Prepared for

Z HOTELS
The Urbanite Stay

BSD
Building Services Design
Consulting Engineers

WILD COURT, HOLBORN
Z-HOTEL

SUSTAINABLE DESIGN & CONSTRUCTION STATEMENT

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1.0 EXECUTIVE SUMMARY

The Sustainable Design and Construction Statement (SDCS) has been undertaken by Building Services Design for the proposed development at Wild Court, Holborn, London in order to address the requirements of the London Borough of Camden Strategy and wider London Plan Policies.

The proposed development consists of an existing educational /office building which will undergo a change of use to a hotel. The proposed development has sought to address the relevant polices in the provision of a resource efficient, sustainable commercial development.

Sustainability has grown in importance in recent times as a result of the growing concern of the impacts of climate change. This is reflected in the national planning policies, regional planning and is clearly a high priority for the London Borough of Camden.

The Sustainable Design and Construction Statement (SDCS) follows the Mayor of London's Supplementary Planning Guidance ensuring that the project is in compliance with the London Plan policies on Sustainable Design and Construction. Camden Councils guidance document "CPG 03 – Sustainability." has been reviews and the recommendations incorporated in to this statement to demonstrate that the proposed hotel refurbishment has been designed with sustainability in mind.

The report details how the design team has considered the sites potential environmental impacts and how those impacts have been managed and mitigated in line with the prevailing spatial planning policies.

The proposed hotel will minimise the waste and will ensure the sustainable procurement of materials during construction and operation. Energy and water efficiency have been addressed and will be an internal feature of the hotel. Due to the nature of the hotel and the proposed energy efficiency improvements, the occupants during their stay will have a lower carbon impact than if they were to stay in a traditional hotel and as a result of careful specification will be able to reduce their water consumption without any impact on quality. Pollution arising from site activities has been targeted and will be minimized at all times. Overall the proposed scheme achieves the high standards of sustainability as prescribed in planning policy and meets the criteria required by Camden Council.

'Best practice', energy efficiency measures and renewable energy solutions are assessed for the proposed development, taking into consideration both the technical and the economic viability of the proposals in order to target the reduction of CO_2

emissions by a minimum of 35% in line with the requirements of London Plan and Camden Councils CPG 03 document. For further details please refer to the BSD's Energy and Renewable Statement.

The purpose of this report is to assess the proposed development in relation to wider sustainability requirements including BREEAM. Due to the proposed building type and site location within Camden the scheme can achieve a BREEAM "EXCELLENT" rating for the change of use works on the existing building.

The proposed development goes as far as is practical in meeting the relevant requirements set out within the London Borough of Camden planning guidance and the London plan.

The design team targeted a BREEAM rating of excellent (70 points), however due to the restrictions to work with an existing building, this has limited some of the BREEAM credits. Our initial pre-assessment suggests an "Excellent" score appears to be achievable.

The following list some of the BREEAM criteria that have not been achievable due to the restrictions of re-using an existing building:-

- HEA 1 View out (credit 1)
- HEA 2 Potential for natural vent (1 credit)
- ENE 1 Reduction of CO_2 Emissions (9 credits)
- MAT 2 Hard landscaping and boundary protection (1 credit0
- WST 2 Recycled aggregates (1 credit)
- LE 2 Contaminated land (1 credit)
- LE 5 Enhancing site ecology (2 credits)
- POL 5 Flood risk – surface water run off attenuation (1 credit)
- POL 6 Minimising water course pollution (SUDS) (1 credit)
- Innovation: HEA 1: Daylight (1 credit)

We would point out that achieving an "Excellent" score still with those limitations indicated the high quality sustainable design has been proposed for the development. Furthermore the re-use of an existing building structure is far more sustainable than demolishing and rebuilding as it saves the embedded carbon stored in the building fabric.

The proposed development will minimise waste and will ensure the sustainable procurement of materials during construction and operations. Energy and water efficiency have been addressed and will be an internal feature of the scheme.

Pollution arising from site activities has been targeted and will be minimized at all times. Overall the proposed scheme achieves the high standards of sustainability as prescribed in planning policy.

The key sustainability features outlined in this Sustainability Statement are listed below:

- The target reduction in regulated CO_2 emissions over the Building Regulations Part L (2013) baseline will be at least 35% in accordance with the London Plan Policy and exceeds the reduction outlined by Camden Council Guidance Document "CPG 03- Sustainability" for existing buildings.;

- Water efficiency measures and devices will be installed in the hotel to dramatically reduce the maximum daily water usage in accordance with the London Plan and section 7.3 of Camden Council Guidance Document "CPG 03 – Sustainability";

- Recycling facilities will be provided for commercial and construction related waste;

- The use of sustainable transport modes will be encouraged, and the site benefits from excellent connections to a range of surrounding transport services;

- The building will be designed to meet applicable Building Regulation Part M requirements;

- The proposed development includes the provision of dedicated cycle storage areas;

- Brown roofs have been incorporated into the scheme to maximize potential benefit to biodiversity;

- Sound insulation values are to be improved on Building Regulations Part E where possible;

- Where practical, building materials will be sourced locally to reduce transportation pollution and support the local economy. All timber will be purchased from responsible forest sources. Selection of materials will be based on their environmental impact assessment, with the preference

given to the high rated materials from BRE Green Guide wherever possible, and,

- Construction impacts will be minimised and monitored where possible;

The proposed development goes as far as is practical in meeting the relevant requirements set out within the London Borough of Camden planning guidance and the London plan.

The BREEAM pre assessments contained in the appendix, suggests that an“EXCELLENT” score is achievable for the scheme.

2.0 INTRODUCTION

2.0.1 The sustainable design and construction statement has been prepared by BSD to accompany with the planning application for the proposed development at Wild Court, Holborn, London.

2.0.2 The SDCS addresses the both local and regional policies on sustainable buildings and is supported by the BREEAM Pre-assessment for Wild Court, Holborn, London. The report also responds to Camden City Council's Planning Guidance -CPG 03- Sustainability. All of the Mayor's Essential and Preferred Standards referred to in the SPG Sustainable Design and Construction have been addressed. Where the standards have not been met a justifications have been provided.

2.0.3 This SDCS highlights where a sustainability standard will be met by the Building Research Establishment's Environmental Assessment Method (BREEAM) and how the principle will be achieved. The project is aspiring to achieve at least a BREEAM rating of Excellent, with a minimum score of 70. This report assumes a basic understanding of BREEAM, for further information please refer to the BREEAM Technical Guide1.

2.0.4 In order to develop the sustainability strategy at the planning application stage, the scheme has been assessed using the BREEAM 2014 Refurbishment and Fit out 2014 scheme methodology, we have been advised by BRE that this would be the most suitable bearing in mind that is not a new building.

2.0.5 This SDCS should be read alongside the Energy Statement produced by BSD, the Design and Access Statement produced by Harper Downie and other supplemental environmental reports.

2.0.6 The SDCS details how the proposed development responds to the relevant planning requirements as part of an overall sustainability assessment, and addresses key factors in relation to the sustainability under the following headings:

- Land use and location
- Noise, pollution, flooding and micro-climate effects
- Promoting sustainable waste and behaviour
- Promoting sustainable use of materials
- Sustainable construction
- Transport and movement

- Flood resistant design
- Access
- Maximise the use of urban design and adapting to climate change
- Ensure developments are comfortable and secured
- Conserve and enhance the natural environment and biodiversity

2.0.7 Each section demonstrates how the sustainability standards are achieved and where the standards have not been met, a justification has been provided. The report looks at how the proposed hotel is in compliance with local policies on sustainable buildings. Each section summaries the policies and standards that have been addressed.

2.0.8 Broader sustainability aspects are also assessed within this report to ensure that all matters surrounding the issues of sustainable development are addressed by the client within the design. Details on the energy consumption, associated CO_2 emissions and energy efficiency measures, as well as methods to meet planning policy in this regards has been included in section 4 as part of the statement.

2.1 The Proposed Development

2.1.1 The proposed development at 4 Wild Court, WC2B 4AU consists of the re-development and change of use of an existing private college (use D1 Class) to a hotel (class C1).

2.1.2 The proposed scheme comprises a 196 bedroom hotel together with a small reception and coffee shop for hotel guests.

The proposal intends to create a new concept of hotel, focused on delivering the highest quality product, accessible to all through the efficient use of space. The hotel intends to provide a feeling of comfort, luxury and relaxation in a compact floor area. This involves making efficient use of the existing building whilst retaining a significant amount of the building fabric, modifying only where required to create the room spaces.

The hotel will be equipped with the latest technologies required by business people and leisure travellers alike. Each room will be equipped with broadband internet access and digital services. All bedrooms will be complemented by ensuite bathrooms, controlled comfort cooling and other bedroom amenities such as, satellite TV and features that would be expected from a modern city

hotel. The hotel is proposed to cater for an occupancy level of 78%, which is the benchmark occupancy for inner London hotels.

The target market for the hotel is generally split into two categories, dependent on whether guests would be occupying rooms during weekdays or weekends. It is anticipated that overall 60-65% of rooms would be occupied by business travellers and 35-40% occupied by leisure travellers.

During the week the proposed hotel's target market would be corporate and leisure clientele, namely business persons who are conducting their activities within Holborn, the West End and specifically Central London.

2.1.3 Full details of the proposed development can be found in the supporting design and access statement and the submitted architectural drawings.

2.2 Sustainability Approach

2.2.1 The World Commission on the Environment and Development (WCED) report: Our Common Future describes sustainable development as development that:-

'Meets the needs of the present without compromising the ability of future generations to meet their own needs'

2.2.2 The London plan also requires sustainable development to be incorporated into all new development and defines sustainable development as:-

'Meeting present needs without compromising future needs'

2.2.3 This broad concept of sustainable development is to be taken into account within the sustainability statement. However, the main focus will be on successfully meeting the requirements of planning policy and guidance, of which the key documents are listed below.

2.3 Sustainability Guidelines and Policy

2.3.1 Sustainable development is the core principle underpinning planning. At the heart of sustainable development is the simple idea of ensuring a better quality of life for everyone, now and for future generations. A widely used definition was drawn up by the World Commission on Environment and Development in

1987: “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

Planning has a key role to play in the creation of sustainable communities: communities that will stand the test of time, where people want to live, and which will enable people to meet their aspirations and potential.

The following planning policy and guidance has been used to inform the strategy and to ensure that the proposed development meets all requirements applicable to the site.

Key policies

- European Policy
- National Policy
- Regional Policy
- Local Policy

2.3.2 European Policy

EU Sustainable Development Strategy (SDS)

Sustainable development means that the needs of the present generation should be met without compromising the ability of future generations to meet their own needs. It is an overarching objective of the European Union set out in the Treaty, governing all the Union’s policies and activities. It is about safeguarding the earth's capacity to support life in all its diversity and is based on the principles of democracy, gender equality, solidarity, the rule of law and respect for fundamental rights, including freedom and equal opportunities for all. It aims at the continuous improvement of the quality of life and well-being on Earth for present and future generations. To that end it promotes a dynamic economy with full employment and a high level of education, health protection, social and territorial cohesion and environmental protection in a peaceful and secure world, respecting cultural diversity.

Key Objectives

• Environmental Protection
• Social Equity and Cohesion
• Economic Prosperity
• Meeting Our International Responsibilities

2.3.3 National Policy

National Planning Policy Framework Document (NPPF)

The NPPF sets out the overarching planning policies on the delivery of sustainable development through the planning system. The key principle of NPPE is that sustainable development should be pursued in an integrated manner, in line with the principles for sustainable development set out in the UK strategy. Regional planning bodies and local planning authorities should ensure that development plans promote outcomes in which environmental, economic and social objectives are achieved together over time.

There are three dimensions to sustainable development: economic, social and environmental. These dimensions give rise to the need for the planning system to perform a number of roles:

- **An economic role** – contributing to building a strong, responsive and competitive economy, by ensuring that sufficient land of the right type is available in the right places and at the right time to support growth and innovation.
- **A social role** – supporting strong, vibrant and healthy communities, by providing the supply of housing required to meet the needs of present and future generations; and by creating a high quality built environment, with accessible local services and support its health, social and cultural well-being.
- **An environmental role** – contributing to protecting and enhancing our natural, built and historic environment; and, as part of this, helping to improve biodiversity, use natural resources prudently, minimise waste and pollution, and mitigate and adapt to climate change including moving to a low carbon economy.

At the heart of the National Planning Policy Framework 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 **plan-making** this means that:

- local planning authorities should positively seek opportunities to meet the development needs of their area;
- Local Plans should meet objectively assessed needs, with sufficient flexibility to adapt to rapid change, 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.

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

2.3.4 Regional Policy

London Plan 2015 Policy 5.3 Sustainable Design and Construction
The Mayor will, and boroughs should, ensure future developments meet the highest standards of sustainable design and construction and reflect this principle in UDP policies.

SUSTAINABLE DESIGN AND CONSTRUCTION SPG 2014
The development proposals should meet the minimum standards outlined in the Mayor's supplementary planning guidance. The standards include measures to achieve other policies in this Plan and the following sustainable design principles:

a) Minimising carbon dioxide emissions across the site, including the building and services (such as heating and cooling systems)
b) Avoiding internal overheating and contributing to the urban heat island effect
c) Efficient use of natural resources (including water), including making the most of natural systems both within and around buildings
d) Minimising pollution (including noise, air and urban runoff)
e) Minimising the generation of waste and maximising reuse or recycling
f) Avoiding impacts from natural hazards (including flooding)

g) Ensuring developments are comfortable and secure for users, including avoiding the creation of adverse local climatic conditions
h) Securing sustainable procurement of materials, using local supplies where feasible, and
i) Promoting and protecting biodiversity and green infrastructure.

2.3.5 Local Policy: London Borough of Camden

Core Strategy

a) The **Camden Core Strategy** was adopted in 2010. The objectives and policies pertinent to this document are summarised below.

b) **Policy CS 11 –Promoting Sustainable and Efficient Travel:**
Cycling is a sustainable means of travel that provides the opportunity to relieve congestion as well as promoting healthy, active lifestyles. Camden's Cycling Plan (Fourth Review 2008) seeks to promote increased cycling in the borough by improving cycling facilities and routes.
The Council will ensure that all opportunities are taken to maximise the availability of new cycle parking across the borough both in new developments and more widely in any areas where there is need for
increased provision.

c) **Policy CS 13– Tackling climate change through promoting higher environmental standards**

Reducing the effects of and adapting to climate change:
The Council will require 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 by:

- ensuring patterns of land use that minimise the need to travel by car and
- help support local energy networks;
- promoting the efficient use of land and buildings;
- minimising carbon emissions from the redevelopment, construction and occupation of buildings by implementing, in order, all of the elements of the following energy hierarchy:
    1. Ensuring developments use less energy,

2. Making use of energy from efficient sources, such as decentralised energy networks;
3. Generating renewable energy on-site; and ensuring buildings and spaces are designed to cope with, and minimise the effects of, climate change.

The Council will have regard to the cost of installing measures to tackle climate change as well as the cumulative future costs of delaying reductions in carbon dioxide emissions.

Local energy generation

The Council will promote local energy generation and networks.

Water and surface water flooding

We will make Camden a water efficient borough and minimise the potential for surface water flooding.

Development Policy DP22 – Promoting sustainable design and construction contributes towards delivering the strategy in policy CS13 by providing detail of the sustainability standards Camden Council will expect developments to meet. This document recommends that developments should try to achieve the following BREEAM Ratings.

Time period	Minimum rating	Minimum standard for categories (% of un-weighted credits)
2010-2015	'very good'	Energy 60% Water 60% Materials 40%
2016+	'excellent'	

d) <u>Policy CS 18– Dealing with our waste and encouraging recycling</u>

The Council will seek to make Camden a low waste borough. The council will:

- aim to reduce the amount of waste produced in the borough and increase recycling and the re-use of materials.
- make sure that developments include facilities for the storage and collection of waste and recycling;

e) <u>Camden Planning Guide (CPG03)– Sustainability</u>

The Guide covers the following sustainability items

- Energy statements
- The energy hierarchy
  - Energy efficiency – in new and existing buildings
  - Decentralised energy and combined heat and power (CHP)
  - Renewable energy
- Water efficiency
- Sustainable use of materials
- Sustainability assessment tools - BREEAM
- Green roofs, brown roofs and green walls
- Flooding
- Climate change adaptation
- Biodiversity
- Urban food growing

Sustainability is clearly a high priority for Camden Council, and sustainability requirements have been incorporated into this planning guidance document.

2.3.6 SUSTAINABILITY TARGETS

BREEAM

a) In accordance with Camden Borough Council (DP22 & CPG03) and London Plan requirements, the proposed scheme targeted the achievement of BREEAM Excellent certification which represents a very high level of sustainable design and construction.

b) The pre-assessment presented in **Appendix A** provides an illustrative route to achieving 'EXCELENT' for the proposed development. Whilst this has been determined as an appropriate route to certification at this stage of the development proposals, the actual route to certification may vary as the design and assessment progress.

Energy Performance

c) In accordance with Camden Borough Council planning policy and the London Plan, the proposed development will target a 35.47% reduction in regulated CO_2 emissions over the Part L 2013 baseline, which exceeds the target set out within the Ministerial Statement and also meets the requirements of the London Plan (35% reduction).

Summary of Development Targets

d) In summary, the Applicant is seeking to meet high levels of sustainability in accordance with planning policy and the latest guidance. The key targets for the proposed development are therefore as follows:

- The achievement of BREEAM is 'EXCELLENT' for the development.
- A reduction in regulated CO_2 emissions of 35.47% over the Part L 2013 baseline.
- A level of water efficiency meeting the new tighter Building Regulations optional requirement and in accordance with the London Plan.

3.0 SUSTAINABILITY ASSESSMENT

3.1 Environmental Rating

The building will be assessed against BREEAM 2014 Refurbishment and Fitout 2014. BREEAM is a nationally recognised standard used to assess the environmental performance of buildings and aims to acknowledge improved environmental performance in design.

The scheme considers both broad environmental concerns (e.g. climate change, resources use) as well as site specific issues (e.g. energy use, ecology etc.) and these issues are balanced against the desire for high quality of life and a safe and healthy internal environment. The issues assessed are arranged into 9 key categories:

- Energy
- Water
- Materials
- Transport
- Waste
- Pollution
- Health and wellbeing
- Management
- Ecology and land-use

Each category consists of a number of issues and each issue seeks to mitigate the impact of a new or refurbished building on the environment by defining performance targets and assessment criteria.

The majority of BREEAM issues are tradable, meaning that a design team/client can pick and choose which to comply with in order to build up their BREEAM performance score. However, there are a few mandatory requirements which need to be met in order to achieve the aspired BREEAM level.

A scheme can be assessed at Design Stage (DS) - leading to an Interim BREEAM Certificate and/or Post-Construction Stage (PCS) – leading to a Final BREEAM Certificate.

BREEAM ratings are classified from ‘Pass’ to ‘Outstanding’ dependent on the total score received from achieving credits across the various categories. In order to achieve ‘Outstanding’ there are also additional criteria to be met. For more detail on this, please refer to the BREEAM website.

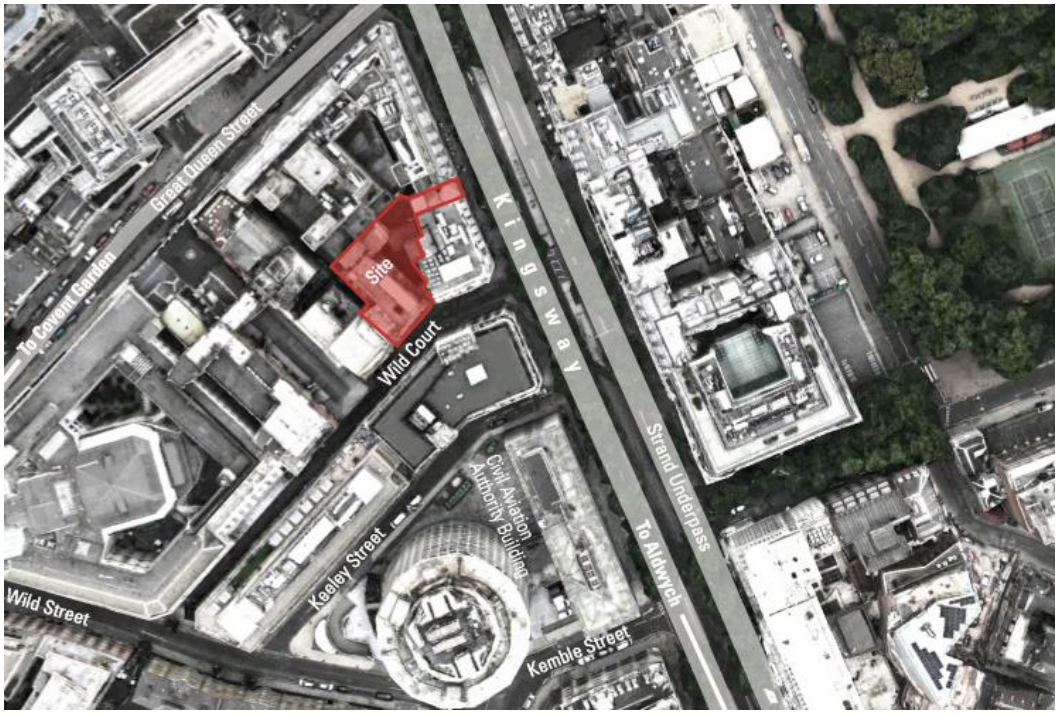
BREEAM Rating	% score
UNCLASSIFIED	<30
PASS	≥30
GOOD	≥45
V GOOD	≥55
EXCELLENT	≥70
OUTSTANDING*	≥85

As discussed previously, the most appropriate BREEAM scheme for Wild Court is a BREEAM 2014 Refurbishment and Fitout 2014.

The proposed development has been assessed as achieving an 'EXCELLENT' standard. Achieving an 'EXCELLENT" rating on the redevelopment of the site is extremely difficult, but in our opinion it is possible. A summary of the predicated credit score is provided in the BREEAM pre-assessments is included in appendix.

3.2 Land Use and Location

3.2.1 London has a large population and a comparatively small land area. Land is a therefore a precious, finite resource. The efficient use of land requires that developments optimise the carrying capacity of land that previously developed land is reused and that green spaces within London are protected and opportunities for the provision of new open space are maximised.



Proposed development location

The existing 8 storey at 4 Wild Court is currently in D1 (Non-residential institution) use and is occupied by the Kensington School of Business/ Kensington College of Business (KCB) with an internal café area and an area of vacant B1 office space at 1st floor level. The proposed development seeks to refurbish the existing building plus basement and is clearly on already developed land. The refurbishment offers the opportunity to substantially increase the usage of the building without any adverse impact on neighbouring occupiers.

The existing building has no features of ecological value on the site. The appearance will remain similar as the existing fabric is being retained.

The scheme achieves a high density rating in an area with very good accessibility to public transport and makes good use of an existing underused building. The density has not been increased from the existing conditions.

The footprint of the building represents the site boundary and as such there is no vacant land around the development site available for reuse or for open space provision. The development is well served by the surrounding transport network and therefore meets the Mayor's Essential Standard.
As the scheme is a refurbishment there will be no ground works and therefore contamination risks are considered to be low.

3.3 ECONOMIC SUSTAINABILITY

3.3.1 In accordance with the NPPF, the economic sustainability of the proposed development has been considered. The economic opportunities arising from the proposed development have been identified as follows:

- Construction – Will create employment and supply opportunities to local businesses;
- Training – Opportunities for local work force to receive training during site construction;
- The provision of an increased labour supply to the benefit of existing local businesses and supporting economic growth in the district.

3.3.2 Local Employment & Businesses

The construction of the proposed development will create work opportunities for the local population. Where possible, the development will utilise the local labour force and local businesses throughout the construction programme as well as providing training, where practicable.

The proposed development will result in employment opportunities for local people. Furthermore, it is expected to complement and enhance existing economic activity in the local area. The development will also be expected to provide employment in the form of catering, hospitality, cleaning and maintenance requirements.

3.3.3 Local Sourcing of Resources

When selecting materials for the development, preference will be given to the use of locally sourced materials and local suppliers where viable. This will benefit the local economy as well as having environmental benefits through reducing transportation requirements. This will be addressed and considered in more detail during the detailed design stage.

3.3.4 SOCIAL RESPONSIBILITY

3.3.4.1 The NPPF recognises the importance of ensuring that new developments are socially sustainable. With this in mind, the proposed development has included the following measures and techniques.

3.3.4.2 Pre-Application Consultation

The applicant has endeavoured to involve the local authority and the local community throughout the design process. This has included engagement in the pre-application process with the London Borough of Camden.

3.3.4.3 Designing Out Crime

It is important for new developments to secure high quality sustainable places where people will choose to stay and work. Secured by Design is a police initiative to encourage the building industry to adopt crime prevention measures in the design of new development with the aim to reduce the opportunity for crime and the fear of crime in order to create a safer and more secure environment

At the detailed design stage, the principles of Secured by Design will be incorporated into the development where possible and it is expected that consultation with a Designing Out Crime Officer (DOCO) will take place to ensure the development provides a safer and more secure place to live and work.

3.4 ENERGY & CO_2 CONSERVATION

3.4.1 Energy Strategy

The Energy Strategy for the Proposed Development has been formulated following The London Plan Energy Hierarchy: Be Lean, Be Clean and Be Green. The overriding objective in the formulation of the strategy is to maximise the reductions in CO_2 emissions through the application of this Hierarchy with a cost-effective, viable and technically appropriate approach and to minimise the emission of other pollutants.

The site will be assessed under Building Regulations Part L1A & L2A 2013.

A range of advanced Be Lean energy efficiency measures are proposed. They enable the proposed development to exceed Part L 2013 Target Emission Rate (TER) and Target Fabric Energy Efficiency (TFEE) minimum standards for the development through energy efficiency measures. A site-wide 10.03% reduction in regulated CO_2 respectively is predicted over the Part L 2013 baseline. This represents a high level of sustainable design and construction.

In line with the London Plan, the feasibility of decentralised energy production as a Be Clean measure has been carefully examined. The application of low carbon energy supply and generation achieves a further regulated and total CO_2 emissions reduction of 27.30% over Be Lean emissions.

The full spectrum of Be Green renewable energy generating technologies has been considered. Solar PV is shown to be a feasible renewable energy technology. There is available unshaded roof space for the provision of 21kWp solar PV (90m^2), which will achieve an estimated further regulated and total CO_2 emission reduction of 1.33% over Be Clean emissions.

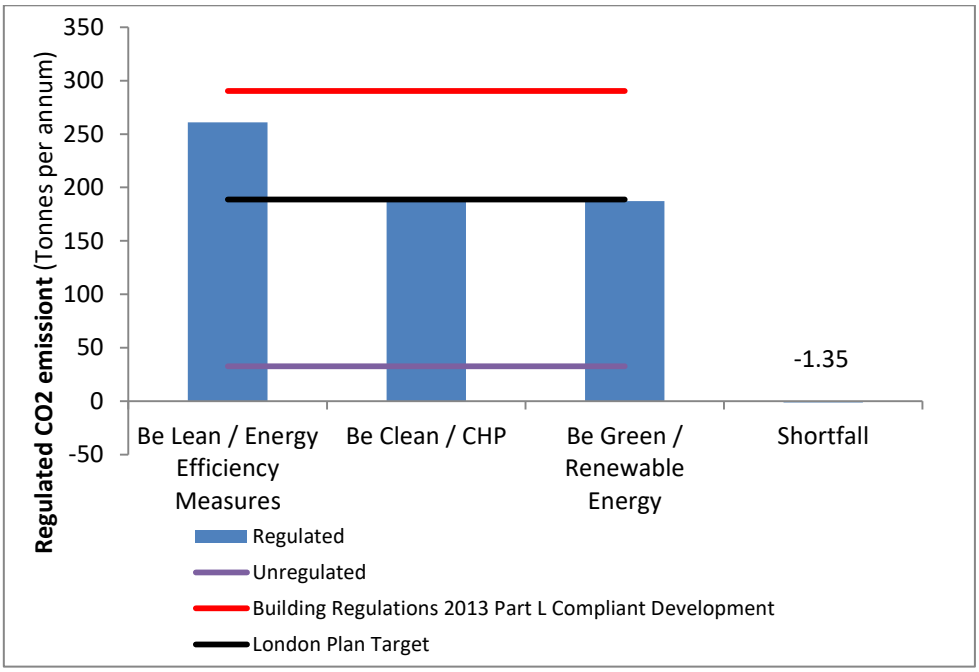
The overall approach to reducing CO_2 emissions for the Proposed Development is in-line with the London Plan Energy Hierarchy and London Borough of Camden's Energy Planning policies. A total 35.47% reduction in Regulated CO_2 emissions is predicted.

The following table presents an overview of the estimated reduction in the propose developments energy demand and associated carbon emissions through the implementation of the energy efficiency measures outlined above.

The proposed redevelopment and change of use of the building will result in a new hotel that will emit less CO_2 emissions that the existing building. In addition it should be remembered that the refurbishment of an existing building provides a far more sustainable approach that the construction of a new hotel as it saves the embodied carbon associated with the manufacturing construction materials. A reasonable proxy in the measure of embodied carbon is that every square meter of floor space will have incorporation of this hotel into an existing building will save one tonne of CO_2.

	Regulated Carbon Dioxide Savings	
	(Tonnes CO_2 per annum)	(%)
Savings from energy demand reduction	29.1	10.03%
Savings from CHP	71.3	27.30%
Savings from renewable	2.5	1.33%
Total Cumulative Savings	102.9	35.47%

TABLE - Show how the proposed development compares with the 2013 Building Regulations



Graph shows how the proposed development CO2 emissions at each stage of the assessment

For further details of all energy calculation and renewables strategy etc. please refer to the "Energy and Renewables Statement" which is a separate report produced by BSD which is also included in the planning documents

3.4.2 Energy Efficient White Goods

Where installed and feasible, energy efficient white goods will meet the following specification and energy efficient ratings under the EU Energy Efficiency Labelling Scheme:

- Fridges, freezers and fridge-freezers: A+ rating;
- Washing machines and dishwashers: A rating; and
- Tumble dryers and washer-dryers: B rating.

3.4.3 Energy Monitoring

Energy display devices which monitor consumption data for electricity and primary heating fuel will be provided, empowering the employees to be more aware of and therefore reduce the energy usage.

3.4.4 Building User Guides

Building User Guides may be provided to the employees, providing advice and information on how to best operate the services within the development. This method can be one of the most effective means to reduce energy use both in the short and long term.

3.5 POLLUTION, NOISE AND MICROCLIMATIC EFFECTS

3.5.1 The proposed development needs to take into account the adverse effects it may have on pollution, flooding and microclimatic effects.

The building materials within the proposed development will all meet the following criteria:

- Use traditional and/or long-established materials that do not emit pollutants;
- Use materials that are stable, durable and appropriate;
- Do not use materials that contain heavy metals, biocides or known toxins such as lead or asbestos;
- Make sure that mineral and other fibres are completely encapsulated;
- Use low or nil-formaldehyde-emitting materials;
- Minimise the use of paints, using organic, water-based or mineral paints wherever practicable;
- Avoid timber preservatives; and
- Avoid harmful cleaning agents, solvents and smoke from open fires.

3.5.2 Air Pollution

Essential Standards

• *All new gas boilers should produce low levels of NOX*

• *Take measures to reduce and mitigate exposure to air pollution*

Mayor's Preferred Standards

• *Low emission developments that are designed to minimize the air quality impact of plant, vehicles and other sources over the lifetime of the development.*

It is the intention to provide new low NOx gas boilers and CHP plant. The gas boilers will be low NOx (<40mg/kWh) helping to minimise harmful emissions and to reduce the negative impact on local air quality. All boiler flues will be discharged at roof level to insure they do not impact on local air quality.

Air Source Heat Pumps (ASHP) will be utilised to heat and cool the building. ASHP do not have any adverse air quality impacts and the NOx emissions produced by such equipment are associated with the grid electricity that is required to run the pump.

The absence of on-site staff car parking provision as well as the bicycle storage should further encourage employees to use public transport and minimise car traffic and therefore associated carbon emissions and pollutants.

Each of these measures will minimise the air quality impact of plant, vehicles and other sources over the lifetime of the development as required by the Mayor's Preferred Standard.

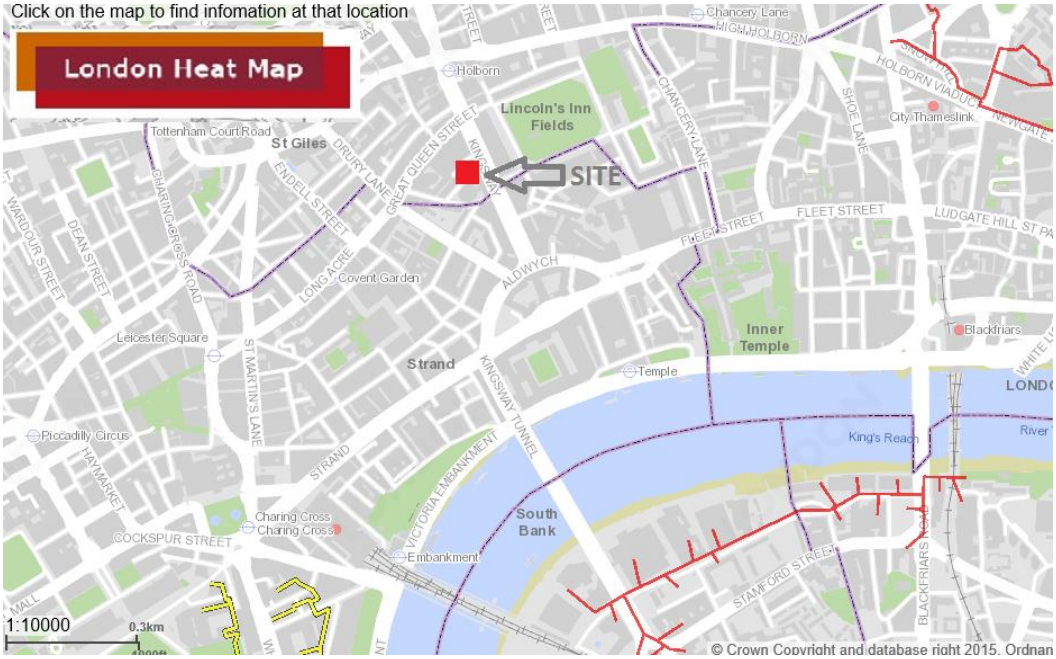
Air Pollution associated with the construction of the development is discussed later in this report

3.5.3 Carbon Dioxide Emissions

The proposed development will aim to reduce the Carbon Dioxide (CO_2) in line with the Policy CS13. Photovoltaic panel and CHP have been specified to reduce CO_2 and provide electricity for the site. Further details please refer to energy statement.

Linking at a district heating CHP system was investigated; however there are no district heating networks within a viable distance of the proposed development.

The proposed redevelopment and change of use of the building will result in a new hotel that will emit less CO_2 emissions that the existing office building. In addition it should be remembered that the refurbishment of an existing building provides a far more sustainable approach that the construction of a new hotel as it saves the embodied carbon associated with the manufacturing construction materials. A reasonable proxy in the measure of embodied carbon is that every square meter of floor space will have incorporation of this hotel into an existing building will save one tonne of CO_2.



Linking the site to a district heating CHP system was investigated; however there are no districts heating networks within a viable distance of the proposed development. The London Heat map doesn't indicate any existing heat networks nearby. The map does show a potential future district heating main approximately 1.3km away however this currently doesn't exist.

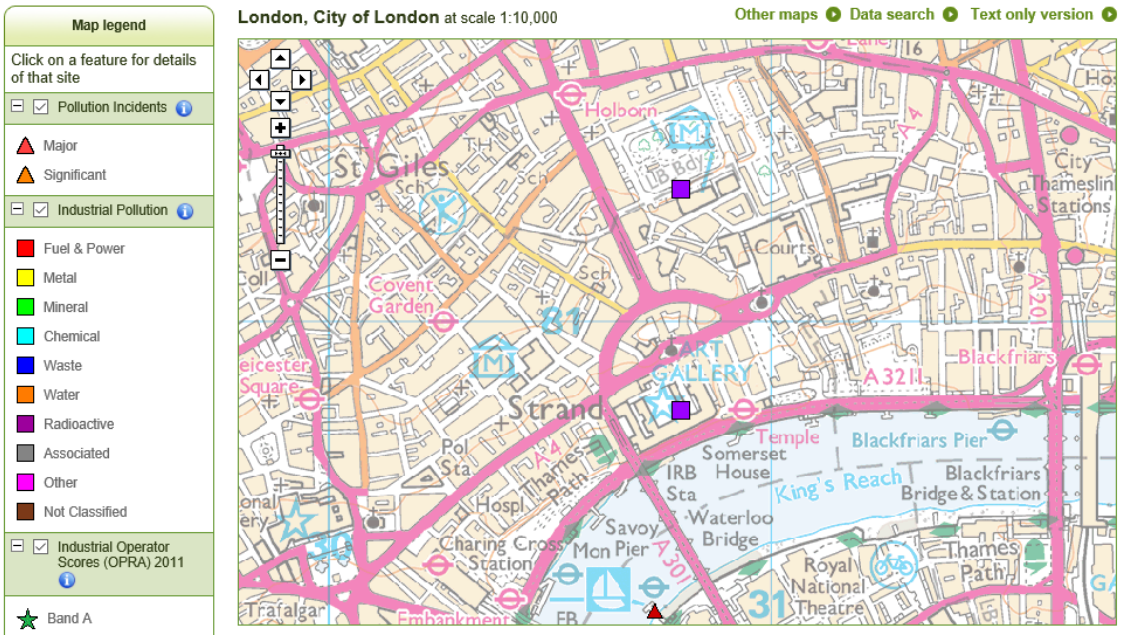
We therefore suggest that space is provided within the plant room for a future heat exchanger and pumps so that the site could be connected to local heat networks should they are provided in the area in the future.

3.5.4 Light Pollution

Light pollution will be minimized where possible through the careful specification in line with table 1 of institute of lighting engineers' guidance note 2005 and all external lighting will be capable of being switched off between 2300 and 0700 hours to minimize light pollution to the surrounding area. Light fittings will carefully selected so light is angled downward and light spillage is controlled.

3.5.5 Contaminated Land

This is not applicable as we are re-using the existing building land on which the existing buildings are standing on. However, initial environment agency data indicates that the site is not expected to be considered as contaminated – there are no reported incidences of pollution on the site.



Environment agency – Pollution Map

The environment agency pollution maps show that the site is not situated on, or adjacent to any historical landfill sites which may have caused pollution incidences.

3.5.6 Noise

Essential Standard

• Demonstrate that adverse impacts of noise have been minimised, using measures at source or between source and receptor (including choice and location of plant or method, layout, screening and sound absorption) in preference to sound insulation at the receptor, wherever practicable

Baseline noise monitoring has been undertaken in and around the vicinity of the application site to establish the existing noise environment. The data has been used to assess the development. It is considered that, with the use of good quality double glazing to the facade , with a suitable sound reduction value and mechanical ventilation, that good internal environments are achievable in during the day and night.

All external plant shall be located away from noise sensitive areas and where necessary shall be fitted with acoustic screening to ensure that noise levels at the nearest effected windows are 10dB below ambient levels. For further details please refer to the acoustic report.

Noise pollution will be minimized during the construction phase through compliance with best practice principles with heavy machinery only being used during the hours of 0800hrs and 1800hrs. The development operates under

considerate constructor's scheme and as such noise pollution will be reduced where possible.

Noise will be predominantly traffic associated with delivery vehicles and taxi dropping off at the premises. There is no car parking on the site so it's anticipated that the noise from the site will have negligible impact on the surrounding area.

3.5.7 Microclimate

Essential Standard

• *Mitigate any negative impact on the microclimate of existing surrounding public realm and buildings to meet the Lawson criteria for wind comfort and safety.*

The development meets the Essential Standard by avoiding the creation of adverse local climatic conditions.

The scheme is predominantly the re-use of an existing building with small/minor extension works therefore there is no need to modelling the development to check the effects of the building on wind tunnelling as the proposal does not substantially altering the existing building.

3.6 WATER REDUCTION

3.6.1 Conservation of water is crucial to the sustainability debate. The processing of water into fresh, drinking water uses large amounts of energy. Using water in our homes contributes around 35 million tonnes of greenhouse gas a year (on average 1.5 tonnes per family). Additionally, water is a finite resource and during times of drought supplies can run low. Many natural ecosystems in the United Kingdom can suffer as a result of water abstraction.

3.6.2 The proposed development will target water efficiency levels in accordance with the London Plan and CPG 03 which requires the internal potable water usage in the will be minimised by using Dual flush WCs, low flow spray taps, low flow showers and low water usage white goods. This level of water efficiency will also meet the requirements of the tighter Building Regulations optional requirement.

3.6.3 In accordance with the London Plan Sustainable Design and Construction SPG, internal water consumption will be reduced through the use of practical and hygienic water saving measures. An evaluation of the devices to be used will be undertaken based on technical performance, cost and appeal. These may include dual flushes, low flow taps and shower heads and, if white goods are to be provided, they should be best practice with respect to both water use and energy efficiency. An illustrative suitable strategy to achieve the water efficiency standard targeted is set out in the Water Efficiency Calculator at and could include the following:

> Dual flush WCs (6/3L per flush);
> Wash hand basin tap flows of 3L/min;
> Shower flow rates of 9L/min;
> Bath capacity of up to 150L; and
> Kitchen tap flows of 4L/min.

The following measures may also be incorporated:

> Flow restrictors to manage water pressure;
> White goods will be both water and energy efficient;
> Water meters will be included to detect leakages and ensure no excess wastage occurs.

3.6.4 Water waste reduction advice can also be provided to guests and staff Via the building user guides, to enable optimum use to be made of the devices installed.

3.6.7 Another method of reducing water consumption is to detect leaks. In order to prevent them from occurring, it is anticipated that a sanitary supply shut-off valve will be installed in each sanitary area/facility.

It is intended that the proposed development will be fitted with water meters and as such receives a credit for WAT 2. Water meters shall be linked back to the building management system (BMS) which shall monitor water usage. This system will learn the usage pattern for the building and raise an alarm if water usage suddenly increases dramatically for the building owner to investigate a possible leak. Additionally the water meter will meet the Mayor's Essential Standards on water use.

In addition to proximity detection shut off in the public areas the card reader for each room shall be linked to an automatic sanitary shut off valve in each ensuite so that when the room is unoccupied the valve will shut to avoid water losses.

3.6.8 Grey water recycling has been considered for the project, but has however been discounted due to the complexity such a system would within such a constrained site. This complexity is due to the level of filtration and treatment that the grey water would have to undergo in order to be of the colour and quality that is considered to be acceptable in a commercial development.

Furthermore, the most efficient system would be a communal system, however there is not sufficient space to house the grey water tank in the basement plant room area. Individual systems in this type of development would prove costly and difficult to manage and maintain.

3.7 PROMOTING SUSTAINABLE WASTE BEHAVIOR

3.7.1 London produces about 17 million tonnes of solid waste every year. Of this, councils collect 4.4 million tonnes of municipal waste which includes waste from households, and some commercial and industrial sources. The balance is made up of 6.4 million tonnes of commercial and industrial waste and 6.1 million tonnes of construction and demolition waste.

Construction site impacts will be monitored throughout the construction and demolition process by the contractor. Water use, energy use and CO_2 emissions from site related activities being recorded, with appropriate targets set for their reduction, and monitored through the sire waste management plan (SWMP). The contractor will also conform to best practice principle in respect to air (dust) pollution from the site and all site timber will be re-used, recycled or responsibly sourced.

Site environmental targets will be monitored as part of the considerate constructors scheme.

3.7.2 Commercial Waste

In accordance with Camden Policies and DM14, adequate internal storage containers for recycling will be provided within the building to encourage sustainable recycling habits by the occupants.

External storage for waste and recycling will be provided for the development. Space for external waste storage will also be provided to work with the London Borough of Camden's waste collection service

Building User Guides can also be provided to the occupants of the new dwellings and commercial unit which will provide advice and information on the most effective means and methods to recycle and minimise waste

Composting is not considered to be a viable option for this site, given the available space within the site boundary and the practicality of composting waste produced by the scheme.

Provision will be made for a cigarette butt bins to be located outside the building as all internal areas of the building will be non-smoking.

3.7.3 Construction Waste

Construction waste is a key element to be considered in achieving a reduction in all waste and has been considered as part of this proposed development in accordance with London Borough of Camden's Core Strategy Polices.

It is estimated that some 40% of all waste is construction related. It has also been shown on a number of construction sites that as soon as the issue of waste starts to be addressed, significant improvements follow quickly across the site. There are two key elements to be considered:

- Appropriate construction methods and effective management;
- Re-use/recycling of materials on site.

The amount of waste materials arising from construction can be reduced by introducing regular audits to monitor and control site activities more closely, for example reviewing materials ordering and site practices to prevent damage and cross-contamination. Attention to the quantity of materials purchased and the way that these are offloaded, labelled and stored, can significantly reduce the amount of materials wasted. Wherever possible, the use of packaging and non-returnable pallets should be avoided, or they should be recycled or reused.

A Site Waste Management Plan (SWMP) will be produced to ensure compliance with legislation, and will address any additional areas required by BREEAM. The SWMP ensures that waste is reduced by specifying and purchasing only what is needed for the project. The Site Waste Management Plan (SWMP) will result in various benefits for the development, which include:

- Better control of risks relating to the materials and waste on the site;
- 'Good housekeeping' of waste and improved site safety;
- Demonstrating compliance with the legislative framework;
- A mechanism for demonstrating how waste is managed and minimised and how associated costs are controlled;
- A tool to aid compliance with various environmental management systems e.g. ISO14001;
- Compliance with contractual requirements from public and private sector clients; and
- A system to help make cost savings by better managing the supply chain of materials, and their storage, handling, recovery and eventual disposal.

Recycling of materials from the construction waste stream can provide valuable construction materials and relieves the existing pressure on landfill sites. By maximising the value extracted from these materials, and extending their life in this way, the demand for such materials from new sources is reduced and there is likely to be a long-term beneficial impact on the conservation of mineral resources such as primary aggregate materials.

The main contractor will be required to segregate materials prior to transportation to recycling centres. The strategy is to separate materials into waste bins for the following:

- Concrete
- Timber
- Glass
- Plasterboard
- General waste

Special waste such as oils or paint will be managed separately using appropriate COSHH bins.

The main contractor will track what waste has been produced using their devised waste stream schedule and minimise residual waste where possible.

A specialist HSE licensed waste management company will be responsible for transferring waste from out bins to applicable, separate contractors for further processing and deliver to their waste transfer station. The waste management company will be responsible for maintaining appropriate records i.e. waste transfer and waste management notes.

As set out in BREEAM the team will ensure that during the construction phase, the amount of non-hazardous construction waste generated on site by the development is the same as, or better than good or best practice levels. This will be rewarded by BREEAM Issue WST 1.

3.8 PROMOTING SUSTAINABLE USE OF MATERIALS

3.8.1 In accordance with the guidance set out in the London Plan Sustainable Design and Construction SPG (2014), the Building Research Establishment (BRE) Green Guide will be used to assess the building materials. As part of this, materials are rated from 'A' to 'E', with the rating reflecting the Life Cycle of the materials in question.

3.8.2 In accordance with the London Plan Sustainable Design and Construction SPG, new materials required in the development will be sourced where possible to ensure that environmentally friendly and low embodied energy materials are used. Where possible, "A+/A" rated materials and element construction will be sourced to enable the development to be as environmentally friendly as possible.

3.8.3 Preference will be given to the use of local materials and suppliers where viable. This will be considered as part of the detailed design and construction process.

3.8.4 Where possible, materials will be sourced from a supplier who are covered by an accredited environmental management system (EMS) such as ISO 14001 or BS8555 at extraction and process stages. This will ensure that the environmental impacts of the materials have been measured and minimised where possible in the products manufacture. Similarly, recycled materials will be utilized wherever possible to minimised the amount of raw material that would need to be obtained, and also to reduce waste.

3.8.5 Timber used on the site, including timber used in the construction phase, such as hoarding, fencing and scaffolding, will be sourced from sustainable sources (e.g. PEFC and FSC) where possible. The use of recycled materials (e.g. crushed concrete from waste used for hard-standing) has zero embodied energy impact, other than that expended in their processing or transport.

3.8.6 Material from the demolition of the existing buildings on site will not re-used as this will not be practicable and the quantity of demolition will be to minor to justify the reuse or recycling off-site. A comprehensive Site Waste Management Plan will address the potential for recycling construction related waste on site through implementing effective and site suitable practices in accordance with the waste hierarchy set out in the London Plan Sustainable Design and Construction SPG; reduce, reuse, recycle, disposal.

3.8.7 In addition, the development will be designed to withstand the long term impact from high pedestrian traffic, vehicular and other activities, which will further satisfy BREEAM.

3.8.8 It is likely that the main contractor will have an environmental materials policy,

used for sourcing of construction materials however this will be confirmed during the BREEAM design stage. The source of the materials has not yet been specified, however local materials will be optimised where it is economically feasible to do so, thus attempting to achieve the Mayor's Preferred Standard.

3.9 SUSTAINABLE CONSTRUCTION

3.9.1 All of the Mayor's Essential and Preferred Standards will be met though the developments registration and compliance with the Considerate Constructors Scheme (CCS). This commitment is rewarded by the BREEAM Issue MAN 2.

3.9.2 As part of the overall management of the site contractors will be required to sign up to the considerate contractors scheme and will aim to achieve a score exceeding well beyond best practice.

3.9.3 The considerate contractor's scheme is a notional voluntary scheme, which is adopted by participating construction companies and everyone involved on the construction site. The scheme aims to assist and encourage contractors to carry out their operations in a safe and considerate manner, with due regard and causing minimum disturbance to local residents, businesses, passing pedestrians and road users.

3.9.4 The scheme looks at the various aspects of construction work and sets appropriate standards. It covers 8 categories relevant during the construction phase of the project:

- Considerate
- Environment
- Cleanliness
- Accountable
- Good neighbour
- Respectful
- Safe
- Responsible

3.9.5 All sites registered with the Scheme are monitored by an experienced industry professional to assess their performance against the eight points of the Code of Considerate Practice.

3.9.6 Good air quality is important for our environment. Most air pollution arising from construction is associated with dust particles. Other forms of air pollution come from energy use arising from site activities and transport to and from the site. Dust management for development will be implemented according to BRE guidance, meeting best practice standards. Measures include damping down the site along with dust sheets and covering waste receptacles. Provision will be made to ensure that areas occupied by contractors are kept in a clean and tidy condition.

These measures are targeted in BREEAM Issue MAN 3 and meet the Preferred Standard.

3.9.7 The design team has also made the commitment to monitor, report, and set targets, to reduce water consumption from site activities and adopt best practice policies in respect of water pollution on site (ground and surface). Construction noise can have a significant effect on the environment and on the quality of life enjoyed by individuals and communities. Construction should not create unacceptable levels of disturbance.

3.9.8 The contractor will therefore ensure that neighbouring businesses are able to continue their day-to-day activities without significant disruption. They will liaise with neighbouring businesses and the local residents to ensure that noisy works are carried out at appropriate times agreed by all parties. A contact telephone number will be established so that residents can raise any concerns.

3.9.9 It is likely that the main contractor will provide an environmental materials policy, used for sourcing of construction materials and will have to operate an Environmental Management System. All these items are rewarded by BREEAM Issue MAN 3.

3.9.10 Implementation of an asbestos management plan that minimises the potential for future damage of the asbestos materials will be adopted. Asbestos materials will be removed prior to the commencement of any renovation or demolition works that may cause their disturbance.

3.9.11 Construction waste has been discussed in the previous Section on Waste. The development is committed to the sustainable specification and procurement of materials and resources as discussed in Section 3.8 – Materials.

3.10 TRANSPORT

3.10.1 Sustainable Transport Strategy -Sustainable transport links are central to the sustainability debate. They provide a positive contribution to environmental, societal and economic sustainability of the places they serve.

3.10.2 **Public Transport** - The site is well located within close proximity to a number of transport links which include the following:

Bus:-

The nearest bus stops to the site are located on Kingsway a very short walk from the site very close to Holborn Station. These stops are served by routes 1, 59, 68, 91, 168, 171, 188, 243, 521, N1, N68, N91, N171 and provide connections to Canada Water, Streatham Hill, West Norwood, Elephant & Castle, Euston, Herne Hill, North Greenwich and Trafalgar Sq.

There are also a number of bus stops located a few minutes walk to the south of the site near on Aldwych. . These stops are served by routes 6, 9, 13, 87, 243, 341 and night buses N9, N13, N44, N 87 and provide connections to Wandsworth, Vauxhall, Hammersmith, Woodgreen, Angel and Victoria railway stations. There are number of stops serving a variety of routes.
These bus stops provide a high quality interchange for passengers.

National Rail

The closest mainline railway station to the site is Charing Cross which is located 10-15 minutes' walk to the south-west of the site. Euston, Farringdon, Blackfriars and City Thameslink are located less than a mile from site.

London Underground

Holborn Station is located within 200m from site. It is a London underground station which offers direct access to both the Central Line and the Piccadilly Line

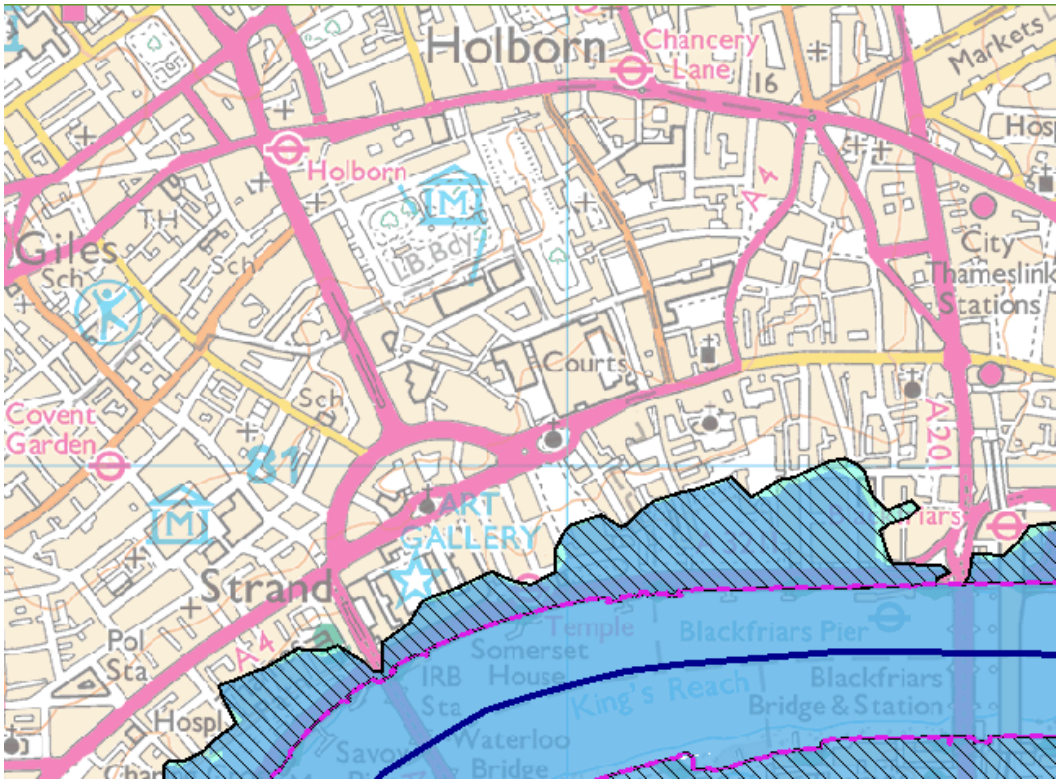
As can be seen from above there is an excellent level of access to public transport with a PTAL score of 6B. Therefore the location of the site is considered to be sustainable in terms of its transport links and accessibility.

3.10.3 **Cycle Parking** -Encouraging cycling not only makes a positive contribution to health and well-being, but also reduces pressure on existing transport systems. In accordance with the London Plan (2015), secure, covered and convenient cycle parking provision will be provided for the proposed re-development. The

cycle stores will be at lower ground floor level to allow easy access for staff and visitors.

3.11 FLOOD RESISTANT DESIGN

3.11.1 In accordance with the London Plan Sustainable Design and Construction SPG, flood risk within the context of the proposed development has been considered. According to the Environment Agency Flood Map for Planning, the site is located in Floor Zone 1.



EA Flood Risk Map

3.11.2 The site is situated in Flood Zone 1 (see environment agency flood map) and therefore has a very low probability of flooding and as a result, a Flood Risk Assessment has not been required.

3.11.3 In accordance with London Borough of Camden Policies and the London Plan Sustainable Design and Construction SPD, the development has been reviewed to see if the incorporation of sustainable drainage techniques (SUDS) where practicable or possible. As there is no undeveloped land on the site there is limited opportunity to attenuate peak run-off from the site. The refurbishment project will not change the existing conditions of the site, and in addition to this the roof space has been designated for plant and renewables so there is limited space and structural scope for implementing any sustainable urban drainage techniques.

3.12 BUILDING QUALITY

3.12.1 Accessibility & Building Regulations Part M

3.10.1 All floors will have level access and doors in line with Building Regulations Part M so that the development is largely deemed 'accessible to all'.

3.10.2 Level access walking routes (which will be clearly signed) will be provided from the main access to the site, to the proposed development entrance. Accessible WC's are provided with hand rails etc.

3.10.3 Level access will be provided from the entrance to the facility. Lifts (appropriately sized for wheelchair users) will also be provided to access the upper floors.

3.12.2 Security

Sustainable communities will only be sustainable if they have been designed with people, as well as the environment, in mind. Developments must be comfortable and safe to use for all sections of society and all cultures and religions. This includes internal and external security design and safe transport links.

The development will conform to the requirements of Secured by Design where possible. In addition, consultation with a Designing Out Crime Officer (DOCO) will take place through the detailed design process to ensure the development provides a safer and more secure development.

3.12.3 Sound Insulation

In order to reduce the likelihood of noise complaints and to ensure a high quality development is created, the development will be aiming to achieve airborne sound insulation values that will improve upon the performance standards outlined within the Building Regulations Part E standards.

Construction traffic will be minimised by restricting deliveries and arrival times in order to manage potential impacts on existing and future occupants. Work will be limited to appropriate hours to be agreed with the Council, and suppressors will be used to reduce noise from machinery in line with the Considerate Constructor's Scheme.

3.12.4 Internal Environment

The design team will take all practical steps when selecting and specifying materials to ensure that the potential risk of airborne pollutants released are kept to a minimum. The following items will be careful considered.

- Volatile Organic Compounds (VOCs) - Released from many synthetic materials, furnishing and chemical products. Many VOCs are respiratory irritants.
- Carbon Monoxide - Problems arise with poorly maintained equipment and when chimneys or flues are blocked, or if there is not sufficient ventilation to supply air to the appliance or where air intakes are located too close to roads or areas used for car parking.
- Fine Particles - less than 10µm in diameter can cause irritation and respiratory problems.

In order to combat these potential issues, the design team is aware that specified materials should not contain or emit toxic chemicals, for example: natural materials and low solvent finishing products and furnishings. These products are rated highly in the Green Guide and will be rewarded in the BREEAM Materials Category. In addition excellent ventilation is vital during construction, to aid the removal of chemicals. Designing for and managing internal air quality will benefit the health of building occupiers.

3.12.5 Overheating & Adapting to Climate Change

Overheating is becoming an increasing problem in modern buildings due to increase air tightness and low u-values.

The proposed new hotel building will not suffer from overheating because it will be provided with air conditioning. However in order to minimise the use of this air conditioning and keep energy use to a minimum good solar fabric design will be utilised.

- Heavy thermal mass(existing heavy weight structure)
- Good G – Value glazing

In addition good mechanical ventilation with heat recovery is provided to each room to reduce a/c loads and provide free cooling at night.

No Significant risks of overheating were identified.

3.13 ECOLOGY

In accordance with the London Plan Sustainable Design and Construction SPG, the development has been designed to benefit ecology and biodiversity wherever possible.

3.13.1 Current Ecological Value

The location of the site is not in an area of nature conservation and nor will any protected species be affected by the proposal. The site has limited ecological value and no habitats or animal species of conservation concern are considered likely to be present. The development of the site will therefore not have any significant ecological impact.

Due to the restricted size of the site and to the lack of open space, it will be very difficult to greatly enhance the ecological value and the biodiversity of the site. However some of roof area which is not occupied with plant to service the building will be suitable to be used for a green or brown roof.

3.13.2 Protection & Enhancement of Ecological Value

Although there are considered to be no ecological constraints to the proposals, a series of mitigation measures have been recommended which can be implemented to reduce any impact on local wildlife. These measures include the following: > In the unlikely event of bats being encountered during works, it is a legal requirement to stop work immediately and inform Natural England (or an appropriate Ecologist) so that appropriate advice can be provided.

- Site clearance and demolition works should be timed to avoid the main bird nesting season. If this is not possible, a check should be carried out prior to works to ensure there are no active nests present.
- Where new planting is proposed it should aim to use native species or species of known value for wildlife.

4.0 SUMMARY

From this Sustainable Design and Construction Statement, it is clear that the proposed development is of a high standard of design. The refurbished development will achieve a BREEAM "EXCELLENT Rating"

The sustainability strategy focuses on the implementation of sustainable systems for energy, water, waste management and recycling and the use and choice of materials. Much attention has been drawn to reducing the environmental impact during operational life of the development with good energy and water consumption savings achieved.

The energy performance will be 35.47% better than Building Regulations and
Water consumption will be reduced substantially by using water saving devices.

The scheme has incorporated best practice design principles with regards to noise pollution and the recommendations of the appointed professionals have been adopted, in addition, the building has been designed to minimise air pollution over its lifetime.

In summary, the proposed development includes the following key commitments relating to sustainability:

- The target reduction in regulated CO_2 emissions over the Building Regulations Part L (2013) baseline will be 35.47% in accordance with the London Borough of Camden Planning Policy;
- The proposed refurbishment and change of use will target the BREEAM 'EXCELLENT' certification;
- Water efficiency measures and devices will be installed in the building to target a maximum daily water usage of 105 litres/person/day in accordance with the London Plan and the tighter Building Regulations optional requirement;
- Recycling facilities will be provided for commercial and construction related waste;
- The site benefits from very good connections to a range of surrounding transport services;
- The development will be designed to meet applicable Building Regulation Part M requirements;
- The proposed development includes the provision of dedicated cycle storage area, reducing the need to use public transport or drive.
- Sound insulation values are to be improved on Building Regulations Part E where possible;
- Where practical, building materials will be sourced locally to reduce transportation pollution and support the local economy. All timber will be purchased from responsible forest sources. Materials will be selected based on their environmental impact, with preference given to high rated materials from the BRE Green Guide to Specification where possible; and
- Construction impacts will be minimised and monitored where possible.

The proposed development responds as positively as practical for a building of

this type to the Camden Council's Core Strategy and London plan policies in an integrated way to deliver a modern, hotel development utilizing an D1 educational building.

In conclusion, the proposed development has successfully met the majority of the Mayor's Essential and Preferred Standards referred to in the SPG Sustainable Design and Construction. Where a standard has not been met a justification has been provided. The design team has considered the sites potential environmental impacts and this report details how those impacts will be managed and mitigated.

APPENDIX 1 -BREEAM- PRE ASSESSMENT