are accessible and effective, and providing necessary design adjustments where it is practical to do so.

4.2 In order to achieve the BREEAM 'Very Good' ratings, the applicant will design all new buildings in line with the CABE publication Design and Access Statements, which includes principles of inclusive design. The access statement results in a strategy that must address, as a minimum, access to and throughout the development for all users, with particular emphasis on the following:

- Disables users;
- People of different ages groups, genders, ethnicity and stamina/fitness levels;
- Parents with children.

Sound Insulation

4.3 A suitably qualified acoustician will be appointed to provide appropriate design advice. The building will meet relevant acoustic performance standards and testing requirements. All multi-residential units will aim to achieve airborne sound insulation values that are at least 5dB higher, and impact sound values that are at least 5dB lower, than the performance standards outlined within the Building Regulations for England and Wales, Approved Document E. This will be demonstrated at the post construction stage through a regime of sound testing.

Education – Building User Guides

4.4 Building User Guides will be provided to all users of the building (general users including staff, residents as well as the non-technical facilities management team/building manager). The guides will cover all functions and uses of the building, ensuring building users are able to use the building effectively.

4.5 Water and energy use meters will also be included in the development as a means to monitor use and determine any excess use or wastage. Their inclusion can be a very effective means to reduce energy and water usage.

5. Conserve Energy, Materials, Water and Other Resources

Energy

5.1. The proposed Energy Statement submitted with this planning application, prepared by Matthew Bailey of Richard Hodkinson Consultancy, provides a means to reduce energy consumption through the use of energy efficiency measures and Combined Heat and Power (CHP).

5.2. These measures will include improved insulation standards and improved U-Values from Building Regulation standards in the external walls, floors, windows, glazed doors and roof.

5.3. As stated in the Energy Statement, the strategy for the building will reduce predicted regulated CO_2 emissions by at least 25% against Part L 2010 target emissions through the use of energy efficient design and CHP.

5.4. Through implementation of Be Lean, Be Clean and Be Green measures, a total carbon dioxide emission saving of 26% is currently proposed as part of the Energy Strategy, when compared to the base case results. This exceeds the mandatory energy requirements of BREEAM 'Very Good' and the London Plan Policy 5.2. Please refer to Energy Statement for further details.

5.5. External space and security lighting will be specified to minimise energy use and night-time light pollution. Measures proposed will include down-facing lights, time scheduling and photocell control. All space and security lighting will be dedicated energy efficient.

Water

5.6. In accordance with the requirement of BREEAM 'Very Good', there will be a 25% improvement in water consumption (litres/person/day) for the warehouse and multi-residential uses against a baseline performance. This could be achieved by the following suggested measures, set out in the BREEAM guidance, and will be developed during detailed design:

- WC – 4.5L;
- Wash basin taps – 7.5L/min;
- Shower – 8/min;
- Bath volume – 160L;
- Urinals (2 or more) – 3L/bowl/hour;
- Urinals (1 urinal only) – 4L/bowl/hour;

- Kitchen taps (kitchenette) – 7.5L/min;
- Dishwashers (domestic sized) – 13L/cycle;
- Dishwashers (commercial sized) – 6L/rack;
- Washing machines (domestic sized) – 50L/use;
- Washing machines (commercial sized) – 10L/kg.

5.7. This strategy assists in addressing the Camden Core Strategy CS13 and Development Policy 22, which both seek to reduce water consumption.

5.8. Water waste reduction advice will be provided to residents and other building users within comprehensive Building User Guides, to enable optimum use to be made of the devices installed.

Environmental Impact of Materials

5.9. While a major consideration in materials selection is the external appearance of the buildings, from a sustainability perspective it is equally important that the Applicant seeks to minimise the environmental impact of the materials used over the lifetime of the building – from manufacture, usage, to eventual demolition and disposal. For building materials, the Applicant will, where viable and practical, specify materials using the BRE Green Guide to Specification to achieve as many points as possible in the BREEAM MAT 01 calculator.

5.10. Timber used in the proposed development for both basic and finishing elements will be sourced in accordance with the Government's Timber Procurement's Policy.

Waste

5.11. A comprehensive Site Waste Management Plan will include measures for sorting and recycling construction waste, with a target maximum production of 11.1 tonnes per 100m^2 gross internal floor area and a target to divert 90% of all waste from landfill. Appropriate facilities for the storage of operational recyclable waste volumes will also be provided.

5.12. Further details on the proposals for sustainable waste management are outlined within Section 9 of this Statement.

6. Reduced Noise, Pollution, Flood Risk and Microclimate Effects

Noise Pollution

6.1. Construction traffic, which has the potential to have a damaging effect on neighbours, wildlife, roads and the local community, will be minimised by restricting deliveries and arrival times. Work will be limited to appropriate hours to be agreed with the local authority, and suppressors will be used to reduce noise from machinery.

Flood Risk and Surface Water Run-off

6.2. The Environment Agency website indicates the site as within Flood Zone 1, with a low risk of flooding from fluvial or tidal sources. This is to be confirmed in the separate FRA prepared for the site (please refer to this report for further detail regarding flood risk and surface water run-off).

6.3. The site is to meet the BREEAM criteria for peak rate surface water run-off and for surface water run off volume, attenuation and/or limiting discharge. The site will also minimise watercourse pollution in accordance with the BREEAM criteria.

7. Ensure Developments are Comfortable, Accessible and Secure for Users

7.1. Residents will enjoy a high quality lifestyle in a secure and well-designed development, within space that is environmentally friendly and adaptable to their changing needs.

7.2. The proposed development will be designed to 'Secured by Design' Section 2 principles and a suitably qualified consultant will be appointed. The security standards of external doors and windows will be very high, external areas will be well lit and external lighting will be operated with motion sensors to deter burglars and intruders.

7.3. The Applicant's commitment to inclusivity will ensure that the proposed development is scaled appropriately so as to respond to the needs of all of its users**.** The Applicant will endeavour to incorporate the requirements of the Disability Discrimination Act (1995) into their design, making reasonable adjustments to enable disabled access, regularly reviewing whether the buildings are accessible and effective, and providing necessary design adjustments where it is practical to do so.

Sustainable Transport

7.4. The site has a PTAL rating of 5, which represents a very good provision of public transport. Users of the new development can benefit from a range of nearby bus, rail and underground services.

7.5. A Travel Plan, based on a site specific travel survey, will be developed to encourage the reduction of user reliance on forms of travel that have the highest environmental impact.

Daylighting

7.6. Daylighting will be maximised throughout the development where possible. As part of the BREEAM Assessment, a daylighting assessment will be undertaken to assess the Average Daylight Factor (ADF) in all relevant building areas. Where feasible, all multi-residential buildings will have an ADF of 2% in kitchens and non-residential/communal space, an ADF of at least 1.5% in living rooms, dining rooms and studies and a view of the sky from 80% of the rooms.

8. Conserve and Enhance the Natural Environment and Biodiversity

Ecological Enhancements

8.1. In accordance with the BREEAM Assessment, a suitably qualified ecologist will be appointed to report on enhancing and protecting site ecology. All general recommendations made by the ecologist are to be implemented to enhance the proposed development's ecological value.

8.2. The Applicant will commit to implement all general recommendations made by the ecologist, which are likely to involve soft landscaping, including native species and species of value for wildlife.

8.3. A number of new trees and shrubs will be planted as part of the development proposals to at least meet the 'small improvement' target under the BREEAM Assessment.

Green Roofs

8.4. As per Camden policy DP22, green roofs have been included within the design, covering an area of approximately 1190 sqm.

8.5. The green roof will assist with achieving the Land Use and Ecology credits under the BREEAM Assessment by increasing the plant species richness across the site.

9. Promoting Sustainable Waste Behaviour

9.1. Waste reduction is a key principle of sustainable development. The two main waste issues that the Applicant has considered are:

- **Domestic waste**: to reduce waste by the building occupiers, and incorporating various techniques for this.
- **Construction waste:** to reduce waste by the contractors and incorporating various techniques for this.

9.2. A reduction in waste offers benefits not only to the environment, but also the occupier and developer. Throughout the design process, the Applicant has illustrated their intent to reduce waste going to landfill and have promoted key waste saving measures. This includes the production of a Site Waste Management Plan with a target maximum production of 11.1 tonnes per 100m^2 gross internal floor area and a target to divert 90% of all waste from landfill. Implementing a SWMP can result in benefits for the proposed development, including:

- Better control of risks relating to the materials and waste on the Application Site. 'Good housekeeping' of waste improves site safety.
- Demonstrating compliance with the legislative framework.
- A mechanism demonstrating to clients how waste is managed and minimised and how associated costs are controlled.
- Compliance with contractual requirements from public and private sector clients.
- A system to help make cost savings by better managing the supply chain of materials, and their storage, handling, recovery and eventual disposal.

9.3. Construction operations generate waste materials as a result of general handling losses and surpluses. These wastes can be reduced through appropriate selection of construction methods, good site waste management practices and spotting opportunities to avoid creating unnecessary waste.

10. Sustainable Construction

10.1. During the construction processes, control procedures will be put in place to minimise noise and dust pollution whilst emissions will be monitored. Roads will be kept clean. The management systems will generally comprise procedures and working methods that are approved by the development team together with commercial arrangements to ensure compliance.

10.2. Specific action will be taken to minimise and control any nuisance from construction traffic to surrounding neighbourhoods.

10.3. Regular consultation is to take place with the existing community and residents will to be kept informed about onsite construction activities, with a complaints procedure established.

11. Conclusion

11.1. Sustainability and the issue of climate change and its effects will be considered throughout the design of the proposed development. In particular, the associated effects of flood risk, drainage, water efficiency, building structure, renewable technologies and recycling will be addressed.

11.2. The proposed development includes the following key achievements:

- The development will achieve a BREEAM 'Very Good' rating for both multi-residential and warehouse uses;
- It is proposed that the proposed development will be connected to a Combined Heat and Power network;
- The reduction in total regulated CO_2 emissions over the Building Regulations (2010) baseline is 26%;
- 100% of the proposed development is on previously developed land;
- Water efficiency measures and devices will be installed to reduce the total water consumption;
- Green roofs have been incorporated into the designs where feasible, covering an approximate area of 1190 sqm;
- A surface water drainage design is proposed which will meet the BREEAM criteria for peak rate surface water run-off and surface water run off volume;

- Advice from an ecologist will be sought to ensure ecology/ biodiversity is protected and enhanced as part of the BREEAM assessment;
- All timber will be sourced in accordance with the Government's Timber Procurement Policy. Materials will be selected based on their environmental impact, with preference given to materials from the BRE Green Guide to Specification that achieve a higher score in the Mat 01 calculator;
- Appropriate facilities will be provided for the storage of operational recyclable waste;
- A suitably qualified consultant will be consulted, and the proposed development will incorporate the principles of Secured by Design Section 2;
- A Site Waste Management Plan will be prepared and implemented, with a target to reduce waste sent to landfill to a maximum of 11.1 tonnes/100m^2.

Appendices

A. Response to London Plan Climate Change Policies

B. BREEAM 2011 New Construction 'Very Good' Pre-Assessment for Warehouse

C. BREEAM 2011 New Construction 'Very Good' Pre-Assessment for Multi-Residential

Appendix A
Response to London Plan Climate Change Policies

APPENDIX A
RESPONSE TO LONDON PLAN CLIMATE CHANGE MITIGATION AND ADAPTION POLICIES

LONDON PLAN POLICIES	POLICY REQUIREMENTS/TARGETS	DEVELOPMENT RESPONSE
Policy 5.1 – Climate Change Mitigation	The Mayor seeks to achieve an overall reduction in London's CO_2 emissions of 60% below 1990 levels by 2025.	This development will assist in achieving this over-arching policy target.
Policy 5.2 – Minimising Carbon Dioxide Emissions	Major developments to meet the following targets for reductions in CO_2 emissions in both residential and non-residential buildings: 2010 – 2013 -25% reduction on 2010 building regulations.	The reduction in total CO_2 emissions over the Building Regulations (2010) baseline will be at least 25%. Please refer to the Energy Statement.
Policy 5.3 – Sustainable Design and Construction	The highest standards of sustainable design and construction should be achieved in London to improve the environmental performance of new developments. Major development should meet the minimum standards outlined in the London Plan Supplementary Planning Guidance on this stop and this should be clearly demonstrated. The standards includes the following sustainable design principles (summarised): • Minimising CO_2 emissions; • Avoiding internal overheating and contributing to the urban heat island effect; • Efficient use of natural resources (including water); • Minimising pollution (including noise, air and urban run-off); • Minimising the generation of waste and maximising reuse and recycling; • Avoiding impacts from natural hazards (including flooding); • Ensuring developments are comfortable and secure for users; • Securing sustainable procurement of materials, using local suppliers where feasible; • Promoting and protecting biodiversity and green infrastructure.	The development will seek to achieve BREEAM 'Very Good' rating. BREEAM contains a range of measures and categories to ensure high quality sustainable design, including: • Energy reduction measures; • Water efficiency measures; • Minimising pollution during site construction and operation (including noise, air and run-off); • Minimising the generation of waste and encouraging recycling throughout the construction and operational phases of the development; • The risk of flooding for this site is expected to be low; • Ensuring development is comfortable and secure for all users, including ensuring all dwellings achieve Secured by Design Section 2; • Ensuring sustainable procurement of materials, for both construction and building elements; • Promoting and protecting site ecology. The BREEAM pre-assessments for the warehouse and student accommodation can be viewed in Appendices B and C.

Policy 5.4 – Retrofitting	The environmental impact of existing urban areas should be reduced through policies and programmes that bring existing buildings up to the Mayor's standards on sustainable design and construction.	N/A
Policy 5.5 – Decentralised Energy Networks	Expects 25 per cent of the heat and power used in London to be generated through the use of localised decentralised energy systems by 2025. The Mayor will prioritise the development of decentralised heating and cooling networks at the development and area wide levels, including larger scale heat transmission networks.	The proposed development will incorporate a CHP system. For more information, please refer to the Energy Statement.
Policy 5.6 - Decentralised Energy	Requires that all developments should evaluate the feasibility of Combined Heat and Power (CHP) systems, and examine the opportunities to extend the system beyond the site boundary to adjacent sites.	The proposed development will incorporate a CHP system. Please refer to the Energy Statement.
Policy 5.7 – Renewable Energy	Requires that there is a presumption that all major development proposals will seek to reduce total CO_2 emissions by 20% through the use of renewable energy technologies.	The proposed development will incorporate a CHP system. Please refer to the Energy Statement for further information.
Policy 5.8 – Innovative Energy Technologies	Encourages the more widespread use of innovative energy technologies to reduce use of fossil fuels and carbon dioxide emissions.	The proposed development will use energy efficient design. Please refer to the Energy Statement.
Policy 5.9 – Overheating and Cooling	Seeks to reduce the impact of the urban heat island effect, reduce potential overheating and reduce reliance on air conditioning systems.	The development will include approximately 1190sqm of green roof as well as new planting which will assist in reducing contribution to the urban heat island effect.
Policy 5.10 – Urban Greening	Promotes urban greening, such as new planting in the public realm (including streets, squares and plazas) and green infrastructure, to contribute to the adaptation to, and mitigation of, the effects of climate change.	The site will benefit from roughly 1190sqm of green roofing and new planting and landscaping.

Policy 5.11 – Green Roofs	Requires roof, wall and site planting, especially green roofs and walls, to be designed where feasible.	The proposed development has included designs for a green roof, covering approximately 1190sqm.
Policy 5.12 – Flood Risk Management	States that new developments must comply with the flood risk assessment and management requirements, and will be required to pass the Exceptions Test addressing flood resilient design and emergency planning.	Please refer to the FRA.
Policy 5.13 – Sustainable Drainage	Requires that developments should use sustainable urban drainage systems (SUDS) unless there are practical reasons for not doing so, and should aim to achieve greenfield run-off rates and ensure that surface water run-off is managed as close to its source as possible.	Please refer to the FRA.
Policy 5.14 – Water Quality and Wastewater Infrastructure	Development proposals must ensure that adequate wastewater infrastructure capacity is available in tandem with development. Development proposals also to upgrade London's sewage (including sludge) treatment capacity should be supported provided they utilise best available techniques and energy capture.	Please refer to the FRA.
Policy 5.15 – Water Use and Supplies	Requires that development should minimise the use of mains water by incorporating water saving measure and equipment and that residential development is designed so that mains water consumption meets a target of 105 litres/person/day or less.	Water efficient measures and devices will be installed to reduce the total water consumption in line with the BREEAM assessment.

Appendix B

BREEAM 2011 New Construction 'Very Good' Pre-Assessment for the warehouse

BREEAM 2011 New Construction Assessment Report

Overall Indicative Building Performance

Building Name	**65-69 Holmes Road Industrial**
Indicative building score (%)	**68.26%**
Indicative BREEAM Rating	**Pre-Assessment result indicates potential for BREEAM Very Good rating**
Indicative minimum standards level	**Pre-Assessment result indicates the minimum standards for Very Good level**

Summary of Indicative Building Performance by Environmental Section and Assessment Issue

Management	Indicative no. credits available	Indicative no. credits achieved	Indicative contribution to score	Design Requirements
Man 01 Sustainable Procurement	8.0	7.0	3.82%	Define project teams roles, responsibilities and a training schedule. Appoint a BREEAM AP at RIBA stage A/B and performance targets contractually agreed. BREEAM AP to monitor and report progress during RIBA stage B-L. Compliant commissioning of building services to be carried out. Compliant seasonal commissioning of building services to be carried out. Water & energy consumption data recorded and aftercare support provided for 12 months.
Man 02 Responsible Construction Practices	2.0	1.0	0.55%	Registration to Considerate Construction Scheme and commitment to achieve 5 or more in all sections with a minimum score of 25
Man 03 Construction Site Impacts	5.0	3.0	1.64%	On site energy and water consumption to be metered/monitored. All timber to be sourced in accordance with the Government's Timber Procurement Policy.
Man 04 Stakeholder Participation	4.0	2.0	1.09%	Design and access statement developed and appropriate building user facilities included within the design. Building user guides and relevant user information provided to building users.
Man 05 Life cycle cost and service life planning	3.0	0.0	0.00%	Credit not achievable
Total indicative environmental section	**22.0**	**13.0**	**7.09%**	
Health and Wellbeing				
Hea 01 Visual Comfort	3.0	2.0	3.75%	All fluorescent lamps to be fitted with high frequency ballasts. Design to provide adequate glare control and view out for building users. All internal/external lighting be specified in accordance with the relevant CIBSE Guides/British Standards.
Hea 02 Indoor Air Quality	N/A	N/A	N/A	Credit not applicable
Hea 03 Thermal Comfort	N/A	N/A	N/A	Credit not applicable
Hea 04 Water Quality	1.0	1.0	1.88%	All water systems to be designed to comply with the relevant HSE Approved Code of Practice and Guidance. Where humidification is to be provided, a failsafe humidification system to be specified. With a wholesome supply of accessible, clean and fresh drinking water for building users.
Hea 05 Acoustic Performance	2.0	2.0	3.75%	A suitably qualified acoustician to be appointed to provide appropriate design advice. The building to meet the relevant acoustic performance standards and testing requirements.
Hea 06 Safety and Security	2.0	2.0	3.75%	External site areas where present, will have safe access designed for pedestrians and cyclists. A suitably qualified security consultant will be appointed and security considerations accounted for.
Total indicative environmental section	**8.0**	**7.0**	**13.13%**	
Energy				
Ene 01 Reduction of CO2 Emissions	15.0	4.0	2.81%	SBEM to be completed to show the minimum number of credits targeted
Ene 02 Energy Monitoring	2.0	2.0	1.41%	A BMS or sub-meters to be specified to monitor energy use from major building services systems. BMS or sub-meters to be specified to monitor energy use by tenant/building function areas.
Ene 03 External Lighting	1.0	1.0	0.70%	External light fittings and controls to be specified in accordance with the BREEAM criteria.
Ene 04 Low and Zero Carbon Technology	5.0	2.0	1.41%	Compliant LZC study to be undertaken at RIBA stage C. 10% reduction in CO2.
Ene 05 Energy Efficient Cold Storage	N/A	N/A	N/A	Credit not applicable
Ene 06 Energy Efficient Transportation Systems	2.0	2.0	1.41%	Transportation system analysis to be carried out to determine the optimum number and size of lifts. Lifts then selected with three energy-efficient features offering the greatest potential of energy savings.
Ene 07 Energy Efficient Laboratory Systems	N/A	N/A	N/A	Credit not applicable
Ene 08 Energy Efficient Equipment	2.0	0.0	0.00%	Credit not targeted
Ene 09 Dry Space	N/A	N/A	N/A	Credit not applicable
Total indicative environmental section	**27.0**	**11.0**	**7.74%**	
Transport				
Tra 01 Public Transport Accessibility	3.0	3.0	2.67%	What is the degree of accessibility to the site. For sites in London use PTAL rating.
Tra 02 Proximity to Amenities	1.0	1.0	0.89%	The building to be in close proximity of and accessible to all applicable amenities.
Tra 03 Cyclist facilities	2.0	0.0	0.00%	Credit not targeted
Tra 04 Maximum Car Parking Capacity	2.0	2.0	1.78%	The building to meet BREEAM's maximum parking capacity criteria for this building type/Accessibility Index.
Tra 05 Travel Plan	1.0	1.0	0.89%	A transport plan based on site specific travel survey/assessment be developed.
Total indicative environmental section	**9.0**	**7.0**	**6.22%**	

Water

Wat 01 Water Consumption	5.0	2.0	1.33%	Select credits to show the likely level of BREEAM credits achieved via the target table.
Wat 02 Water Monitoring	1.0	1.0	0.67%	A pulsed water meter will be installed on the mains water supply to the building. Metering/monitoring equipment will be specified on the water supply to any relevant plant/building areas. All specified water meters to have a pulsed output.
Wat 03 Water Leak Detection and Prevention	2.0	2.0	1.33%	Flow control devices to be installed in each sanitary area/facility. Install major leak detection on mains pipework.
Wat 04 Water Efficient Equipment	1.0	1.0	0.67%	Water efficient irrigation methods to be installed.
Total indicative environmental section	**9.0**	**6.0**	**4.00%**	

Materials

Mat 01 Life Cycle Impacts	2.0	2.0	2.78%	Define the number of target credits for Green Guide rated materials in major building elements.
Mat 02 Hard Landscaping and Boundary Protection	1.0	1.0	1.39%	≥80% of all external hard landscaping and boundary protection achieve a Green Guide rating of A or A+.
Mat 03 Responsible Sourcing	3.0	0.0	0.00%	Credit not targeted
Mat 04 Insulation	2.0	2.0	2.78%	The building to target an insulating index of 2 or more with insulating materials to be responsibly sourced.
Mat 05 Designing for Robustness	1.0	1.0	1.39%	Suitable durability/protection measures be specified and installed to vulnerable areas of the building.
Total indicative environmental section	**9.0**	**6.0**	**8.33%**	

Waste

Wst 01 Construction Waste Management	4.0	2.0	2.50%	SWMP to be provided with a target of 11.1 tonnes/100m2 of waste to be diverted from landfill. 90% of all waste to be recycled.
Wst 02 Recycled Aggregates	1.0	0.0	0.00%	Credit not targeted
Wst 03 Operational Waste	1.0	1.0	1.25%	Appropriate facilities for the storage of operational recyclable waste volumes to be provided. If relevant, will a static waste compactor(s) or baler(s) be specified/installed. If relevant, a vessel for composting suitable organic waste to be specified/installed.
Wst 04 Speculative Floor and Ceiling Finishes	N/A	N/A	N/A	Credit not applicable
Total indicative environmental section	**6.0**	**3.0**	**3.75%**	

Land Use and Ecology

Le 01 Site Selection	2.0	1.0	1.00%	At least 75% of the proposed development's footprint to be located on previously been developed land.
Le 02 Ecological Value of Site and Protection of Ecological Features	1.0	1.0	1.00%	The land within the construction zone to be defined as 'land of low ecological value'. All features of ecological value surrounding the construction zone/site boundary to be protected.
Le 03 Mitigating Ecological Impact	2.0	2.0	2.00%	A small improvement in ecological value (plant species richness) on the site.
Le 04 Enhancing Site ecology	3.0	2.0	2.00%	A suitably qualified ecologist to be appointed to report on enhancing and protecting site ecology. The suitably qualified ecologists general recommendations to be implemented. The targeted/intended improvement in ecological value as a result of enhancement actions to show at least a small improvement in plant species.
Le 05 Long Term Impact on Biodiversity	2.0	2.0	2.00%	A suitably qualified ecologist to be appointed. All relevant EU and UK legislation to be followed. A 5 year management plan to be developed. A Biodiversity Champion to be appointed to monitor/minimise impacts of site activities on biodiversity. The contractor to record actions to protect biodiversity and monitor their effectiveness during construction. New ecologically valuable habitat, appropriate to the local area, to be created. Where flora/fauna habitats exist on site, the contractor to programme site works to minimise disturbance.
Total indicative environmental section	**10.0**	**8.0**	**8.00%**	

Pollution

Pol 01 Impact of Refrigerants	3.0	3.0	3.00%	No refrigerants to be specified in the development.
Pol 02 NOx Emissions	1.0	1.0	1.00%	Maximum NOx emission level for space heating system of 40mg/kWh. Maximum NOx emission level for the water heating system of 40mg/kWh.
Pol 03 Surface Water Run Off	5.0	5.0	5.00%	Annual probability of flooding for the assessed site to be Low. A compliant Flood Risk Assessment to be undertaken. Site to meet the BREEAM criteria for peak rate surface water run off. Site to meet the criteria for surface water run off volume, attenuation and/or limiting discharge. Site to be designed to minimise watercourse pollution in accordance with the BREEAM criteria.
Pol 04 Reduction of Night Time Light Pollution	1.0	1.0	1.00%	External lighting is designed to reduce light pollution to ILE guidance.
Pol 05 Noise Attenuation	N/A	N/A	N/A	Credit not applicable
Total indicative environmental section	**10.0**	**10.0**	**10.00%**	

Innovation

Inn 01 Innovation	10.0	0.0	0.00%	
Total indicative environmental section	**10.0**	**0.0**	**0.00%**	

Appendix C

BREEAM 2011 New Construction 'Very Good' Pre-Assessment for Multi-Residential

BREEAM 2011 New Construction Assessment Report

Overall Indicative Building Performance

Building Name	**65-69 Holmes Road Multi Residential**
Indicative building score (%)	**61.99%**
Indicative BREEAM Rating	**Pre-Assessment result indicates potential for BREEAM Very Good rating**
Indicative minimum standards level	**Pre-Assessment result indicates the minimum standards for Very Good level**

Summary of Indicative Building Performance by Environmental Section and Assessment Issue

Management	Indicative no. credits available	Indicative no. credits achieved	Indicative contribution to score	Design Requirements
Man 01 Sustainable Procurement	8.0	7.0	3.82%	Define project teams roles, responsibilities and a training schedule. Appoint a BREEAM AP at RIBA stage A/B and performance targets contractually agreed. BREEAM AP to monitor and report progress during RIBA stage B-L. Compliant commissioning of building services to be carried out. Compliant seasonal commissioning of building services to be carried out. Water & energy consumption data recorded and aftercare support provided for 12 months.
Man 02 Responsible Construction Practices	2.0	1.0	0.55%	Registration to Considerate Construction Scheme and commitment to achieve 5 or more in all sections with a minimum score of 25
Man 03 Construction Site Impacts	5.0	3.0	1.64%	On site energy and water consumption to be metered/monitored. All timber to be sourced in accordance with the Government's Timber Procurement Policy.
Man 04 Stakeholder Participation	4.0	2.0	1.09%	Design and access statement developed and appropriate building user facilities included within the design. Building user guides and relevant user information provided to building users.
Man 05 Life cycle cost and service life planning	3.0	0.0	0.00%	Credit not achievable
Total indicative environmental section	**22.0**	**13.0**	**7.09%**	
Health and Wellbeing				
Hea 01 Visual Comfort	3.0	2.0	1.88%	All fluorescent lamps to be fitted with high frequency ballasts. Design to provide adequate glare control and view out for building users. All internal/external lighting be specified in accordance with the relevant CIBSE Guides/British Standards.
Hea 02 Indoor Air Quality	4.0	1.0	0.94%	Building to be naturally ventilated.
Hea 03 Thermal Comfort	2.0	0.0	0.00%	Credit not targeted.
Hea 04 Water Quality	1.0	1.0	0.94%	All water systems to be designed to comply with the relevant HSE Approved Code of Practice and Guidance. Where humidification is to be provided, a failsafe humidification system to be specified. With a wholesome supply of accessible, clean and fresh drinking water for building users.
Hea 05 Acoustic Performance	4.0	3.0	2.81%	A suitably qualified acoustician to be appointed to provide appropriate design advice. The building to meet the relevant acoustic performance standards and testing requirements.
Hea 06 Safety and Security	2.0	2.0	1.88%	External site areas where present, will have safe access designed for pedestrians and cyclists. A suitably qualified security consultant will be appointed and security considerations accounted for.
Total indicative environmental section	**16.0**	**9.0**	**8.44%**	
Energy				
Ene 01 Reduction of CO2 Emissions	15.0	6.0	4.22%	SBEM to be completed to show the minimum number of credits targeted
Ene 02 Energy Monitoring	1.0	1.0	0.70%	A BMS or sub-meters to be specified to monitor energy use from major building services systems. BMS or sub-meters to be specified to monitor energy use by tenant/building function areas.
Ene 03 External Lighting	1.0	1.0	0.70%	External light fittings and controls to be specified in accordance with the BREEAM criteria.
Ene 04 Low and Zero Carbon Technology	5.0	2.0	1.41%	Compliant LZC study to be undertaken at RIBA stage C. 10% reduction in CO2.
Ene 05 Energy Efficient Cold Storage	N/A	N/A	N/A	Credit not applicable
Ene 06 Energy Efficient Transportation Systems	2.0	2.0	1.41%	Transportation system analysis to be carried out to determine the optimum number and size of lifts. Lifts then selected with three energy-efficient features offering the greatest potential of energy savings.
Ene 07 Energy Efficient Laboratory Systems	N/A	N/A	N/A	Credit not applicable
Ene 08 Energy Efficient Equipment	2.0	0.0	0.00%	Credit not targeted
Ene 09 Dry Space	1.0	1.0	0.70%	Tidy dry to be provided to meet the line length requirements for the number of people per unit.
Total indicative environmental section	**27.0**	**13.0**	**9.15%**	
Transport				
Tra 01 Public Transport Accessibility	3.0	3.0	2.40%	What is the degree of accessibility to the site. For sites in London use PTAL rating.
Tra 02 Proximity to Amenities	2.0	1.0	0.80%	The building to be in close proximity of and accessible to all applicable amenities.
Tra 03 Cyclist facilities	2.0	0.0	0.00%	Credit not targeted
Tra 04 Maximum Car Parking Capacity	2.0	2.0	1.60%	The building to meet BREEAM's maximum parking capacity criteria for this building type/Accessibility Index.
Tra 05 Travel Plan	1.0	1.0	0.80%	A transport plan based on site specific travel survey/assessment be developed.
Total indicative environmental section	**10.0**	**7.0**	**5.60%**	

Water				
Wat 01 Water Consumption	5.0	2.0	1.33%	Select credits to show the likely level of BREEAM credits achieved via the target table.
Wat 02 Water Monitoring	1.0	1.0	0.67%	A pulsed water meter will be installed on the mains water supply to the building. Metering/monitoring equipment will be specified on the water supply to any relevant plant/building areas. All specified water meters to have a pulsed output.
Wat 03 Water Leak Detection and Prevention	2.0	2.0	1.33%	Flow control devices to be installed in each sanitary area/facility. Install major leak detection on mains pipework.
Wat 04 Water Efficient Equipment	1.0	1.0	0.67%	Water efficient irrigation methods to be installed.
Total indicative environmental section	**9.0**	**6.0**	**4.00%**	
Materials				
Mat 01 Life Cycle Impacts	6.0	3.0	2.88%	Define the number of target credits for Green Guide rated materials in major building elements.
Mat 02 Hard Landscaping and Boundary Protection	1.0	1.0	0.96%	≥80% of all external hard landscaping and boundary protection achieve a Green Guide rating of A or A+.
Mat 03 Responsible Sourcing	3.0	0.0	0.00%	Credit not targeted
Mat 04 Insulation	2.0	2.0	1.92%	The building to target an insulating index of 2 or more with insulating materials to be responsibly sourced.
Mat 05 Designing for Robustness	1.0	1.0	0.96%	Suitable durability/protection measures be specified and installed to vulnerable areas of the building.
Total indicative environmental section	**13.0**	**7.0**	**6.73%**	
Waste				
Wst 01 Construction Waste Management	4.0	2.0	2.50%	SWMP to be provided with a target of 11.1 tonnes/100m2 of waste to be diverted from landfill. 90% of all waste to be recycled.
Wst 02 Recycled Aggregates	1.0	0.0	0.00%	Credit not targeted
Wst 03 Operational Waste	1.0	1.0	1.25%	Appropriate facilities for the storage of operational recyclable waste volumes to be provided. If relevant, will a static waste compactor(s) or baler(s) be specified/installed. If relevant, a vessel for composting suitable organic waste to be specified/installed.
Wst 04 Speculative Floor and Ceiling Finishes	N/A	N/A	N/A	Credit not applicable
Total indicative environmental section	**6.0**	**3.0**	**3.75%**	
Land Use and Ecology				
Le 01 Site Selection	2.0	1.0	1.00%	At least 75% of the proposed development's footprint to be located on previously been developed land.
Le 02 Ecological Value of Site and Protection of Ecological Features	1.0	1.0	1.00%	The land within the construction zone to be defined as 'land of low ecological value'. All features of ecological value surrounding the construction zone/site boundary to be protected.
Le 03 Mitigating Ecological Impact	2.0	2.0	2.00%	A small improvement in ecological value (plant species richness) on the site.
Le 04 Enhancing Site ecology	3.0	2.0	2.00%	A suitably qualified ecologist to be appointed to report on enhancing and protecting site ecology. The suitably qualified ecologists general recommendations to be implemented. The targeted/intended improvement in ecological value as a result of enhancement actions to show at least a small improvement in plant species.
Le 05 Long Term Impact on Biodiversity	2.0	2.0	2.00%	A suitably qualified ecologist to be appointed. All relevant EU and UK legislation to be followed. A 5 year management plan to be developed. A Biodiversity Champion to be appointed to monitor/minimise impacts of site activities on biodiversity. The contractor to record actions to protect biodiversity and monitor their effectiveness during construction. New ecologically valuable habitat, appropriate to the local area, to be created. Where flora/fauna habitats exist on site, the contractor to programme site works to minimise disturbance.
Total indicative environmental section	**10.0**	**8.0**	**8.00%**	
Pollution				
Pol 01 Impact of Refrigerants	3.0	3.0	2.31%	No refrigerants to be specified in the development.
Pol 02 NOx Emissions	3.0	3.0	2.31%	Maximum NOx emission level for space heating system of 40mg/kWh. Maximum NOx emission level for the water heating system of 40mg/kWh.
Pol 03 Surface Water Run Off	5.0	5.0	3.85%	Annual probability of flooding for the assessed site to be Low. A compliant Flood Risk Assessment to be undertaken. Site to meet the BREEAM criteria for peak rate surface water run off. Site to meet the criteria for surface water run off volume, attenuation and/or limiting discharge. Site to be designed to minimise watercourse pollution in accordance with the BREEAM criteria.
Pol 04 Reduction of Night Time Light Pollution	1.0	1.0	0.77%	External lighting is designed to reduce light pollution to ILE guidance.
Pol 05 Noise Attenuation	1.0	0.0	0.00%	Credit not targeted
Total indicative environmental section	**13.0**	**12.0**	**9.23%**	
Innovation				
Inn 01 Innovation	10.0	0.0	0.00%	
Total indicative environmental section	**10.0**	**0.0**	**0.00%**	